



AVIR 2018 ANNUAL MEETING
JW Marriott | March 17-22, 2018 | Los Angeles, CA



TABLE OF CONTENTS

3	President's Welcome
4	Useful Information
4	Noteworthy and Networking Events
5	Floor Plans
6	Continuing Education Credits
6	FAQ
8	AVIR Fellowship Award
8	President's Award of Education Excellence
9	Gold Metal Award
10	Board of Directors
13	Award of Excellence
15	Schedule at a Glance
18	Meet Our Presenters
32	Events You Won't Want to Miss
34	Los Angeles Tourist Attractions
36	Sponsors

PRESIDENT'S WELCOME



Welcome to L.A.!

Although it has long been recognized as a world of pristine beaches, sunshine, and Hollywood magic, 2017 told the story of a different L.A; an L.A. that is beginning to receive recognition as a place of innovation and advancement, of incredible talent, and endless potential.

Some media outlets and publications have gone so far as to dub it the "new silicon valley".

With the field of Interventional Radiology (IR) at an unchartered tipping point, I couldn't imagine a more fitting host for the AVIR's Annual National Meeting.

Today, as a result of decades of innovation and education, IR is achieving long deserved autonomy; Interventionalists are recognized by referring providers and patients as specialists who provide the full spectrum of image guided intervention and longitudinal care. IR has been granted the status of a primary specialty, akin to internal medicine or diagnostic radiology. U.S. medical students will now directly enter Interventional Radiology residencies and graduate with primary specialty certification in Interventional Radiology.

Our skillset as IR technologists allows us to share in this unique specialty growth, and the goal of the AVIR is to provide world class education and resources that enables our members to become the educators, innovators, and leaders of tomorrow. Our belief is that relevant, peer driven technologist education will accelerate the practice and evolution of IR, improve IR team care of patients, and strengthen colleague collaboration. It is essential that

we continue to support the growth of our field by seeing ourselves as a requisite to the future of IR and consistent partners to our physician colleagues.

Throughout 2017, the AVIR worked to achieve this goal through both national and regional collaboration.

Regionally, we saw the birth of several new AVIR Chapters. Chapter development is a crucial component of AVIR growth as local support and education is vital to our membership. We improved and strengthened our educational partnership with Medlantis by hosting webinars to share with our members how the educational offerings of Medlantis can be incorporated into their individual institutions.

We have collaborated with our colleagues at Interventional Initiative, promoting their exceptional content that has raised IR awareness for both patients and medical professionals. We joined with our colleagues across the nation in celebrating the first national "Without a Scalpel day" on January 16th.

We have continued to evolve our national meeting. This year will see the addition of two new breakout sessions. A "Hack a Thon", that will promote teamwork driven problem solving as we identify solutions to the everyday challenges we encounter, as well as an abstract writing workshop hosted by JVIR Editor in Chief, Ziv Haskal.

Although we celebrate our successes in 2017, we recognize that innovation is a continued journey. Throughout 2018, new initiatives and efforts will continue to position the AVIR as the leader in IR education and an advocate for technologists and their unique and irreplaceable skillset.

WELCOME



Stefanie Rockwood, RT, R, VI, ARRT
Annual Meeting Chair

We are thrilled to be hosting our 28th Annual Meeting in Los Angeles this year!

I'd like to personally welcome everyone who has been able to attend this meeting. It's an exciting time for AVIR as we continue to grow and adapt to meet the educational needs of the ever evolving specialty of Interventional Radiology. The world of Interventional Radiology is an exciting field, and our organization will continue to meet and bring inspired professionals to informational forums like this, to ensure AVIR remains on the cutting edge.

I'd like to give you an idea of what to expect in the next few days: Our much anticipated Gold Medal Lecture given by longtime AVIR advocate Wael Saad, MD, Musculoskeletal Intervention, Deep Vein Thrombosis, Pulmonary Embolism,

Arterio-venous Malformations, Fallopian Recanalization, Staff Engagement, Embolic Agents, Womens Health, Men's Health, Pain Management, #IRAD Twitter Panel, Interventional Oncology, Chronic Limb Ischemia, Neuro Intervention, Renal Insufficiency, Biliary Intervention, Stroke Response, and more. These are just a few of the topics we have planned for you. I encourage everyone to attend our poster session featuring educational and scientific original presentation from your peers.

Be sure to make it a point to be present for our members Business Meeting Tuesday afternoon, that will feature the latest changes from the ARRT as well as our award presentations and incoming 2018 Board of Directors.

I hope everyone has a fantastic time these next few days and remember to use this time to network with other interventional professionals from around the globe! Cheers!

USEFUL INFORMATION

Contact AVIR:

For information about Membership,
the Annual Meeting or Committee
involvement:

Phone: 571-252-7174
Fax: 571-252-7174
Email: sboulter@avir.org
Web: www.avir.org

Questions onsite at the meeting Call:
Spencer Boulter 703-975-4647

NOTEWORTHY & NETWORKING EVENTS

SIR 43RD ANNUAL SCIENTIFIC MEETING

The AVIR registration fee includes participation in SIR symposia, plenary sessions, scientific sessions, workshops, exhibit hall, and opening reception. Please note that some SIR programs (ie; workshops) may require an additional fee or advanced registration.

SIR OPENING RECEPTION

Saturday March 17, 6:30-7:30 PM
JW Marriot

Don't miss out! The complimentary annual Opening Reception is open to all attendees and registered guests. Enjoy this great opportunity for informal networking and relaxation with colleagues and friends. All hotels are within short walking distance.

SIR EXPO

Sunday, March 18
12:00 – 5:00 PM

Monday, March 19
9:30 AM- 5:00 PM

Tuesday, March 20
9:30 AM – 3:00 PM

Wednesday, March 21
9:30 AM – 1:00 PM

Vendor expo located on the main level of the Los Angeles Convention Center

Coffee, lunch and snacks will be served in SIR's exhibit hall during the day:

Morning break from 10:00 AM - 10:30 AM,

Lunch from 12:00 PM - 1:00 PM,

Afternoon break from 2:30 PM - 3:00 PM

Late afternoon break from 4:30 PM - 5:00 PM

SIR POSTER RECEPTION

Tuesday, March 20

6:00-7:00 pm

Los Angeles
Convention Center

WIFI

The SIR 2018 Annual Meeting Wi-Fi Network is: **SIR2018**



EXHIBIT HALL LEVEL ONE

Level One - Exhibit Space

- Exhibit Space
- Pre-function/Registration
- Show Offices
- Restaurant/Concessions
- FD Freight Door
- FE Freight Elevator
- PE Passenger Elevator
- M Men's Restroom
- W Women's Restroom
- E Elevator
- Groundwork
- ATM
- Column

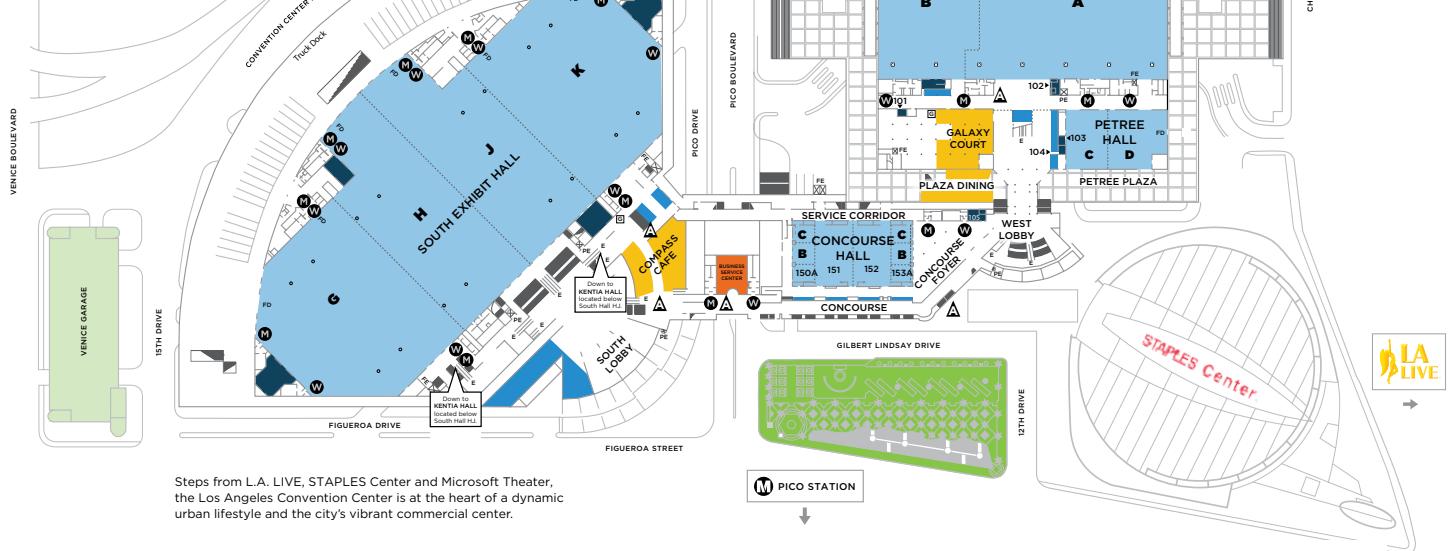
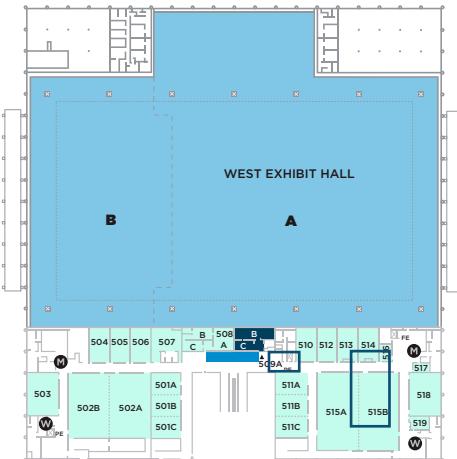
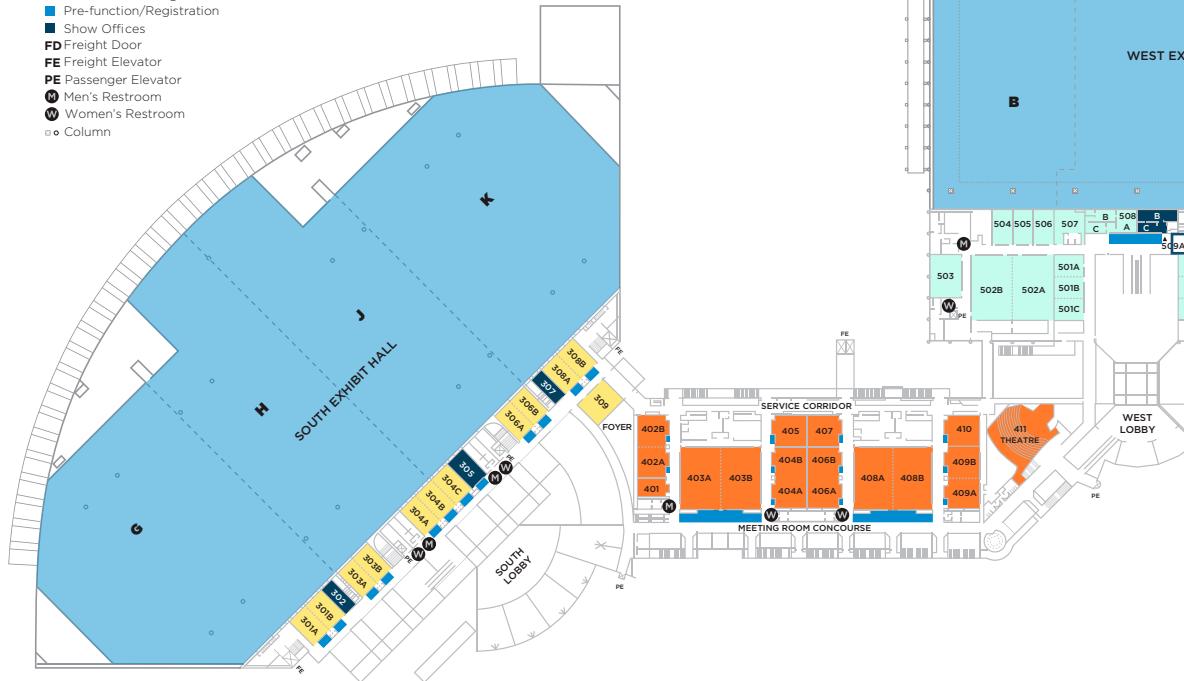


EXHIBIT HALL LEVEL TWO

Level Two - Meeting Rooms

- West Hall Meeting Rooms
- Concourse Meeting Rooms
- South Hall Meeting Rooms
- Pre-function/Registration
- Show Offices
- FD Freight Door
- FE Freight Elevator
- PE Passenger Elevator
- M Men's Restroom
- W Women's Restroom
- Column



AVIR

515B
General Sessions

511A
breakout sessions
workshops
VI review

CONTINUING EDUCATION CREDITS

OBTAINING CREDITS

To obtain continuing education credits, you MUST for each attended presentation: Scan your RFID bracelet for each session and fill in your AVIR Approval # in your program book.

FOR YOUR RECORDS

Record each session number in your program book. An official audited certificate itemizing the sessions you attended will be available for download from the AVIR website within 30 days at <http://www.avir.org>. You must have an AVIR account to receive your credits.

ARRT

YOU are required to submit your annual meeting course listing and certificate as documentation of your attendance directly to ARRT. AVIR does NOT send the documentation to them.

CLINICAL ASSOCIATES

Continuing medical education credits (CMEs) are provided as approved by the Society of Interventional Radiologists (SIR).

To receive credits, attendees must be registered for the AVIR Annual Meeting and attend the SIR session.

TECHNOLOGISTS

Category A and Category A+ continuing education units are offered as approved by the Association of Vascular and Interventional Radiographers (AVIR).

The program offers up to 22 credits. Over 200 Category A and A+ credits have been approved for SIR sessions.

NURSES

Contact hours will not be provided for AVIR sessions this year.

FREQUENTLY ASKED QUESTIONS

1) When can I expect to have my credits available electronically?

CE credits will be posted on the AVIR website two weeks after the close of the Annual Meeting. Attendees must have an AVIR account to access their credits.

2) My hospital wants a certificate ensuring I attended the meeting, when can I expect proof of my attendance at the meeting?

Proof of attendance will be provided upon request. To submit a request send an email to AVIR headquarters at sboulter@avir.org. Certificates will be provided within 48 hours of the request.

3) What continuing education opportunities does the AVIR have available throughout the year?

The AVIR online Educational Portal offers 12 new directed

readings per year, as well as a select number of webinars. Additionally, our unique partnership with Medlantis allows our members one free webinar from their website monthly. Finally, our local chapters sponsor regional meetings throughout the year. Check the website for local offerings.

4) How do I find out if there is a local AVIR Chapter in my area?

All active local Chapters are listed on our website. If there isn't a Chapter in your area consider starting one! Our Director at Large, Mike Kelly, can provide the necessary information to start your own local chapter.

5) Can I attend SIR Sessions and get Credit? How do I obtain the certificates?

Yes, All AVIR attendees can attend any SIR session and receive CE credits. When attending SIR sessions make sure your name

badge is scanned by their staff. After the meeting SIR will send out certificates of attendance directly to the attendee.

6) I'm already a member of the ASRT, should I join the AVIR?

The AVIR is the premiere organization dedicated to the education of VI Technologists. Throughout the year, our educational material is carefully reviewed and selected by an educational committee to ensure that it represents the very best in continuing education for VI technologists. Additionally, our meeting is uniquely aligned with SIR, affording our members access to lectures by internationally renowned Interventionalists, and networking opportunities not available at other meetings.

7) Does the AVIR have any resources available for VI Board Prep?

The AVIR hosts a regional VI Workshop annually. This weekend long conference focuses on the fundamentals of

IR with an emphasis on VI Board Prep. Participants are given a mock registry to complete and are able to participate in a post-test discussion, reviewing the content and of the mock exam and asking questions as needed.

8) Where can I get more information on the ARRT changes regarding VI Technologists and how they will impact me?

Please join us for our Business Meeting on Tuesday March 20th to learn about the updates to the ARRTs Educational Requirements by our Education Chair, Kristen Welch. This presentation will highlight the Structured Education and Continuing Qualification Requirement.

9) How do I become involved with the AVIR?

Contact us to express your interest, as well as to find out more regarding open positions or opportunities to become more involved. We always love hearing from our membership.

GET INVOLVED!

Committees need a strong representation of members. Please consider joining one or more of these committees. It is a great way to be involved in the decisions of the association.

Nominating Committee: Prepares the ballot for the general election.

Ethics/Judicial Committee: Considers any ethical or judicial question regarding the policies of the Association or Local Chapters or actions of the members of the Association.

Education Committee: Responsible for continuing education programs; reviewing and approving the educational program of meetings/seminars endorsed by the national Association; and for assisting other organizations, including local chapters, in planning the content of educational meetings/seminars in which the Association will be endorsing (e.g. Regional AVIR Meetings).

Fellowship Committee: Reviews applications for admission as a Fellow of the AVIR and elects as Fellows those applicants who satisfy the relevant criteria. Committee members are required to have AVIR Fellowship status.

Award of Excellence Committee: Reviews nominations for the Award of Excellence (AOE) and elects most qualified nominee who satisfies the relevant criteria. AOE committee members shall be recipient's of the Award of Excellence.

Membership Committee: Reviews membership concerns and supervises membership recruitment efforts. Committee Members should include the Associate Member Representative.

Finance Committee: Seeks contributions from outside sources to fund the projects of the Association.

Chapter Committee: Members are known as Chapter Liaisons. Each Chapter

Liaison is assigned a regional area where they shall be responsible for helping new chapters get started or helping existing chapters with problems and/or questions. This committee is chaired by the Director-at-Large.

Annual Program Committee: Plans and conducts the Annual and Regional Meetings of the Association.

Publications Committee: Develops and implements policies and guidelines regarding the relationship between the Association and publishers of professional journals and other publications in the field of CV and IR. The committee oversees the newsletter and other publications of the Association.

Associate Members Committee: Reviews associate member concerns and supervises associate membership recruitment. Committee members shall have associate membership status.

Web Site Committee: Reviews and recommends to the AVIR Board content to be placed on AVIR Web site.

AVIR FELLOWSHIP AWARD KRISTEN WELCH RT, R, VI



The AVIR Fellowship is designed to recognize and honor Interventional Radiographers who demonstrate a continued pursuit of excellence in the IR profession. An AVIR Fellowship is reserved for individuals who have established themselves as leaders, educators, authors, and committee members.

This year, the AVIR is honored to induct Kristen Welch as an AVIR Fellow. Kristen graduated from the Wheaton Franciscan Healthcare-All Saints Inc. School of Radiologic Technology in 2012. From there, she began what has already been an astounding career at Froedtert and the Medical College of Wisconsin.

In 2014, Kristen joined the staff of the IR Internship Program at Froedtert and the Medical College of Wisconsin as a Clinical Preceptor. She works with the IR interns in the laboratory and also lectures the interns on a variety of IR topics from fundamentals to more complex, innovative procedures. Additionally, she is intimately involved in their clinical instruction.

In addition to her educational role, Kristen became involved with the IR Division's vertebral augmentation and musculoskeletal research in 2016. Her passion for innovation and continued pursuit of better patient outcomes is evident in the multiple research projects she championed.

Kristen joined the AVIR as a member in 2013. She immediately became an active supporter of the AVIR, functioning as the local Southeastern Wisconsin Chapters Chair. The Wisconsin chapter delivers several education events annually. During this time Kristen supported regional growth and education by providing numerous lectures to both her local Chapter, as well as the Virginia AVIR.

Just three years later, in 2016, she joined the AVIR Board of Directors as the Program Chair, and brought her talent for innovation and passion for IR to the AVIR's National Meeting. Kristen orchestrated an exceptional annual meeting program, providing our membership an unforgettable week of world class lectures. Kristen was instrumental in the introduction of breakout sessions at the national meeting; smaller sessions that encouraged collaboration and networking among peers. She was also a leader in the introduction of the AVIR Poster session; she provided a platform for technologists to showcase their individual accomplishments in research and education.

In 2017, Kristen served as the Vice President of the AVIR. In her role as Education Chair, she worked tirelessly to improve the AVIR's educational offerings, promote not only the AVIR but the field of IR as a whole, and function as a critical liaison between the AVIR and other esteemed organizations such as the Radiologic Society of North America, and the American Registry of Radiologic Technologists. She has published numerous articles for the AVIR Informer, and actively engages with her IR colleagues through social media platforms such as Twitter and Facebook.

Kristen has demonstrated the tireless work ethic, character, and passion required of an AVIR Fellow and it is our great honor and privilege in induct her into the Fellowship class of 2018

PRESIDENT'S AWARD OF EDUCATIONAL EXCELLENCE HALEY SQUIER, BS, RT, R



The AVIR is pleased to introduce our 2018 recipient of the President's Award of Educational Excellence, Ms. Haley Squier.

Haley Squier is currently enrolled in the Charles J. Tegtmeyer Program of

Interventional Radiology and Special Procedures at the University of Virginia. The President's Award of Educational Excellence is designed to honor a VI student who demonstrates a passion for Interventional Radiology through their commitment to patient care, research and innovation, and pursuit of continued learning.

Haley has been described by her instructors as a student who consistently demonstrates the work ethic and character needed of an exemplary technologist. She approaches each day with a

positive attitude and willingness to serve. The proficiency with which she functions as a first assistant, and the anticipation she demonstrates as a circulator at this early stage of her career ensures that Ms. Squier will enjoy a fulfilling career as a VI technologist and will be a proven asset wherever she decides to practice. Her colleagues consistently see her demonstrating compassion towards her patients; going above and beyond to ensure they are comfortable and their needs are met as she builds rapport with them.

For these reasons, we are honored to present Ms. Squier with the AVIR's 2018 Presidents Award of Educational Excellence!

GOLD MEDAL AWARD DR. WAEL SAAD



The AVIR is pleased to announce the recipient of this year's prestigious Sherri Ulman Gold Medal Lecture Award is Dr. Wael Saad.

Dr. Saad completed his medical education at Ain Shams University in Cairo, Egypt. He then completed a vascular surgery internship at John Hopkins University, his radiology residency at the University of Rochester, and his Interventional Fellowship at the Mallinckrodt Institute of Radiology at Washington University. Dr. Saad is currently a professor at the University of Michigan where he serves as the Director of Vascular and Interventional Radiology.

Dr. Saad is has been internationally recognized for his expertise in liver disease including transplantation, hepatobiliary disease, and portal hypertension. He has over 240 publications, as well as over 70 book chapters.

Dr. Saad is a manuscript reviewer for numerous journals including the Journal of Vascular and Interventional Radiology, Journal of Clinical Imaging, American Journal of Roentgenology, Cardiovascular and Interventional Radiology, and Radiology. He also serves on the editorial board for the American Journal of Roentgenology and the Journal of Clinical Imaging Services. He serves on several committees with the Society of Interventional Radiology and the Radiologic Society of North America.

SIEMENS

One of the most obvious testaments to his passion for education is demonstrated by his role in founding the Middle Eastern Endovascular Therapy Symposia. Founded in 2017 and hosted in Cairo, Egypt, it is the first true regional IR and endovascular conference. MEET provides a comprehensive IR experience for its attendees through MEET IO, MEET Aorta, MEET stroke. Subsequently, MEET has founded the Egyptian Board of IR; a two year IR Fellowship with a SIR/United States IR curriculum, and SIR/ABR board examiners.

Dr. Saad is an avid supporter of the AVIR. Not only has he graciously been willing to present for the organization on many occasions, he has been an integral component of the regional Michigan Chapters success.

Those who know him can attest without hesitation that he is a natural educator and makes tremendous effort to teach his physician, nurse, and technologist colleagues alike. He is loved by his patients, and respected and trusted by all who've had the privilege of working with him. For these reasons and so many more, the AVIR is humbled to have the privilege of honoring Dr. Saad as this years Gold Medal lecturer.

GOLD MEDAL AWARD RECIPIENTS

2017	Dr. John Fritz Angle	Truman Medical Center, MO
2016	Dr. Michael Dake	Standford University, CA
2015	Dr. Jafar Golzarian	University of Minnesota, MN
2014	Dr. Barry Katzen	Miami Cardiac & Vascular Institute, FL
2013	Dr. Gary Siskin	Albany Medical Center, NY
2012	Dr. Alan Matsumoto	UVA Health, VA
2011	Dr. Buddy Conners	Baptist Memphis, TN
2010	Dr. Wayne Yakes	Swedish Medical Center, CO
2009	Dr. John Aruny	Yale New Haven, CT
2008	Dr. David Hunter	University of Minnesota Medical Center, MN
2008	Mary Kay O'Brien RT, R, CV, FAVIR	Henry Ford Hospital, MI
2007	Dr. Donald Denny, Jr	Princeton Medical Center, NJ
2006	Carol Mascioli RT, R, CV, FAVIR	Miami Cardiac & Vascular Institute, FL
2005	Dr. Brian Stainken	University of Md. Hospital, MD

BOARD OF DIRECTORS

2018 - 2019



Kristen Welch RT, R, VI

President
Medical College of Wisconsin
Kristenavir@gmail.com

I currently employed as an Interventional Technologist with the Medical College of Wisconsin. In this role I have the opportunity to precept new technologists and students from my institution's Interventional Technologist Internship Program as well as supporting interventional research. I am incredibly grateful for the time I have been able to serve on the AVIR board of directors. Being involved with this organization has afforded me many opportunities including networking with other leaders within our field and learning from world class experts. I look forward to serving as President of this organization and working with our incoming Board of Directors to continue providing our membership exceptional education while offering opportunity for their own growth and professional development.



Alisha Hawrylack RT (R) (VI)

Immediate Past President
University of Virginia
a.hawrylack@gmail.com

I am currently employed by the Division of Interventional Radiology at the University of Virginia, where I have been since graduating their IR program in 2008. Working in an academic institution has allowed me to pursue my passion for education. In addition to providing procedural support to physicians, I work to organize continuing education lectures for my colleagues, as well as teach Interventional Radiology students in both a clinical and classroom setting. I believe that in order to stay relevant and engaged, technologists should be provided with educational opportunities that mirror the dynamic challenges our field provides. As the field of Interventional Radiology continues to evolve, so should continuing education. As a member of the AVIR board, I look forward to the opportunity to network with other individuals whose goal is to continue to grow an organization that provides relevant and exciting meetings, conversation, and educational opportunities for their members so that they in turn may continue to provide excellent patient care.



Mike Kelly RT (R)(VI) RCIS

Vice President/President Elect
Riverside Regional Medical Center
mikekelly.avir@gmail.com

Having worked in a multi-disciplinary department (IR, Vascular, Cardiac, and Neuro) for over 11 years, I fully believe that the AVIR is a valuable resource to all of those in the world of Interventional Medicine. I have had the privilege to serve as Director at Large for the last couple of years and am extremely honored to now have the opportunity to represent this amazing society in the role of Vice President. As a member of the AVIR board of directors, I look forward to continuing my passion of providing relevant educational opportunities that reflect the always changing field of Interventional Medicine. I also look forward to creating opportunities for the professionals in our field to network with one another, through meetings on the local and national level and through social media, in order to help provide the best patient care possible and help provide public awareness of all the life changing treatments our field provides.



Vernon Cooper, RT, R

Director at Large
Georgetown University
vpcooperavir@gmail.com

I attended Shenandoah University and received my Bachelor of Science in Biology as well as a Bachelor in Exercise Science. I earned my Certificate in Radiology at Mary Washington Hospital and then went on to continue my education at University of Virginia's Charles J. Tegtmeyer School of Interventional Radiology. Upon graduation I joined the Interventional Radiology department at Georgetown University Hospital. I am very excited about serving on the AVIR board because I believe it sets a precedence for technologists to continue their education which is a vital component in the advancement of our field. My goals as Director at Large are to help expand this organization and create life-changing opportunities for not only technologists, but also the patients we work so hard to care for.

**Robert Sheridan, FAVIR**

Secretary / Treasurer
Massachusetts General Hospital
RMSheridan@partners.org

I am the Director of Clinical Operations for Interventional Radiology at the Massachusetts General Hospital (MGH), a 900 bed academic medical center located in Boston. Massachusetts General Hospital is Ranked # 1 by US World News Reports and is the primary teaching hospital for Harvard Medical School. I have 18 years' experience in Interventional Radiology and is responsible for the overall strategic planning and operations for 15,000 image guided procedures for 6 IR divisions, and 4 clinical units.

**Katy Unferth, BSN, RN**

Associate Liaison
Medical College of Wisconsin
KatyUnferthAVIR@gmail.com

I have been a registered nurse for over 15 years. I decided to pursue a career within Interventional Radiology because

I was very interested in the procedural aspect of nursing. I have grown to be incredibly passionate for our patient population and the cutting-edge procedures we perform every day. I am involved in several groups within my own organization that work to improve education, workflows, and communication between different roles and departments. I enjoy teaching others and participating in team building exercises. I am beyond elated to serve as the AVIR's associate liaison to continue to build on my own professional development and to help establish an environment of collegiality between IR professionals.

**Samantha Kobeissi, MPH, RT, R, VI**

Annual Meeting Chair
University of Michigan
SamanthaAvir@gmail.com

As an interventional radiologic technologist working at the University of Michigan Health system, I have expanded my level of knowledge in the field of Radiology. I am fortunate to work alongside great physicians, technologists, nurses, and other healthcare professionals that have motivation and passion for the field. With the help of these individuals, my interest for the interventional radiology field has grown. I have become more involved in the education aspect of IR and would like to motivate others to do the same.

My ultimate goal is to be part of a cohesive team that provides educational tools and resources for the interventional radiology community. Education is something that is of importance to me and being able to provide educational opportunities to others will fulfill that goal.

**Dana Bridges Kanfoush**

Corporate Liaison
danakanfoush@gmail.com

I started my own company a few years ago and am selling for multiple manufacturers, including several wonderful companies that I have represented since 2004. In this arena, I have tried to use my experience as a sales rep to create custom sponsorship programs and build AVIR's base of corporate support. A few of my professional accomplishments include being a published author in journals (i.e., Developmental Psychology & The Sport Psychologist), periodicals (i.e., Nephrology News & Issues), and a developmental psychology text book (Social Development in Childhood and Adolescence: A Contemporary Reader). I have been a proud AVIR board member for many years and hope I can continue to support the people who have supported me throughout my career.

BOARD OF DIRECTORS

2018 - 2019



David Douthett RT (R) (CV)

Publication Chair

dsdouthet@gmail.com

I have been involved in Interventional Medicine since X-Ray School when we were using Schonander Film Changers and had to pull the patients on a

wood board, which was sitting on the X-ray table. It has been many Angios ago. After working at 3 different Hospitals and several different clinics for 20 some years, I ended up in the commercial end of the business. Again 3 different commercial companies, to be currently working at W.L. Gore & Associates with in the Endovascular end of the business doing the EVARs and TEVARs. I keep my license current as you always want to leave a back up plan at hand. I have been active in the AVIR since 1993 and have been the Publication Chair since 1995. I have had the pleasure of working with alot of great folks over the years and look forward to every year. This is hands down the best thing I have ever done and I love doing it.

Executive Committee

Kristen Welch – Chairman

Spencer Boulter – Exec Director

Mike Kelly – Vice President

Alisha Hawrylack – Past President

Rob Sheridan – Past President

Izzy Ramaswamy- Past President

COMMITTEE MEMBERS

2018 - 2019



Adam Rubin, RT, R

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Mayo Clinic

rubin.adam@mayo.edu



Julie Orlando, RT, R, CV

Outreach Committee

Vascular Institute of Virginia

jorlando@teamviv.com



Sandra Strycker, RT, R

Outreach Committee

University of Wisconsin

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W. L. Gore & Associates Congratulates Israel "Izzy" Ramaswamy, MS, RT, R, CV, FAVIR

2018 recipient of The Association of Vascular and Interventional Radiographers *Award of Excellence*

Thank you, Israel, for going the extra mile in the field of interventional radiology, taking action to improve daily life for patients, peers, physicians, and hospital staff. Your compassion and professionalism are an inspiration to those in your hospital and community.

Gore proudly sponsors the AVIR Award of Excellence. Founded in 1958, we are devoted to exceeding expectations — through superb product design, a culture of collaboration and utmost dedication to customers. We know excellence when we see it, and sincerely appreciate others who are also always working for a better solution.

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2018 AWARD OF EXCELLENCE IZZY RAMASWAMY, MS, RT, R, CV, FAVIR

Each year through the Award of Excellence, the AVIR recognizes the irreplaceable value of technologists that consistently go the extra mile. Technologists who see in each

challenging situation an opportunity to serve, to grow, and to then share their experience with others.

We are honored to announce Izzy Ramaswamy as this year's recipient of the AVIR Award of Excellence. Izzy currently serves as the Director of Radiology at Westside Regional Medical Center in Plantation Florida. Izzy has served in several Interventional Radiology leadership positions and throughout his career he has gained a vast expertise in Radiology, Cardiology, Neurology, Electrophysiology, and device management. Izzy has worked as a staff interventional technologist at the prestigious Brigham and Women's Hospital in Boston Massachusetts, served as the Department Manager at Albany Medical Center and the world renowned Miami Cardiac and Vascular Institute.

He's been recognized by his colleagues as a collaborative leader and educator within our field. Izzy has dedicated

his career and professional life to promoting our profession as Interventional Technologists. Izzy has served in several roles within the AVIR including serving as president. Izzy was inducted into the AVIR fellowship; a distinction that recognizes individuals that have made extraordinary contributions to our field and organization on local and national levels. Since his time serving on the Board of Directors, he has stayed involved with the organization very intimately. Izzy currently serves on the Executive committee which provides insight on finance and administrative aspects. He's mentored nearly every person that has served on the Board of Directors over the last several years.

On a regional level, Izzy was instrumental in the startup of the AVIR Albany and Miami chapters, encouraging his technologists to get more involved. He is extremely passionate for our field and wants to share that passion with other young leaders within the field. He has given several presentations at local and national AVIR including being the only non-physician faculty at the millennium conference in New Delhi, India in 2000. Izzy served as a member of the Miami Dade College Radiology School and currently Broward College Advisory Board where he impacts changes made for their Radiology Technologist training program. Please join us in congratulating him on this prominent award. He will be recognized with this honor at our annual conference in Los Angeles, CA this March.

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Dual



SCHEDULE AT A GLANCE

SUNDAY, MARCH 18, 2018			ROOM	LA LIVE MARRIOTT 2ND FLOOR CONFERENCE CENTER
7:00 AM	7:45 AM	Continental Breakfast		Continental Breakfast
7:50 AM	8:00 AM	President's Welcome	515B	Alisha Hawrylack RT, R, VI Katherine Duncan BA, RN, CRN
8:00 AM	9:00 AM	Gold Medal Lecture: Why you should care: the evolving role of IR-RT and Splenic Artery Embolization: Different Indications & Different Techniques	515B	Wael Saad, MD
9:00 AM	10:00 AM	MIIPS- Spreading the word and why its the future of medicine	515B	Isabel Newton, MD; Margaret Simor, MSN, BSN, RN; Susan Jackson, RT, MBA; Michele Tessmer, MBA
10:00 AM	10:15 AM	Break		Break
10:15 AM	11:15 AM	Advanced Musculoskeletal Interventions Pushing the Envelope: Needle Guidance and 3D Applications in MSK Intervention Disc Intervention Bone Ablation for Local Tumor Control Nerve Blocks, Neurolysis, and Rizotomies	515B	William Lea, MD Dimitris Filippiadis, MD Anil Kurup, MD Sean Tutton, MD Moderator: Kristen Welch RT, R, VI
		Attention, Effort, and Medical Errors		Dr. Gonzalez, MD
		Lunch		Lunch
		Anesthesia, Nursing, and Technologists: Synergy of Three Teams for One Common Goal		Rafael Vazquez, MD
		3D Printing in Research and Clinical Practice		Rahmi Oklu, MD
3:15 PM	3:30 PM	Break		Break
3:30 PM	4:30 PM	Rapid Resilience for Staff and Patients in IR	515B	Elvira Lang, MD
4:30 PM	5:30 PM	MRI Safety and Patient Management: Update 2018	515B	Frank G. Shellock, MD
MONDAY, MARCH 19, 2018			ROOM	LA LIVE MARRIOTT 2ND FLOOR CONFERENCE CENTER
7:30 AM	8:00 AM	Wake up for Endoleaks	515B	Constantino Pena
8:00 AM	8:30 AM	Clot Busters- DVT/Thromboembolism/PE	515B	Kevin Dickey, MD
8:30 AM	9:00 AM	Pediatric IR	515B	Anne Gill, MD

9:00 AM	9:15 AM	AVIR Local Chapter meeting with Mike to be held outside of conference room	Hall	Mike Kelly RT, R, VI, RCIS
9:00 AM	9:15 AM	Break		Break
9:15 AM	9:45 AM	Making the Right Choice: How to Figure Out Which Line is Right for Your Patient	515B	Gail Egan, ANP
9:45 AM	10:45 AM	CLI Fighters: Stop the Chop!	515B	Kumar Madassery, MD Srini Tummala, MD Sabeen Dhand, MD Neal Khurana, MD Moderator: David Douthett RT (R) (CV)
10:00 AM	11:30 AM	Hackathon	511A	Moderators: Kristen Welch, RT, R, VI Rob Sheridan, FAVIR Sarah White, MD Clifford Weiss, MD
10:45 AM	11:00 AM	Medlantis promo video to follow healthcare update	515B	
11:00 AM	12:15 PM	AVIR POSTER PRESENTATIONS		AVIR POSTER PRESENTATIONS
12:15 PM	1:15 PM	Penumbra Networking Luncheon	515B	First come first serve to 75 people
1:15 PM	1:45 PM	Embolic Agents-What to Use and When	515B	Gary Siskin MD
1:45 PM	2:15 PM	Techniques of Revascularization for Acute Ischemic Stroke	515B	Joseph Gemmete, MD
2:15 PM	2:45PM	Central Vein Occlusions	515B	John Aruny, MD
2:45 PM	3:00 PM	Q and A with Mike Kelly for local chapters	HALL	Mike Kelly RT, R, VI, RCIS
2:45 PM	3:00 PM	Break		Break
3:00 PM	3:30 PM	Treatment for Pelvic Venous Disorders; IR Can Help With Pelvic Pain	515B	Ron Winokur, MD
3:30 PM	4:00 PM	Fallopian Recanalization	515B	Anne Roberts, MD
4:00 PM	5:00 PM	#IRAD- Twitter Community	515B	Mark Lessne MD Kumar Madassery MD Meridith Englander, MD Rob Sheridan Aaron Shiloh, MD Moderator:Dana Bridges
5:00 PM	5:30 PM	Building One Team- Balancing Staff Engagement Needs of Techs and Nurses		Stefanie Manack
5:30 PM	6:30 PM	Vendor Happy Hour Sip and Social		Vendor Happy Hour

TUESDAY, MARCH 20, 2018				ROOM	LA LIVE MARRIOTT 2ND FLOOR CONFERENCE CENTER
7:30 AM	8:00 AM	Biliary Intervention		515B	Joseph DeMarco, DO
8:00 AM	12:45 PM	VI Board Review		511A	Alisha Hawrylack RT, R, VI Erin Hartnett, BS, RT(R)(VI)
8:00 AM	9:00 AM	Dialysis Interventions- An Interventionalist's Primer and #FilterOut- Pre-Procedural Workup and Complex Retrieval Techniques		515B	Anuj Malhotra, MD
9:00 AM	9:15 AM	AVIR Local Chapter Q & A to be held outside lecture room	Hall		Mike Kelly RT, R, VI, RCIS
9:00 AM	9:15 AM	Break			Break
9:15 AM	9:45 AM	3D Applications in a 2D World		515B	Jon Roberts, RT, R, VI
9:45 AM	10:45 AM	Without A Scalpel: Neuro Intervention		515B	John Dalfino, MD
10:45 AM	11:15 AM	Building a Culture of Safety in IR		515B	Bob Dixon, MD
11:15 AM	12:15 PM	The Stealth and Valiant: Cancer Snipers Transarterial Chemoembolization Radioembolization Renal Ablation Fire & Ice: Comparing and Contrasting Different Methods for Thermal Ablation in Interventional Radiology		515B	Sarah White, MD Burlant Arslan, MD Andrew Gunn, MD Osman Ahmed, MD
		Lunch on your own			
		Women's Health			
		2018 AVIR Business Meeting 2018 Award Presentations: President's Award of Educational Excellence, Award of Excellence, And Fellowship Induction Board of Directors Introduction Continuing Education Policy Update: Are You Ready?			
3:00 PM	3:15 PM	Break			Break
3:00 PM	3:15 PM	AVIR Local Chapter Q & A to be held outside lecture room	Hall		Mike Kelly, RT R VI RCIS
3:15 PM	3:45PM	Interventional Pain Management		515B	David Prologo, MD
3:30 PM	4:30 PM	Abstract Writing Workshop		511A	Ziv Haskel, MD and Alisha Hawrylack, RT (R)(VI)
3:45 PM	4:15 PM	Prostate Artery Embolization		515B	Jafar Golzarian, MD
4:15 PM	4:45 PM	Vascular Malformations		515B	Laura Findeiss, MD
4:45 PM	5:15 PM	Radiation Safety		515B	Jim O'Brien, MD

MEET OUR PRESENTERS



Osman Ahmed, MD

Rush University

Dr. Osman Ahmed completed his medical training at the University of Illinois College of Medicine in Chicago, Illinois. He attended the University of Chicago for his Diagnostic Radiology Residency and Stanford Hospital for his Vascular and Interventional Fellowship.

Interventional Fellowships. He currently serves as an Assistant Professor with Rush University in Chicago. At Rush, Dr. Ahmed is involved in several initiatives including serving as the Director of IR Research and their Deep Vein Thrombosis Clinic as well as a Quality Assurance Officer.

Dr. Ahmed has been recognized as a leader in the community of IR as well. He has served as the Course Director for the Midwest Vascular and Interventional Radiology Medical Student Symposium. Dr. Ahmed serves as an Editorial Board Member for the SIR's flagship editorial, Journal of Vascular and Interventional Radiology. He has been recognized by the journal as the Top Reviewer in 2017 and 2018. His clinical interests include the treatment of peripheral arterial disease, caval filter retrieval, and Interventional Oncology.

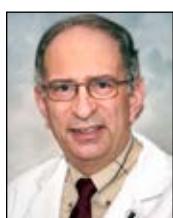


Bulent Arslan, MD, FSIR

Rush University

Dr. Bulent Arslan received his MD from Marmara University School of Medicine in Istanbul, Turkey. He then completed his Radiology Residency and Vascular and Interventional Radiology fellowship at the University of Rochester. He currently is an

Associate Professor and Director of Vascular and Interventional Radiology as well as the fellowship program at Rush University, which he joined in 2012. Dr. Arslan has participated in numerous clinical trials, authored articles in peer-reviewed journals, many abstracts, and book chapters and has presented at national and international meetings. His research and clinical interests include endovascular management of aortic pathology and endovascular interventions for critical limb ischemia. Dr. Arslan has also been a live case presenter for Vascular Interventional Advances, Transcatheter Cardiovascular Therapeutics, and VEITHsymposium.



John Aruny, MD

Yale University Hospital, New Haven

Dr. John Aruny completed his medical training at Autonomous University of Guadalajara in 1983. He then completed a fellowship with Harvard Medical School at Brigham & Womens Hospital. His radiology residency was completed at New

York Medical College and his Vascular and Interventional Fellowship achieved at New York University. Dr. Aruny currently serves as an associate professor and co-chief of Vascular and Interventional Radiology with Yale University.

Dr. Aruny is a long time advocate of AVIR and named our Gold Medal Lecture Award recipient in 2009. An annual contributor to the Shari Ulman foundation he has also been a presenter for our organization for previous annual meetings. He has given several presentations to our organization at our annual meeting. In 1993 Dr. Aruny was named a 'Distinguished Reviewer' for the editorial board of The Journal of Vascular and Interventional Radiology. In 2003 he was given a visiting professorship at The Alfred Hospital in Melbourne, Australia. His clinical interests include the treatment of peripheral vascular disease and aortic aneurysm repair.

Dr. Aruny serves as a reviewer for the Journal of Vascular Access and the JVIR. He's served on several board of directors with the National Kidney Foundation, Vascular Access Society of the Americas, Society of Interventional Radiology, and the Radiological Society of North America.



John Dalfino, MD

Albany Medical Center

Dr. Dalfino received his medical degree at Jefferson Medical College-Thomas Jefferson University in Philadelphia, his residency and his Fellowship in Neuro Endovascular Surgery at Albany Medical Center in Albany, NY. Dr. Dalfino

specializes in the surgical and endovascular management of cerebrovascular disorders of the brain including stroke, cerebral aneurysms, carotid and intracranial vessel disease. In addition to his cerebrovascular practice, Dr. Dalfino has training in functional neurosurgery and spine surgery. He also performs surgical procedures for the diagnosis and treatment of epilepsy, pseudotumor cerebri, chiari malformations, and degenerative spine disease. As a member of the Albany Medical Faculty Physicians, Dr. Dalfino serves as an Assistant Professor of Neurosurgery. We are exhilarated he can share his expertise with us this year!



Joseph DeMarco, DO

Albany Medical Center

Joseph DeMarco received his D.O. Degree at the New York College of Osteopathic Medicine, his residency was obtained through Meadowlands Hospital Medical Center and Atlantic Health System (Morristown/Overlook Medical Centers). He

is currently active in his Fellowship at Albany Medical Center in New York. Dr. DeMarco also moonlights as a radiology attending for Community Care Physicians and has served as a Content Specialist Editor for It's About Time Publishing based in Armonk, NY.

In 2017 he was the recipient of the RSNA Roentgen Resident/Fellow Research Award and in 2015 was awarded the SIR National Case Competition Winner at the annual meeting in Atlanta, GA.

Dr. DeMarco is apart of a variety of professional societies including the Society of Interventional Radiology where he has served as Project Manager/Chief Editor – Resident Survival Guide, 2014-2017, Case Competition Editor, 2014-2016, and Procedural Education Council Leader, GI, GU, Reproduction Service Line, 2014-2017.



Sabeen Dhand, MD

PIH Health

Whittier's One of the most reputed Diagnostic Radiology specialist Dr. Dhand has an outstanding 9 year experience in its subject. He is working as a Doctor of Diagnostic Radiology in Whittier, CA. He is now working with Lambert Radiology Medical Group, Inc in a group of other 13 Doctors. Dr. Sabeen obtained its degree in Diagnostic Radiology from Northwestern University Medical School in the year 2009



Kevin Dickey, MD, FSIR

Wake Forest Baptist Health

Kevin Dickey, M.D., F.S.I.R. serves as the Chief of Radiology of The Hospital of Central Connecticut since May 23, 2013. Mr. Dickey joined HOCC's medical staff and New Britain Radiological Associates, P.C. in 2006, practicing primarily at HOCC's New Britain General campus. He also serves as Director of Interventional Radiology at HOCC, Director of Vein Centers of Connecticut in New Britain and Madison and an Assistant Clinical Professor of Radiology at the University of Connecticut School of Medicine. He completed two years in a General Surgery Internship and Residency at Emory University Affiliated Hospitals, Atlanta; Diagnostic Radiology Residency at University of Vermont College of Medicine, Burlington, Vt. and Fellowship Training in Vascular and Interventional Radiology at Yale University School of Medicine. Before joining New Britain Radiological Associates, P.C., he served as the Chief of Radiology at St. Vincent's Medical Center, Bridgeport. He has also worked at Dartmouth Hitchcock Medical Center in Lebanon, N.H. as Associate Professor and Chief of Interventional Radiology, New Haven Radiology Associates, P.C., New Haven, Yale University School of Medicine and has had several hospital medical staff appointments. He also served the U.S. Naval Reserve as a Lieutenant Commander, Medical Corps. He earned his Medical Degree from Emory University School of Medicine, Atlanta.



Bob Dixon, MD, FSIR

University of North Carolina

Dr. Bob Dixon completed medical school and a Radiology Residency at the State University of New York, Upstate Medical Center in Syracuse, NY. He then completed his Vascular and Interventional Radiology fellowship at the University of North

Carolina in Chapel Hill, NC where he also currently serves as an Associate Professor and the Interventional Fellowship and Residency Program Director. Prior to his career in Radiology, Dr. Dixon also served as an Emergency Medicine Physician for several years. Dr. Dixon has been recognized as a leader within Interventional Radiology for his expertise and passion for teaching. He was inducted into the Academy of Educators as an Associate Fellow and received the Charles A. Bream Teaching Award with the University of North Carolina. He has authored several scientific papers, journal articles, and book chapters. Dr. Dixon has supported the AVIR for several years. He has been an invited lecturer at our annual meeting for several years and also organized a hands-on Radiation Safety Lab Workshop for our organization!



Gail Egan, MS, ANP

Sutter Medical Group

Gail completed her Bachelor's of Science in Nursing at the State University of New York at Albany, her Master of Science in Medical-Surgical Nursing at Russell Sage College, and her Post-Masters Adult Nurse Practitioner at Syracuse University. She has worked in multi areas of nursing including adult oncology and hematology.

Past positions include President of the Association for Vascular Access, Education and Board of Directors for the American Cancer Society, Albany county unit. While working at Albany Medical Center she was appointed to be the clinical instructor of Radiology. In 2010 at the 35th annual Scientific meeting she was awarded the Outstanding Faculty Award.

Over the years she has been involved in multiple research projects and investigations. We are thrilled to have her join us this year to share her expertise on Vascular access!



Meridith Englander, MD, FSIR

Albany Medical Center

Dr. Englander attended medical school at Albany Medical College and completed her Fellowship at Massachusetts General Hospital. She currently serves as an Associate professor at Albany Medical College. In 2015 Dr. Englander was inducted into the prestigious Fellowship Status of the Society of Interventional Radiology. She is heavily involved with the section of Women in IR since 2015, she has become an ever

MEET OUR PRESENTERS

growing and strong voice of women in the Interventional Radiology field. Dr. Englander is also the Vice-Chair, Government Affairs Committee for SIR, Delegate, SIR to the American Medical Association, Member Ex Officio, Executive Council, Economics Committee Member, Government Affairs Committee Member, and Co-Founder of Women in Interventional Radiology.



Dimitrios Filippiadis, MD, PhD

National and Kapodistrian University, Athens Greece

Dr. Dimitrios Filippiadis attended the Medical School Charles' University in Prague Czech Republic. He then completed a post graduate course in Vascular and Interventional at the Medical School of National and Kapodistrian University of Athens. Dr. Filippiadis also obtained a PhD in Quantitative Discmanometry from the Medical School of Athens. He serves on the Scientific Meeting committees with the Cardiovascular and Interventional Radiological Society of Europe, the European Society of Musculoskeletal Radiology, and the Society of Injectable Osteoarticular Biomaterials.



Laura Findeiss, MD, FSIR

Emory Healthcare

Laura Findeiss, MD, FSIR, a radiologist with a diverse professional background that includes training in surgery at the UT Graduate School of Medicine as well as practicing emergency medicine in rural Tennessee. Dr. Findeiss is a noted vascular and interventional radiologist, coming from the University of California Irvine Medical Center where she was Division Chief of Vascular and Interventional Radiology and Co-Director of UC Irvine's Ablative Oncology Center.

Prior to her position in California, Dr. Findeiss practiced in the Vascular Center of Excellence at Charleston Area Medical Center in West Virginia and then served as Chief of Vascular and Interventional Radiology at the University of Utah in Salt Lake City.

Dr. Findeiss received her medical degree from the University of Pittsburgh School of Medicine in 1997 followed by two years of General Surgery Residency at the UT Graduate School of Medicine. She completed her Diagnostic Radiology Residency at Virginia Mason Medical Center in Seattle, Washington, in 2004 followed by a fellowship in Vascular and Interventional Radiology at the University of Washington Medical Center.

Dr. Findeiss lectures nationally on a range of Vascular and Endovascular topics, image-guided treatment of vascular anomalies, and minimally invasive cancer interventions, including tumor ablation. Dr. Findeiss holds national leadership roles as a member of the Executive Council of the Society of Interventional Radiology, the SIR Foundation Board

of Directors, and the Leadership Committee of the American Heart Association's Cardiovascular Radiology and Intervention Council.

Besides certifications in Diagnostic Radiology and Vascular and Interventional Radiology, Dr. Findeiss is certified by the American Board of Vascular Medicine in Endovascular Medicine and is a Registered Physician in Vascular Interpretation. She has been honored as a Fellow in the Society of Interventional Radiology (FSIR), as well as obtaining Fellow status in the American Heart Association. Join me in welcoming, Dr. Findeiss.



Joseph Gemmete, MD, FRCR, FSIR, FAHA

University of Michigan

Dr. Joseph Gemmete is a radiologist in Ann Arbor, Michigan and is affiliated with multiple hospitals in the area, including University of Michigan Hospitals and Health Centers and Veterans Affairs Ann Arbor Healthcare System. He received his medical degree from Wayne State University School of Medicine and has been in practice for more than 20 years. He is one of 123 doctors at University of Michigan Hospitals and Health Centers and one of 83 at Veterans Affairs Ann Arbor Healthcare System who specialize in Radiology. He has been awarded the prestigious honor of being inducted as a Fellow in multiple societies including the Society of Interventional Radiology, the American Heart Association, and the American College of Radiology.



Anne E. Gill, MD

Emory University School of Medicine

Dr. Anne Gill is a pediatric interventional radiologist at Emory University. She received her medical degree at University of Tennessee College of Medicine and completed her Fellowship in Vascular and Interventional Radiology at Emory University.

Her Pediatric Interventional Radiology Fellowship was achieved at the Children's Healthcare Atlanta-Egleston Hospital, one of the only hospitals in the country with a specialized pediatric IR program.

She currently serves as Assistant Professor for the Department of Radiology at Emory University of Medicine.

Dr. Gill is apart of the Society of Pediatric Interventional Radiology's website committee where she writes monthly updates for "Ask Annie" column. She has traveled to Ethiopia where she did various teachings for residents and fellows

including a hands on workshop using a tissue model for hepatic lesions.

Her research interests include radiation safety in fluoroscopic guided procedures, quality improvement projects, as well as educational reference guide of typical IR devices and suggested best end use. Clinical research interests include intravascular ultrasound applications in pediatric interventional procedures, applications for ablation treatment in primary and metastatic tumors. Dr. Gill is also working on developing a less than 3 French coaxial catheter system for arterial access in <10kg pediatric patients.



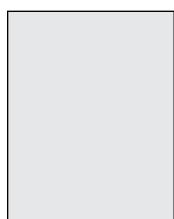
Jafar Golzarian, MD, FSIR

University of Minnesota

Dr. Golzarian acquired his medical degree at University of Brussels School of Medicine and his Interventional Radiology Fellowship at Erasme Hospital in Brussels. He is currently the Director of Vascular and Interventional Radiology at the University of Minnesota Medical Center.

Dr. Golzarian is the founder and Chief Medical Officer of EmboMedics and inventor of the Company's technology. He is an Interventional Radiologist, certified by the American Board of Radiology, and an internationally recognized expert and opinion leader in the field of embolization. Dr. Golzarian is a pioneer in the field of embolization, having performed multiple first-time procedures using microsphere technology in the United States for several indications. He is the author of more than 60 peer reviewed articles. Dr. Golzarian has served as Professor of Radiology and Surgery, and Division Head, Interventional Radiology and Vascular Imaging, at the University of Minnesota since 2008. From 2003 to 2008, he was a Professor of Radiology at The University of Iowa Hospitals and Clinics, and from 1994 to 2003 he was Chef de Clinic Adjoint at Erasme Hospital, University of Brussels. He graduated from the University of Brussels School of Medicine, Brussels, Belgium in 1988 and, from 1988 to 1994, held a Residency in Radiology and a Fellowship in Interventional Radiology at Erasme Hospital, University of Brussels.

He is the cofounder and coorganizer of GEST. He has also served as Program Chair for SIR. Please welcome Dr. Jafar Golzarian.



Arturo Gonzalez, MD

University Hospital and Clinics/LGH

Dr. Gonzalez received his MD at Universidad Automa de Guadajara, Mexico. His Residency was completed at Houston Methodist, General Surgery and his Internship at Zaragoza General Hospital in Mexico City. Dr. Gonzalez participated

in a visiting Fellowship to multiple hospitals. He currently is an Associate Professor in Radiology at Louisiana State University and Medical Director of Interventional Radiology and Radiology.



Andrew Gunn, MD

University of Alabama

AJ Gunn, M.D. graduated magna cum laude from Brigham Young University in Provo, UT earning a BS in exercise physiology with a minor in sociology. He then returned home to South Dakota to attend medical school at the University of South Dakota. During medical school, he participated in the competitive Howard Hughes Medical Institute – National Institutes of Health Research Scholars Program and was awarded the Donald L. Alcott, M.D. Award for Clinical Promise. He graduated summa cum laude in 2009. He completed his diagnostic radiology residency at the Massachusetts General Hospital of Harvard Medical School in Boston, MA followed by a fellowship in vascular and interventional radiology at the Johns Hopkins Hospital in Baltimore, MD where he served as chief fellow.

Prior to joining the faculty at the University of Alabama at Birmingham, Dr. Gunn worked as an attending interventional radiologist at Washington University School of Medicine in St. Louis. He has written and lectured regarding patient-centered care in radiology and has interests in the clinical aspects of interventional radiology in addition to patient safety and quality of care. Currently, he is spearheading the division's efforts to establish an outpatient interventional radiology clinic. He serves as a reviewer for multiple journals and as a section editor for a national database of teaching files tailored to radiology trainees. Clinically, Dr. Gunn practices the full spectrum of interventional radiology with a special focus on treating cancer through minimally-invasive techniques such as chemoembolization, radioembolization, and ablation. Additionally, he has interest in IVC filter retrievals and treating women with uterine fibroids.



Ziv Haskal, MD, FACR, FAHA, FSIR, FCIRSE, FBSIR

University of Virginia

Dr. Ziv Haskal received his MD from Boston University School of Medicine in Boston Massachusetts. He completed his Diagnostic Radiology Residency and Fellowship with the University of California in San Francisco. He currently serves as a Professor of Radiology at the University of Virginia in Charlottesville, Virginia.

As a sought after educator, he has given more than 500 invited lectures worldwide and has been awarded numerous honorary fellowships, national, international, and societal awards for leadership, service, and research excellence. He has designed, participated and led more than 40 research trials. He has

MEET OUR PRESENTERS

published more than 400 scientific manuscripts, chapters, abstracts, and editorials in journals. He co-founded the world's largest scientific congress on Embolization (GEST) and led the Society of Interventional Radiology's Annual Scientific Meeting. His clinical interests include oncology, portal hypertension, venous disease, liver transplantation, peripheral vascular disease, human gene therapy, and hemodialysis maintenance.

Dr. Haskal is the editor in chief of two peer reviewed journals, Journal of Vascular and Interventional Radiology (JVIR) and Gastrointestinal Intervention. He serves in many leadership roles including SIR's Executive Council, Board of Trustees, and Research Foundation board. He has chaired numerous committees with the American Heart Association, American College of Radiology, and the American College of Cardiology.



Alisha Hawrylack, RT, R, VI

University of Virginia

Alisha Hawrylack completed her Radiography schooling with the University of Virginia in Charlottesville, VA. She then attended the Charles J. Tegtmeyer School of Angiography for her vascular and interventional training. Alisha currently

works at the University of Virginia where she also serves as the Program Director for the Charles J. Tegtmeyer School of Angiography. This program is a sought after didactic and clinical program training radiologic technologists to become highly skilled interventional professionals. In addition to overseeing the school's day to day activities, she teaches several classes within the program. Alisha was named the University's Clinical Instructor of the Year in 2009, 2011, 2014, and 2015. Outside of her institution, Alisha serves on an Advisory Board for Piedmont Virginia Community College's Radiography program. She has been on the AVIR Board of Directors since 2014 in numerous roles such as secretary, president-elect, and her upcoming role as president. During her tenure with the AVIR she has served as the

Chairman of the Education Committee that is dedicated to providing consistent and relevant education to meet the needs of our membership. Alisha played a key role in the development of the AVIR's new online education portal. She has been an invited lecturer at several AVIR meetings and VI workshops in California, Virginia, Georgia, Vancouver, and Washington DC.



Susan Jackson, MBA, RT, R, CV

Board Member, CEO
Interventional Initiative

Ms. Jackson is Co-founder and CEO of the II(Interventional Initiative), Co-creator, Contributing Writer and Producer of the documentary series, Without a Scalpel and

Executive Director of Western Angiographic & Interventional Society. Ms. Jackson actively participates in the strategic planning process and assists in implementing and monitoring the goals of the II. The mission is to educate and engage the public about the value and life-changing treatment options from minimally invasive, image guided procedures (MIIPs). Ms. Jackson's education includes receiving her Associate Degree in Radiologic Technology at Presbyterian Hospital School of Radiologic Technology, her Bachelor of Science at Metropolitan State University, and her Masters in Business Administration at Regis University.



Neal Khurana, MS, MD

VIR Chicago

Dr. Neal Khurana received his M.D. from Chicago Medical School Rosalind Franklin University. He then completed his Diagnostic Radiology Residency and Vascular and Interventional Radiology Fellowship at Rush University in Chicago, Illinois. He is currently employed with Vascular and Interventional Professionals, LLC in Chicago. Dr. Khurana has served as the Vice President and President of the Chicago Radiological Society's Residents and Fellows Section as well as on the Student Advising Committee for the Chicago Medical School. Dr Khurana is an advocate for technologist education and the Association of Vascular and Interventional Radiographers. He has given presentations for local chapters within Illinois and Wisconsin. Dr. Khurana has authored several papers on the treatment of uterine fibroids and peripheral arterial disease.



Anil Kurup, MD

Mayo Clinic Rochester

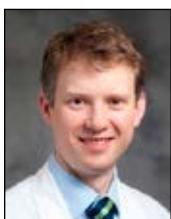
Presently Dr. Kurup is a consultant in Radiology and an Associate Professor of Radiology at Mayo Clinic. Dr. Kurup received his MD at Mayo Medical School, Mayo Clinic College of Medicine, his BA in Economics, and his BS in Biological Sciences at Stanford University. His traditional internship was completed at Scripps Mercy Hospital. His Residency was attained through Mayo Clinic and he then completed his Fellowship at Massachusetts General Hospital. Some of his honors and awards include receiving the Magna Cum Laude - Radiological Society of North America, Chicago, Illinois Digital Poster and Exhibit: "Frozen Bones: Multimodality Imaging Appearance after Cryoablation of Bone Tumors" in 2016. Dr. Kurup is apart of multiple societies and serves as a journal reviewer on the Journal of Vascular and Interventional Radiology and several others. We are very excited to have him join AVIR at this years annual meeting.



Elvira Lang, MD, FSIR, FSCEH
Former Associate Professor of Radiology at Harvard Medical

Comfort Talk ® founder and award-winning interventional radiologist Dr. Elvira Lang is a former Associate Professor of Radiology at Harvard Medical School, and a pioneer and leading world expert in the use of hypnosis

during medical procedures. In fact, she literally "wrote the book" on the subject. Patient Sedation Without Medication draws on Dr. Lang's nearly two decades of field experience serving thousands of patients. She has held faculty positions at the University of Heidelberg, Stanford University, the University of Iowa, and Harvard Medical School. With a substantive government-funded research program she demonstrated in three large-scale prospective randomized studies with more than 700 patients that hypnosis on the procedure table reduces pain, anxiety, drug use, and complications. This work provided much of the evidence-based foundation for widespread acceptance of procedural hypnosis. She has been in practice for over 30 years, and was the Former Associate Professor of Radiology and Director of Interventional Radiology at the University of Iowa Hospital and Clinics. More than 150 research papers and chapters, Dr. Lang has presented and analyzed medical procedures and interactions with healthcare professionals as well as the effects of patients' age and disposition on outcomes. She has developed and rigorously tested training in methods of advanced rapport skills and hypnoidal language for busy healthcare professionals who have no extra time to spare. Her research work has been acknowledged with the Ernest R. Hilgard Award for Scientific Excellence for a Lifetime of Published Experimental Work.



William Lea, MD
Medical College of Wisconsin

Dr. William Lea completed his Medical Degree at Vanderbilt University in Nashville Tennessee. He attended Indiana University for his Diagnostic Radiology Residency. Dr. Lea completed his Vascular and Interventional Fellowship with the Medical College of Wisconsin where he currently serves as an Assistant Professor in Milwaukee, Wisconsin.

Dr. Lea serves as a Reviewer for the Educational Exhibits for the Radiological Society of North America. He has given several presentations throughout the community and at several medical student symposiums throughout Wisconsin on peripheral arterial and aortic disease. His clinical interests include interventional oncology in for the treatment of primary and bone metastasis. He is a great advocate for technologist education and has implemented a process improvement project with his technologists to improve the workflow during musculoskeletal interventions.



Mark Lessne, MD
Charlotte Radiology, John Hopkins Hospital

Dr. Mark Lessne completed his medical training with Boston University in Boston, MA. He completed his Radiology Residency and Vascular and Interventional Fellowship with Duke University in Durham, NC. He currently practices with Charlotte Radiology and serves as an adjunct Assistant Professor of Radiology/Graduate Fellowship Program Director, and Physician Assistant Program Director at John Hopkin's University. Dr. Lessne is a member of Society of Interventional Radiology, Radiologic Society of North America, American College of Radiology, and the North American Society for Cardiovascular Imaging. Dr. Lessne launched the RAD-AID Cancer Imaging and Treatment initiative in 2014 in conjunction with ASRT Foundation and Project HOPE in Yinchuan, China. This program sent the first two delegations to China in 2014. He currently serves as the Director of the Radiology and Radiation Oncology Outreach program where he aims to improve the practice of radiation oncology and IR in China through education and global collaboration. Dr. Lessne has authored several journal articles and given numerous lectures on caval filter removal including the removal of permanent and embedded filters. He serves as a reviewer for the Journal of Urology, Cardiovascular and Interventional Radiology, British Journal Medical Case review, and the Journal of Vascular and Interventional Radiology. Dr. Lessne has been named Teacher of the Year from John Hopkin's Vascular and Interventional Fellowship as well as Duke University's Department of Radiology, Medical School, and Physician Assistant Program.



Sreekumar Madassery, MD
Rush University

Dr. Madassery attended medical school at Chicago Medical School, Rosalind Franklin University of Medicine & Science And received his Medical Doctorate Degree. He completed his Fellowship at Rush Medical Center in Chicago. He currently serves as Assistant Professor of Vascular and Interventional Radiology Since 2015 at Rush. During his Residency in 2014, he received the VIVA Interventional Radiology Conference Face Off Scholarship Award. He currently serves as Director in Advanced Vascular & Interventional Radiology Fellowship, Director at Rush IVC Filter Clinic, and Director for the Midwest Angio Club. Dr. Madassery is very active on Twitter with case presentations and education.



Anuj Malhotra, MD
Weill Cornell Medical Center

Dr. Malhotra received his medical degree at New York Medical College in Valhalla, NY and his Fellowship at Albany Medical Center. He currently is an attending and

MEET OUR PRESENTERS

Assistant Professor at Weill Cornell Medical Center. His professional society memberships include the Society of Interventional Radiology, Radiological Society of North America, and the American Medical Association.

In 2012, he was nominated and attended the Introduction to Academic Radiology Program co-sponsored by the RSNA, Association of University of Radiologists, and the American Roentgen Ray Society. The goal of this program to introduce residents to who are interested and involved in research to academic radiology in the second year of their residences. It also demonstrates the importance of research in diagnostic radiology, illustrates the excitement of academic careers, and exposes residents to successful clinical radiology researchers. In 2017 at the annual meeting Dr. Malhotra presented a poster abstract on the use of the PowerWire Radiofrequency Guidewire in the Treatment of Chronic Venous Occlusions. We are very excited to have him join us this year!



**Stefanie Manack, CRA, BS,
RT(R)(M)(VI)(ARRT)**
University of Chicago Medicine

Highly driven and engaged Certified Radiology Administrator with eight years of leadership experience and thirteen years of experience as a registered technologist certified in multiple imaging modalities.

Forward-thinking strategic leader with a proven track record in change management, culture development, process improvement and relationship building. Ms. Manack is a professionally engaged and passionate servant leader able to connect team-building, professional development, empowering others and creating an environment of personal and professional success to bridge service lines, improve Employee Engagement and directly benefit the business bottom line.

The Interventional Radiology department Ms. Manack works at performs over 7000 procedures annually with a team of eight Attending Radiologists, two Fellows, four Advanced Practice Nurses and a staff of 27 technologists, nurses and support staff. Successful management of this dynamic department includes daily operations, budget/expense activity, vendor relationships, equipment purchases, physician relationships across service lines and staffing needs for this 6 suite multi-disciplinary practice.

Stefanie Manack's accomplishments include being Co-Chair, Interventional Radiology Level 1 Trauma Technical Review and Preparation Committee, co-facilitator of department Value Analysis Team (VAT) realizing \$144,000 in quality-driven sustainable cost savings, and on-track to exceed \$120,000, and Increased Outpatient On-Time First Case Starts from baseline of 8% to over 75%.



Janice Newsome, MD,
Emory University

Dr. Janice Newsome is an Assistant Professor with Emory University where she also serves as the Director of Vascular and Interventional Radiology. She completed her medical degree with Mount Sinai School of Medicine in New York, NY. She attended

the Medical College of Virginia with Commonwealth University where she completed a Surgery Internship and Residency, and Diagnostic Radiology Residency. She also worked as a Research Assistant during that time. She then attended Miami Cardiac and Vascular Institute for her Vascular and Interventional Fellowship. Dr. Newsome is heavily engaged in education within her institution and the community. She's participated in numerous community outreach programs including SIR's Legs for Life Screening and workshops for INOVA Women's Expo Outreach. She's participated in imaging courses for undergraduate education in vascular anatomy and image guided procedures. She chairs Emory University's Annual Interventional Radiology Medical Student Symposium and in 2016, she received the Outstanding Faculty Award from the University's School of Medicine. Dr. Newsome's clinical interests include interventional treatment of uterine fibroids, is an active member of the Society of Interventional Radiology and serves on their Diversity and Inclusion Committee and has served as a scientific poster examiner



Isabel Newton, MD
Chairperson of the Board, Secretary
Interventional Initiative

Dr. Newton is a physician-scientist practicing in the field of Interventional Radiology at the VA San Diego Healthcare System and UCSD. She is Co-creator, Contributing Writer and Director of the documentary series, Without a Scalpel. Dr. Newton attended Wake Forest University School of Medicine where she received her PhD in 2004 and her MD in 2006. Her Internship was completed at Moses Cone Hospital and completed a T32 Clinician-Scientist Residency Program at the University of California. Dr. Newton then pursued a Fellowship in Vascular and Interventional Radiology also at the University of California.



Jim O'Brien Jr., MMSc, DABR
Landauer Medical Physics

Jim received his Bachelor of Science, Physics (Pre-Med) at Auburn University, AL. His Master of Medical Science in Radiation Physics at Emory University, GA. His professional memberships include the AAPM – American Association of Physicists

In Medicine, HPS -Health Physics Society, and PMI – Project Management Institute. He has participated in multiple workshops and educational programs over the years for

quality measurement including Mammo, CT, MRI, NucMed/PET, and Ultrasound.

Member of the USAF team for nuclear weapons and radiation accidents. Chief of the USAF Radiation Calibration facility for instrument calibrations and dosimetry irradiations. Designed, developed, and installed several large irradiators for DOE facility calibration laboratories.



Rahmi Oklu, MD
Mayo Clinic Arizona

The research conducted by Rahmi Oklu, M.D., Ph.D., is primarily based on patient-inspired bioengineering. As an interventional radiologist, Dr. Oklu treats a wide variety of disease conditions including venous and arterial disease and cancer; patients with these conditions are the inspiration for his research.

Dr. Oklu's work includes novel biomaterials as a tool to treat acute and chronic bleeding, bioengineering approaches to deliver and to capture drugs or byproducts of metabolism, biosensors on intravascular and indwelling catheters, and new medical devices for the treatment of venous thrombosis, catheter infections and obesity.

Dr. Oklu hopes that through his research, better minimally invasive medical devices will be developed to detect, diagnose, and treat acute and chronic diseases. A significant number of patients succumb to cancer, vascular disease and obesity, but through novel, patient-inspired bioengineering approaches, Dr. Oklu aims to treat or even cure common conditions that affect patients today.

Dr. Oklu is the Co-Chair in Micro and Nanotechnologies in Medicine in Cambridge, MA. Editor in Chief for the Journal of Vascular Diagnostics and Interventions, Recipient of the Outstanding Young Clinician Award from the Center for Integration of Medicine and Innovative Technology in Boston, MA, and the Recipient of the Junior Faculty Investigator Award from the American College of Phlebology in 2011.



Constantino Pena, MD
Miami Cardiac and Vascular Institute

Dr. Pena received his medical degree at Yale University School of Medicine and his Vascular Fellowship at Massachusetts General Hospital. He currently serves as the Director of Vascular Imaging at Baptist Cardiac and Vascular Institute Baptist Hospital and as the Interventional Cardiology/Cardiac Surgery QA Committee.

Dr. Pena has been in practice for over 24 years. Past positions include Director of Interventional Radiology at Mercy Hospital in Miami. His experience also includes a staff position in abdominal imaging and intervention at Massachusetts General Hospital. During his years there, he also was a clinical

fellow in radiology at Harvard Medical School, and later an instructor of radiology at Harvard Medical School. He serves as the program director for the International Symposium on Endovascular Therapy (ISET) and Symposium on Clinical Interventional Oncology (CIO). 12

Dr. Pena has authored and co-authored many scientific articles and chapters that have been published in medical journals, including the Journal of Vascular and Interventional Radiology, Journal of Vascular Surgery, and American Journal of Radiology. He has also presented numerous lectures and education sessions for doctors on clinical research trials, atherosclerotic occlusive disease, aortic aneurysms, uterine artery embolization, peripheral angiography and Vascular imaging.



David Prologo, MD, FSIR, ABOM-D
Emory University

Dr. Prologo completed his medical training at Ohio State University. He then Completed his Diagnostic Radiology Residency at University Hospitals Case Medical Center and his Vascular and Interventional Fellowship at Case Western Reserve School of Medicine in Cleveland, Ohio. He is currently an Assistant Professor with Emory University in Atlanta, Georgia where he also serves as the Director of Interventional Radiology as well as the Division's Animal Research Lab.

Dr. Prologo serves on several committees with the Society of Interventional Radiology including their Government Relations, Foundation Grant Awards, and Economics Committees. He serves as an Abstract and Manuscript Reviewer for the Journal of Vascular and Interventional Radiology, Diagnostic and Interventional Radiology, and Clinical Radiology. Dr. Prologo has an extensive publication record and has been recognized for the Distinguished Plenary Presentation Award by SIR and a Top Reviewer for JVIR. In 2017, Dr. Prologo was inducted into SIR's prestigious Fellowship. Dr. Prologo's academic work is centered around stem cell therapy and the expansion of palliative interventions for pain management.



Anne Roberts, MD, FSIR

UCSD Medical Center/Thornton Hospital
Dr. Roberts received her medical degree from the University of California and completed her residency at Diagnostic Radiology, Massachusetts General Hospital. She then went on to a Fellowship in Vascular Radiology also at Massachusetts General Hospital.

Past positions include being an associate, assistant, and professor in clinical radiology at the University of California. She has also been the Chief of Vascular and Interventional Radiology, Interim Chair, and Executive Vice Chair in the department of Radiology.

MEET OUR PRESENTERS

Dr. Roberts has been apart a number of professional societies over the years as well as being the Society of Interventional Radiology's President in 1996 when it was formerly known as Society of Cardiovascular and Interventional Radiology. In 2004 she gave the Dotter Lecture at the annual scientific meeting and in 2015 was the recipient of the Gold Medal Award of the Society of Interventional Radiology. Dr. Roberts not only has been heavily involved with SIR she has also been the president of the Western Angiographic and Interventional Society in 1995.

Dr. Roberts has been awarded multiple prestigious awards and recognition for her dedication to this field. America has noticed her efforts as well, she has been bestowed the honor of Best Doctor in America 2003-2015. We are very excited to hear from her at this years meeting!



Jon Roberts, RT, R, VI

Siemens Healthineers

Siemens Healthineers- Clinical Applications Specialist; Advanced/Angio Therapies Division

Jon Roberts received his Radiology education with the University of Minnesota Duluth College in Lake Superior, MN.

He has worked as a Lead Surgical Radiology Technologist with Olathe Medical Center in Olathe, Kansas. He then served with Saint Lukes Hospital in Kansas City, Missouri as a Lead Vascular and Interventional Technologist. Jon currently works with Siemens Healthineers where he has served as a Clinical Applications Specialist in the Advanced / Angio Therapies Division. His primary duties involve providing clinical and case support with 3D Navigation in Neuro and Vascular Interventions in Vascular and Interventional Radiology.



Wael Saad, MB.BCh, FSIR

University of Michigan Medical Center

Dr. Saad has been a leading expert in the field of Interventional Radiology since 2003. He is the co-founder and organizer of MEET IO, Middle East Endovascular Therapy & Interventional Oncology Symposium, MEET-Stroke, Middle East Endovascular Therapy of Stroke & Neurovascular Disease Symposium, and MEET-Aorta, Middle East Therapy of Aorta & Vascular Disease Symposium. These meetings are an annual International and regional conference with an annual attendance of over 500. Currently Dr. Saad serves as the Director of the Division of Vascular & Interventional Radiology and a clinical attending at the University of Michigan, Ann Arbor, MI. Current leadership also includes, Director of the section of Neuro-Interventional Radiology & Hybrid Operating Rooms. Past postions held include Director of Interventional Radiology Residency Program.

Dr. Saad received his medical degree at Ain Shams University in Cairo, Egypt in 1995, served in the mandatory medical military service for 14 months with Egyptian Armed Forces, Egypt, his Radiology residency at the University of Rochester Medical

Center in Rochester, NY and his Interventional Radiology Fellowship at Mallinckrodt Institute of Radiology, Washington University, St. Louis, MO.

Dr. Saad has been awarded America's Top Doctors in Vascular & Interventional Radiology from 2014-present and is the 2018 recipient of the AVIR, Association of Vascular and Interventional Radiographers, Gold Medal Award.

Research projects include a number of national multi-center clinical trials and has spoken at conferences around the world. Accomplishments also include publishings in JVIR, Journal of Vascular and Interventional Radiology and SCVS, Sociey for Clinical Vascular Surgery, and ACR, American College of Radiology.



Frank G. Shellock, Ph.D., FISM RM, FACC, FACSM

University of Southern California

Frank G. Shellock, Ph.D. is a physiologist with more than 30 years of experience conducting laboratory and clinical investigations in the field of magnetic resonance imaging. He is an Adjunct

Clinical Professor of Radiology and Medicine at the Keck School of Medicine, University of Southern California, Adjunct Professor of Clinical Physical Therapy, Division of Biokinesiology and Physical Therapy, School of Dentistry, University of Southern California and the Director of MRI Studies at the Biomimetic Microelectronic Systems, National Science Foundation (NSF) - Engineering Research Center, University of Southern California, and the Founder of the Institute for Magnetic Resonance Safety, Education, and Research (www.IMRSER.org). As a commitment to the field of MRI safety, bioeffects, and patient management, he created and maintains the internationally popular web site, www.MRIsafety.com.

Dr. Shellock has authored or co-authored more than 250 publications in the peer-reviewed literature. He co-authored the MRI safety section of the Cardiovascular MR Self-Assessment Program (CMR-SAP) for the American College of Cardiology and three of his medical textbooks are considered best sellers - Reference Manual for Magnetic Resonance Safety, Implants and Devices; Magnetic Resonance Procedures: Health Effects and Safety; and Kinematic MRI of the Joints: Functional Anatomy, Kinesiology, and Clinical Applications. His latest hardbound textbook includes contributions from more than forty internationally respected authors and is entitled, MRI Bioeffects, Safety, and Patient Management.

Dr. Shellock's company, Magnetic Resonance Safety Testing Services, specializes in the assessment of MRI issues for implants and devices, as well as the evaluation of electromagnetic field-related bioeffects (www.MagneticResonanceSafetyTesting.com).

**Rob Sheridan, FAVIR**

Massachusetts General Hospital

Director of IR responsible for all aspects of clinical and administrative operations of Interventional Radiology and the direct supervision 100 technical, administrative and nursing staff members supporting IR. Rob manages the overall strategic

planning for IR preparing and managing ~20 million dollar operating budget. Functioning in a pure matrix org structure, he also oversees all invasive procedures across the Imaging department across all modalities including US, CT and RF with responsibility for the oversight of Interventional Administrative staff, Interventional technologist, Nursing staff, Nurse Practitioners and Physician Assistants. Director of IR outpatient clinic operations.

In 1996 Rob began as a staff technologist and over the years has worked his way to becoming the Director of IR. He is very involved with the education aspect in IR and has developed an A.S. to B.S. in Imaging Program with IR concentration, Regis College.

Rob has been as AVIR member since 2006. He has been on the board of directors as treasurer, Vice President, and as President. He will join the board of directors again this incoming year as the Secretary/Treasurer position.

**Aaron Shiloh, MD**

Shiloh Institute, Philadelphia, PA

Aaron Shiloh, MD, FSIR takes great pride in his ability to diagnose and treat medical conditions ranging from the simplest to the most complex. As one of the premier interventionalists in the tri state area, Dr. Shiloh has spent his career using minimally invasive techniques to manage various diseases. Dr. Shiloh is expert in all aspects of treatment of vascular conditions with a particular interest in venous diseases.

Aaron Shiloh, MD, FSIR began his education at the Pennsylvania State University where he earned a Bachelor of Science in Premedicine with distinction. He earned an honors degree through the Schreyer Scholars program through additional classes and by writing an honors thesis on the role of Phosphodiesterase Type IV in the regulation of the canine basilar artery.

Aaron matriculated to the University of Pennsylvania School of medicine where he earned AOA honors graduating in the top 10% of his class. After a year of general surgery internship at the Hospital of the University of Pennsylvania, he moved on to a residency in radiology at Thomas Jefferson University Hospital. After serving as chief resident, he completed a cardiovascular and interventional radiology fellowship also at Thomas Jefferson Hospital.

Aaron Shiloh, MD, FSIR, is double board certified in radiology and interventional radiology (IR). Dr. Shiloh was recently awarded fellowship in the society of interventional radiology, a

distinction granted to only 10% of all doctors in this field.

Dr Shiloh has served his group in multiple capacities and has been the section chief of IR for over 5 years managing multiple hospitals and physicians. He has been elected to the leadership of the Philadelphia Angiography and Interventional Radiology Society serving as Secretary/Treasurer, Vice President, and President.

Dr Shiloh has developed a reputation as an extraordinary physician in the Philadelphia and tri state area. He has been featured in the IR quarterly. Locally, Dr. Shiloh was featured on the local abc and nbc affiliates regarding cutting edge treatments for venous disease and women's health.

**Margaret Simor, MSN, BSN, RN**Board Member, Treasurer
Interventional Initiative

Ms. Simor is a Registered Nurse and former hospital administrator with expertise in the executive management of Minimally Invasive, Image-guided procedures. She has designed and managed quality assurance and patient outcome programs for several major hospitals in the SF Bay Area. Ms. Simon's education includes receiving her BSN at the University of San Francisco and her MSN at CS University Dominguez Hills.

**Gary Siskin, MD, FSIR**

Albany Medical Center

Dr. Siskin received his medical degree at Mount Sinai School of Medicine. He then finished his residency at King's County Hospital Center in Brooklyn, NY. Afterwards he completed a CardioVascular and Interventional Radiology Fellowship at Columbia Presbyterian Medical Center. Currently he serves as Department of Radiology Chair and Director of Vascular and Interventional Radiology with Albany Medical Center.

Dr. Siskin has received numerous prestigious awards for his contributions to the field of IR. He holds many publications including the book he wrote titled, Interventional Radiology in Women's Health and co-authored Embolization Therapy:Principles and Clinical Applications. Heavily involved with SIR, he also has received the Distinguished Faculty Award at the annual scientific meeting in 2000, 2001, and in 2005. In 2002 he was inducted into SIR's renowned fellowship. He serves on the Journal of Vascular and Interventional Radiology's editorial board, is Co-Chairman of the Economics Committee, and is an editor of the society newsletter. He has also coordinated the scientific sessions for gynecological interventions at the national meeting from 2002-2007. In 2013, he lead the way in New Orleans as the Program Chair for the 38th annual scientific meeting. Along with Dr. Siskin's contributions to the society, he has been a longtime advocate for AVIR and was awarded our Gold Medal Lecture winner in 2013.

MEET OUR PRESENTERS



Michele Tessmer, MBA

Interventional Initiative

Ms. Tessmer is a dynamic and versatile strategic marketer with 10+ years and variety of healthcare experience across roles of increasing responsibility within management consulting and medical device firms, encompassing strategy, global downstream and upstream product management, and research and analytics. Proven track record of planning and executing global Voice of Customer, advisory boards, and creative analytics to drive project-based decision support and inform strategic plan, launching new products and managing product portfolios, evaluating and presenting investment opportunities, guiding product development, and coaching and mentoring team members.



Srinivas Tummala, MD

Reston Radiology Consultants

Srinivas Tummala, MD is a practicing Radiologist in Reston, VA. Dr. Tummala graduated from University of Michigan Medical School in 1995 and has been in practice for 22 years. He completed a residency at University of Wisconsin. Dr. Tummala also specializes in Diagnostic Radiology. He currently practices at Reston Radiology Consultants and is affiliated with LewisGale Hospital Alleghany. Dr. Tummala accepts multiple insurance plans including Medicare, Cigna and PacifiCare (UnitedHealthcare). Dr. Tummala is board certified in Radiology. Dr. Tummala also practices at Reston Radiology Consultants in Reston, VA.



Sean Tutton, MD, FSIR

Medical College of Wisconsin

Dr. Sean Tutton completed his medical education at New Jersey Medical School. He then attended Northwestern University in Chicago, IL for his Diagnostic Radiology Residency and Vascular & Interventional Fellowship. He currently serves as a Professor and Chief of Vascular and Interventional Radiology with the Medical College of Wisconsin.

Dr. Tutton serves on the Editorial Boards for the Journal of Vascular and Interventional Radiology as well as the Scientific Meeting for the Society of Interventional Radiology. He has been elected to several national leadership roles. He was inducted into the Society of Interventional Radiology's prestigious Fellowship in 2007. He serves on several committees with the society including the Government Affairs and Carrier Advisory committees. He is the Chairman of the Economics Committee and serves as an Advisor the RUC Committee. He also holds positions with the American College of Radiology, American Roentgen Ray Society, and

Groupe de Recherche Interdisciplinaire sur les Biomatériaux Ostéoarticulaires Injectables (GRIBOI). Dr. Tutton has been recognized nationally and internationally as a leader in Interventional Oncology and musculoskeletal intervention.



Rafael Vazquez, MD

Massachusetts General Hospital

Dr. Rafael Vazquez is an anesthesiologist in Boston, Massachusetts and is affiliated with Massachusetts General Hospital. He received his medical degree from Weill Cornell Medical College of Cornell University and has been in practice between

11-20 years. He is the director of Anesthesia for Interventional Radiology. Current memberships include: American Society of Anesthesiologists(ASA), Anesthesia Society of Regional Anesthesia and Pain Medicine (ASRA), Society for Interventional Radiology (SIR), and Society for Non OR Intervention and Anesthesia (SONORIA).

Awarded "Best Verbal Feedback" distinction by MGH anesthesia residents on the annual program survey.

Selected by the Massachusetts General Hospital Partners Healthcare system for training in management of healthcare teams to improve clinical processes.

As section chief of interventional radiology (IR) Dr. Vazquez was tasked with enhancing the collaboration between the department of interventional radiology and anesthesiology. The main goal was to implement a sustainable infrastructure to improve workflow efficiency and enhance patient safety. The IR anesthesia improvement project involved building a dedicated IR anesthesia team, collaborating with IR leadership to optimize patient scheduling with IR anesthesia and nursing resources. The initiative also involved improving anesthesia delivery systems in an effort to improve patient safety. He was able to negotiate with engineering, pharmacy, and clinical coordinators to update ventilators, obtain anesthesia workstations with ability to store controlled medications, and obtain updated airway equipment. Working actively to improve interpersonal communication by implementing a real time voice communication badges for clinical staff. Other initiatives that have been set forth included monthly leadership meetings and development of post anesthesia care guidelines for IR patients receiving Monitored Anesthesia Care and anesthesia guidelines for standardizing anesthesia delivery. To date the anesthesia IR patient volume has increased by 90%.



Clifford Weiss, MD, FSIR

John Hopkins University

Dr. Clifford Weiss completed his medical degree, Diagnostic Radiology Residency as well as his Vascular and Interventional Fellowship with John Hopkins University in Maryland. He currently serves as an Associate Professor with the institution.

His administrative roles include serving as the Director of IR Research and the Medical Director of Bioengineering, Innovation, and Design.

The focus of Dr. Weiss' research is the development of Bariatric Embolization, a new, minimally invasive endovascular approach for the treatment of Obesity. Dr. Weiss is the PI or co-PI on a number of pre clinical grants relating to this work, and is the co-PI of the BEAT Obesity trial.

Dr. Weiss' research has also focused on research related to his clinical practice including the development and implementation Interventional MRI techniques, improving the diagnosis, treatment and outcomes assessment for patients with vascular malformations (including HHT and pulmonary AVM), and the interventional treatment of Pulmonary Embolism (including IVC filtration).

Dr. Weiss has mentored many Undergraduate and Masters CBID teams, and has advised on the design and development of numerous devices related to Vascular and Interventional Radiology, with a particular focus on vascular access and hemodialysis.



Kristen Welch, RT, R, VI

Medical College of Wisconsin

Kristen Welch attended Wheaton Franciscan Healthcare School of Radiologic Technology in Racine, Wisconsin. She then completed an internship in Vascular and Interventional Radiology with Froedtert Hospital. She currently works as an

interventional Technologist at Froedtert and the Medical College of Wisconsin. At this institution Kristen assists with training interns and new hires and is on the IR Practice Council Committee that leads process improvement within the department. Kristen is a co-chair for her local AVIR chapter within Wisconsin; one of the largest chapters within the country. She has been involved with the organization since 2013. She joined the AVIR's national Board of Directors in 2016 as the Annual Meeting Chair working to plan the annual meeting held in conjunction with the Society of Interventional Radiology. In 2017 she will be transitioning into a new role as the organization's President-Elect and the Chairman of the Education Committee. In this role she will be working to provide membership with consistent and relevant educational opportunities that adhere to our field's evolving educational requirements.



Sarah B. White, MD, MS, FSIR

Medical College of Wisconsin

Dr. Sarah White completed her medical education with the University of Medicine and Dentistry of New Jersey. She then completed her Radiology and Surgery Residencies with the University of

Pennsylvania where she also completed her Vascular and Interventional Fellowship. She has also received a Master of Science in Clinical Investigation from Northwestern University in Chicago, Illinois. Dr. White specializes in Interventional oncology. She currently runs a translational oncology laboratory that focuses on selective delivery of nanotechnology based drug delivery platforms for the treatment of primary and metastatic liver tumors. She began her career in research in a molecular biology laboratory at the University of Pennsylvania and has also spent time at the National Institutes of Health. She has received numerous awards for research from several organizations including the Society of Interventional Radiology, the Association of University Radiologists, the Radiologic Society of North America, Cardiovascular and Interventional Radiological Society of Europe, and was most recently awarded the very prestigious, Gary J Becker Young Investigators award in 2016. She was inducted into the Society of Interventional Radiology's prestigious Fellowship in March. Dr. White is a long-time supporter of our organization and has spoken several times for the Southeastern



Ronald Winokur, MD

Weill Cornell Medicine

Dr. Winokur received his medical degree at Thomas Jefferson University in 2006 and completed his Fellowship in Interventional Radiology at New York Presbyterian Hospital Weill Cornell Medical Center. He currently serves as the Program Director for the IR-DR

Residency and IR Fellowship at NY Presbyterian Hospital/Weill Cornell as well as Assistant Professor. His awards include the Super Doctors Rising Star in 2015, 2016, and 2017 and JVIR Outstanding Reviewer in 2016. Dr. Winokur is a member of the Society of Interventional Radiology, Radiology Society of North America, American Roentgen Ray Society and various others. His societal committees are with the SIR foundation for IR performance and quality improvement, American college of phlebology guidelines committee, Radiology Research Alliance Task Force on Quality and Safety, and the Association of Program Directors in Interventional Radiology. He serves as a reviewer for SIR's flagship publication, Journal of Vascular and Interventional Radiology. Dr. Winokur is also heavily involved in teaching, among one of the many is Interventional Radiology Jeopardy! We are very excited to hear from him on ovarian and varicocele embolization.



Visit us at
booth 138

Expanding precision medicine

Come visit us at booth 138 to see how we provide advanced image guidance tools for procedure success featuring Angio-CT Suite, DynaCT in PAE, and CARE Radiation Protection.

Live speaker session times:

March 19, 2018

10:00 a.m.–10:30 a.m. and
2:30 p.m.–3:00 p.m.

March 20, 2018

10:00 a.m.–10:30 a.m. and
2:30 p.m.–3:00 p.m.

SAVE THE DATE!

AMAZING POSTER PRESENTATIONS COMING YOUR WAY TO THE AVIR 2018 ANNUAL MEETING

We are so excited to be able to showcase 12 outstanding Posters at our AVIR annual meeting this year in Los Angeles from March 17-22nd. Make sure to attend the 3rd annual Poster presentation session, support your fellow technologists and obtain your CE for participating!! Who loves continuing education!!! AVIR does!!! So we plan to see you all at the Poster session Monday March 19thth from 11:00 to 12:15. Poster presentations are an excellent mechanism to facilitate the rapid communication of scientific ideas or educational outcomes. The poster presentation format is less formal and more interactive than an oral lecture because it provides the opportunity for viewers to engage in discussion and to have one-on-one interactions with both other viewers and the presenters.

As a result, poster sessions offer the potential for new collaborations to develop among colleagues, leading to improved practice and better patient results. Congratulations to all the technologists who submitted abstracts representing the results of the hard work they contribute to in IR on a daily basis. We look forward to hearing your short presentations enlightening us regarding the results of your interesting research or educational improvements. AVIR members, we look forward to your questions, contributions, reviews and possible collaborations that result from the Poster Presentation discussions you have with your fellow technologists. Listed below are the 12 remarkable Posters you will see at the AVIR Annual Meeting.

2018 Poster Submissions		
Name	Title	Institution
Heather Cleveland	Little PICC, Big Problems	Texas Children's Hospital
Julie Orlando	Geniculate Artery Embolization (GAE) for Osteoarthritis (OA)- Related Knee Pain: Interim Results from a Multicenter US Trial	Vascular Institute of Virginia
Kristen Welch, Julie Aguilar, & Janet Ste. Marie	Quality Improvement in IR: Techniques to Improve Patient Satisfaction	Medical College of Wisconsin
Debra Barnes, Julie Aguilar, & Janet Ste. Marie	The Development of a Nurse Externship in Interventional Radiology	Medical College of Wisconsin
Elizabeth Rodriguez	Sphenopalatine Nerve Block Clinical Considerations and Safety and Efficacy	Medical College of Wisconsin
Lisa Schultz	Aneurysmal Bone Cyst	Children's Hospital of Wisconsin
Samantha Kobeissi	Pelvic Congestion Syndrome: Techniques and Treatment	University of Michigan
Erin Shields	Intravasulcar Ultrasound (IVUS)-Guided Inferior Vena Cava (IVC) Filter Placement: Review of Indications and Procedural Techniques	University of Michigan
Rob Sheridan, Katrina Viau, & Kim Mahoney	An Implementation of Time Based Scheduling (TBS) for Interventional Radiology Service Lines	Massachusetts General Hospital
Debra Barnes Julie Aguilar	Advanced Technologist Levels for Interventional Radiology Demonstrates a Strong Correlation to Positive Staff Engagement	Medical College of Wisconsin
Steven Jakubowski	Developing Teamwork in the Procedural Area	Medical College of Wisconsin
Amanni Herbawi	Inferior Vena Cava Filter Retrievals	Cleveland Clinic

EVENTS YOU WON'T WANT TO MISS!

SATURDAY MARCH 17TH

SIR Opening Reception

6:30- 7:30 PM
JW Marriott

SUNDAY MARCH 18TH

AVIR & ARIN Combined Day General Session

LA Convention Center 515A & B

MONDAY MARCH 19TH

AVIR Chapter Start up Q & A

led by: Director at Large, Mike Kelly, RT, R, VI, RCIS
Monday 9:00-9:15 AM & 2:45- 3:15 PM
Tuesday 9:00-9:15 AM & 3:00- 3:15 PM

AVIR Hack-a-thon

10:00- 11:30 AM
LA Convention Center 511A
led by: Kristen Welch, RT, R, VI, Robert Sheridan, FAVIR,
Clifford Weiss, MD, FSIR & Sarah White MS, MD, FSIR

AVIR Poster Presentations & Ribbons

11:00 AM- 12:15 PM
LA Convention Center 515B

Penumbra Networking Luncheon

12:15 – 1:15 PM
LA Convention Center 515B

AVIR Sip and Social

5:30- 6:30 PM
LA Convention Center 515B



TUESDAY MARCH 20TH

VI Board Review and Mock Exam (registration required)

8:00 AM – 12:45 PM
LA Convention Center 511A
led by: Alisha Hawrylack, RT, R, VI

AVIR Business Meeting

2:00- 3:00 PM
LA Convention Center 515B

Award Presentations:
President's Award of Educational Excellence
Award of Excellence
Fellowship Award
AVIR Board of Directors Introduction
Continuing Education Update: Are You Ready?
(0.5 CE)
Kristen L Welch, RT, R, VI

Abstract Writing Workshop

3:30- 4:30 PM
LA Convention Center 511A
led by: Ziv Haskal, MD, FSIR & Alisha Hawrylack, RT, R, VI



AVIR MOBILE APP

The AVIR app for the Association of Vascular and Interventional Radiographers (AVIR) is created to help colleagues learn about upcoming event, utilize valuable resources and stay current with our quarterly newsletters. AVIR acknowledges the importance of continuing education, establishing high standards of practice and care, certifying Vascular Interventional Radiographers, and establishing a nationwide network for obtaining information, education, and employment opportunities. Download the AVIR app today.

EXTRA!! EXTRA!!! READ ALL ABOUT YOUR EXTRA CREDITS!!

Siemens has partnered with AVIR to offer additional credits for RT's who attend any of the speaker sessions that will take place at their SIR exhibit hall booth (#138) during the SIR breaks on Monday and Tuesday. The topics, speakers, days and times are listed below:

Role of the DynaCT/3D Angiogram in Prostate Artery Embolization

Presented by Dr Shivank Bhatia
Monday March 19th
10:30 AM - 11:00 AM

Nexaris Angio-CT: Joining Forces to Overcome Challenging Procedures

Presented by Dr. David Lacey
Monday March 19th
2:30 PM - 3:00 PM

Strategies for Managing Radiation Dose and Image Quality

Presented by Dr Kyle Jones (PhD, physicist)
Tuesday March 20th
10:30 AM - 11:00 AM

CT Intervention: 3D isn't just for movies

Presented by Dr. David Lacey
Tuesday March 20th
2:30 PM - 3:00 PM

At the conclusion of the talks, Siemens representatives will hand out certificates for the half credit to any RT's who attended. Please support our partner, Siemens, and take advantage of these extra credit opportunities!

LOS ANGELES TOURIST ATTRACTIONS



Petersen Automotive Museum

One of the worlds largest automotive museum it features over 300 automobiles and educational programs. There are over 100 automobiles displayed in its twenty five galleries while the remaining are kept in a vault on the basement level of the building. Certain restrictions and a additional fee are required to view the vault selection. A few automobiles displayed are Lightning McQueen from Disney's Pixar Cars, 1964 Aston Martin DB5 from the James Bond film: Skyfall, 1992 Batmobile from Batman Returns, De Tomaso Pantera which belonged to Elvis Presley, and many more worthy of interest.

Admission: Adults \$16, Kids \$8, under 3 free
Hours: 10-6pm daily
www.petersen.org



Natural History Museum of Los Angeles County

Largest natural history museum in the western United States. Collections include nearly 35 million specimens and artifacts and cover 4.5 billion years of history. There are three floors of permanent exhibits. Through April 1st there is a green diamond exhibit showcasing the radiance and alluring glow of this rare gem. While you're there swing by the Dino hall to meet Augustynolophus. There are only two fossil specimens of this Cretaceous period dinosaur in the world and they're both here.

Admission: Adults \$15, Kids(3-12) \$7, Kids(13-17) \$12
Hours: 9:30-5pm daily
www.nhm.org



Universal Studios Hollywood

Escape into the world of Harry Potter or battle King Kong. There are a number of featured rides and attraction to experience at Universal Studios. You never know who you'll meet here, a couple of minions, Optimus Prime, or even a Raptor Encounter! Check out the website for more details on planning your visit.

Admission: \$105-116

Hours: Varies, see website for details
www.universalstudioshollywood.com

These are just a few things to embark on your adventure in Los Angeles. Stop by the beautiful Malibu beach located about 36min west of the convention center or for the shopping enthusiast hit up The Grove, an outdoor shopping area. Whatever you're into Los Angeles has got you covered. Enjoy!



"Hollywood Walk of Fame" Game

During this year's AVIR/SIR meeting, one of the best ways we can support the companies that sponsor AVIR is to

visit their booths in the exhibit hall. In order to give our attendees a little extra incentive to do just that, we've created a "Hollywood Walk of Fame" game card which will be handed out at registration. The rules are simple ... visit the booths of the sponsors listed on the card and receive a sticker or a stamp. (Make sure to ask about any of their new products, too! You might find something that can help you at your facility back home.) Once you've gotten as many stickers or stamps as possible, turn the game card back in to the AVIR representatives outside the AVIR conference room in the convention center (Room 515 A&B). The more booths you visit, the more chances you have to enter and win great prizes. Small side note for the early birds ... We can't distribute the stamps and stickers until the exhibit hall opens at 12 pm on Sunday so please give us some time before you start hitting the booths. Thanks for supporting the companies that support you and AVIR!



S P O N S O R S

AVIR extends its appreciation to the following corporate sponsors!

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Association of Vascular and Interventional Radiographers

INTERVENTIONAL INFORMER

Winter 2018

LETTER FROM THE PRESIDENT

President, AVIR



Welcome to L.A.!

Although it has long been recognized as a world of pristine beaches, sunshine, and Hollywood magic, 2017 told the story of a different L.A.; an L.A. that is beginning to receive recognition as a place of innovation and advancement, of incredible talent, and endless potential. Some media outlets

and publications have gone so far as to dub it the "new silicon valley".

With the field of Interventional Radiology (IR) at an unchartered tipping point, I couldn't imagine a more fitting host for the AVIR's Annual National Meeting.

Today, as a result of decades of innovation and education, IR is achieving long deserved autonomy; Interventionalists are recognized by referring providers and patients as specialists who provide the full spectrum of image guided intervention and longitudinal care. IR has been granted the status of a primary specialty, akin to internal medicine or diagnostic radiology. U.S. medical students will now directly enter Interventional Radiology residencies and graduate with primary specialty certification in Interventional Radiology.

Our skillset as IR technologists allows us to share in this unique specialty growth, and the goal of the AVIR is to provide world class education and resources that enables our members to become the educators, innovators, and leaders of tomorrow. Our belief is that relevant, peer driven technologist education will accelerate the practice and evolution of IR, improve IR team care of patients, and strengthen colleague collaboration. It is essential that we continue to support the growth of our field by seeing ourselves as a requisite to the future of IR and consistent partners to our physician colleagues.

Throughout 2017, the AVIR worked to achieve this goal through both national and regional collaboration.

Regionally, we saw the birth of several new AVIR Chapters. Chapter development is a crucial component of AVIR growth as local support and education is vital to our membership. We improved and strengthened our educational partnership with Medlantis by hosting webinars to share with our members how the educational offerings of Medlantis can be incorporated into their individual institutions.

We have collaborated with our colleagues at Interventional Initiative, promoting their exceptional content that has raised IR awareness for both patients and medical professionals. We joined with our colleagues across the nation in celebrating the first national "Without a Scalpel day" on January 16th.

We have continued to evolve our national meeting. This year will see the addition of two new breakout sessions. A "Hack a Thon", that will promote teamwork driven problem solving as we identify solutions to the everyday challenges we encounter, as well as an abstract writing workshop hosted by JVIR Editor in Chief, Ziv Haskal.

Although we celebrate our successes in 2017, we recognize that innovation is a continued journey. Throughout 2018, new initiatives and efforts will continue to position the AVIR as the leader in IR education and an advocate for technologists and their unique and irreplaceable skillset.

Inside Spring 2017 | David S. Douthett, RT(R)(CV), Editor

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|--|--|----------------------------------|
| 2 Vice President's Message | 5 Diamond Spotlight: Siemens, The Leader In Ir Imaging | 18 Spotlight on: Rush University |
| 2 Associate Corner | 9 The AVIR Takes Miami! | 22 Primary VI Examination |
| 3 2018 AVIR Business Meeting | 10 2018 Chapter Updates | 27 Membership Application |
| 4 Continuing Education Policy Update:
Are You Ready?! | 15 A Call for Standardization in
Technologist Education | |

VICE PRESIDENT'S MESSAGE

by: Kristen L. Welch RT, R, VI



I'm not embarrassed to admit, the week of the annual meeting is a very emotional time for me. In our professional and in our personal lives, we gravitate to other individuals that share mutual interests of our own. Something I've always found very unique about the professionals within our unique field is the extraordinary passion we all embody for it... What I enjoy most about our annual meeting are the conversations

I get to partake in with technologists, nurses, and physician colleagues from around the country. The networking with all of these individuals that share the same passion that I do has resulted in some of the most valuable relationships I've made in my career. Our field's greatest pioneers and visionaries that developed so many innovations and techniques that have since evolved into modern Interventional Radiology are here in our presence at this meeting. Many of these thought leaders have taken time to be a part of our program

and teach all of us- how incredible is that?! Our meeting chair, Stefanie Rockwood and the rest of the Board of Directors has spent the year curating this event to meet the needs of our membership- YOU! I encourage you to enjoy the program, but also to take advantage of the opportunities to network and collaborate with the other professionals here that share the same passion you do.

ASSOCIATE CORNER

By Lora Cheeks



We are in the homestretch to the AVIR annual meeting of 2018 in LA! My excitement has been built and I am so ready to shake off my winter blues with spectacular access to state of the art education and fabulous networking opportunities with my peers! Can you tell this in one of my favorite events of the year? We who work in Interventional Radiology are so very fortunate to be working in an environment that fosters teamwork by holding the annual SIR, AVIR and ARIN conferences together at the same site. Research has shown that teams get more done and most people are smarter, make fewer mistakes, and are more effective together than they are alone. As an RN working in a very busy academic Interventional Radiology department the fusion of the team I am paired with in the lab has a big impact on the outcome of our day. Striving to maintain a successful practice we continually work to improve communication, recognize different

perspectives and knowledge bases and expand our service. I am very lucky that my MD's and Techs are very receptive to my FAQ's about the case between the fluoro runs and assessing my patient response to sedation assessments. That is one of the reasons I so look forward to the national annual conference where I am able to go to a variety of lectures at AVIR, ARIN and SIR with my RT, RN, MD coworkers while still obtaining the continuing education credits I need. Can you guess which day is my absolute favorite? You got it the AVIR/ ARIN combined day is my most favorite day of lectures. It is a remarkable day of lectures spent with many of my coworkers together listening to outstanding topics pertinent to our practice. The combined day has sparked discussions with my coworkers that continue for weeks to months back at home surrounding ideas to facilitate improved practice in our department. Following the combined day a very close second event is the annual AVIR Poster presentation session!!! Posters are an excellent way to present results of statistical analysis, share project evaluations

or relay clinical initiatives at professional conferences. Posters presentations offer a unique merged learning experience for both the presenter and the audience. We are so excited to have 12 outstanding posters to share at this year's session on Monday the 18th at 11:00-12:15. Most definitely no conference would be complete without networking with my peers, which is my third favorite pastime at any AVIR meeting! AVIR offers so many networking events each year, from the Vendor Happy Hour, to the amazing Lunch and Learns, to the spectacular Vendor Booth Bingo for fabulous prizes!!! Collaboration in continuing education has made a great difference in our IR department. By sharing with our teams the collective knowledge we gain from our annual meetings we create an influx of new ideas we look forward to each year. I'm so excited to see what discussion and concepts stem from this year's meeting in LA and how our department grows from the experience and knowledge my coworkers and I gain from this annual conference. See you in LA!

2018 AVIR BUSINESS MEETING

by: Kristen L. Welch RT, R, VI



If you're attending the meeting, be sure to make it to our business meeting! Each year at our annual business meeting we recognize leaders within our field, address

milestones from the year, our upcoming goals for the organization and membership, topics that affect IR technologists and their education, and introduce our new Board of Directors! This is an opportunity to meet with the incoming AVIR Leadership and address any concerns or questions you may have regarding your membership and education.

2018 AVIR Business Meeting

Tuesday March 20th, 2:00 – 3:00 pm

AVIR Award Presentations:

President's Award of Educational Excellence
Haley Squire, BS, RT, R, VI

Award of Excellence

Izzy Ramaswamy, MS, RT, R, CV, FAVIR

Fellows Award

Kristen Welch, RT, R, VI

Board of Directors Introduction

Continuing Education Policy Update: Are You Ready?

0.5 CE credits



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CONTINUING EDUCATION POLICY UPDATE: ARE YOU READY?!

by: Kristen L. Welch RT, R, VI



January 1 marked the beginning of several changes that will affect all RTs credentialed by the ARRT. These policy modifications are the first since their infancy.

Unfortunately, many RTs do not realize what is to come. These policy changes will affect the way you find, earn, and track your continuing education.

Structured Education CEs

This affects technologists sitting for post primary board examinations after January 1, 2018. In order to sit for the exam, you will be required to provide 16 structured education CEs. These credits have been approved by the ARRT as Structured Education. If the credits were obtained before 2018, they will only need to be Vascular in topic. At least 1 credit must be obtained in the following 3 categories: Patient Care, Image Production, and Procedures. All of the AVIR's CEs have been submitted and approved for Structured Education, but if you obtain CEs from other sources, you may want to verify they're approved. You can track your CE activities and check their approval status by logging into your ARRT account and using their post-primary tool. You can also search for activities in the categories you need. Some activities may be dispersed throughout multiple categories like the example from the ARRT's site below.

For more information, you may visit the ARRT's website here: <https://www.arrt.org/arrt-reference-documents/by-document-type/structured-education-requirements>

CQR (Continuing Qualification Requirements)

This change affects technologists that obtained primary and/or post-primary certifications on or after January 1, 2011. These certifications are time limited to ten years. This does not mean you are required to retake your board examination. The ARRT has developed a self-assessment module. This is a learning tool that assesses your knowledge and skill set within each modality you are credentialed within. Once the self-assessment is completed, a report is generated by the ARRT identifying your areas of strength and weaknesses. You may be asked to obtain additional CE credits within your areas for opportune growth. The CQR process begins 7 years after your primary or post-primary certification examination. Since this change affects techs with credentials earned after January 1, 2011- this means that those individuals will be prompted to take their self-assessment module during their birth month in 2018. This gives you a 3 year period to complete any additional CEs needed.

This assessment is required for any credentials earned (R, VI, CT, MR, or M). If you currently work in Vascular and Interventional Radiology, but took your primary Radiography board examination in 2011 you will be required to take a Radiography self-assessment module and may be mandated to obtain Radiography CEs.

You can view your CQR Compliance and biennium periods by logging into your ARRT account and clicking 'My Dashboard'. For more information, you may also visit the ARRT's website here: <https://www.arrt.org/registration/CQR>

The AVIR continues to strive to guide our technologists in the pursuit of continuing education. We are dedicated to providing relevant and consistent educational opportunities to help our membership in meeting these new requirements. We invite you to join us during our Business Meeting on Tuesday March 20th at 2:00 pm where we will present more information on these new qualifications.

Evaluation of a Device Combining and Inferior Vena Cava...

by ASSOCIATION OF VASCULAR AND INTERVENTIONAL RADIOGRAPHERS

Directed reading to evaluate efficacy and safety of a novel device that combines an IVC filter and central venous catheter for prevention of pulmonary embolism in critically ill patients.

2016 Content Specifications Credit Distribution

Patient Care	Image Production	Procedures
0.25	0.25	0.50

2017 Content Specifications Credit Distribution

Patient Care	Image Production	Procedures
0.25	0.00	0.75

Current Approval Ends 10/1/2019

Structured Education Credits

1.00 2016 Content Specification

1.00 2017 Content Specification

1.00 Total Category A+ Credits

Self Study

DIAMOND SPOTLIGHT: SIEMENS, THE LEADER IN IR IMAGING

by: Dana Bridges Kanfoush



AVIR is proud to welcome Siemens as a Diamond level sponsor this year. Their excellence in the field of interventional radiology makes a partnership a natural fit between AVIR and

Siemens. Siemens provides solutions for general IR procedures as well as the subspecialties of interventional oncology and neuroradiology. Siemens has introduced enhanced imaging capabilities and keeps customers on the cutting edge of technology by offering solutions like the nEXARIS Angio-CT which combines an angiography system with a sliding-gantry CT to deliver state-of-the-art image guidance for a broad spectrum of minimally-invasive interventions.



nEXARIS Angio-CT

Artis zee is a proven and reliable system that delivers optimal image quality at lowest dose, letting doctors and staff optimize their procedure mix, and invest with confidence. This machine offers synchronized detector rotation so that both the flat panel detector and the collimator are synchronized and are always in line with the table. No matter how one rotates the table or the C-arm, the linear adjustment at any angulation ensures that an upright image is always seen. Other features include intuitive tableside operation and an onscreen 3D menu to improve workflow. It is also equipped with industry-leading imaging technology, unique dose management tools, and the latest clinical applications based on the innovative PURE® platform. Siemens works hard to offer excellent equipment so that clinical teams can function more efficiently.



Artis Q Ceiling

As a leader in healthcare innovation, Siemens also goes above and beyond to look out for the safety of clinical teams and patients. For many years, they have focused on reducing dose without compromising image quality and clinical outcomes. With this purpose in mind, Siemens has developed the CARE dose reduction program and CLEAR image applications to improve radiation protection for patients and staff as well as deliver better image quality.

The philosophy behind Siemens' Combined Applications to Reduce Exposure (CARE) is simple: They are designed to help doctors and staff deliver better care at the lowest reasonable dose. These cutting-edge functions are designed to reduce radiation dosage for both patients and clinical staff as well as making dose monitoring and reporting easy and structured for the hospital. The complete CARE package is standard with every Artis system.

The CLEAR program focuses on optimal image quality. Whether patients are tall or short, obese or slender – it is critical to see. And in order to see, clinicians need optimal image quality that helps to

make the right decision for that patient. Siemens' comprehensive range of CLEAR applications automatically enhances image quality and thus helps increase certainty during interventions without increasing the dose. Advanced image acquisition features like a high-power X-ray tube and optimized brightness achieve excellent contrast when imaging obese patients and avoid overexposures.

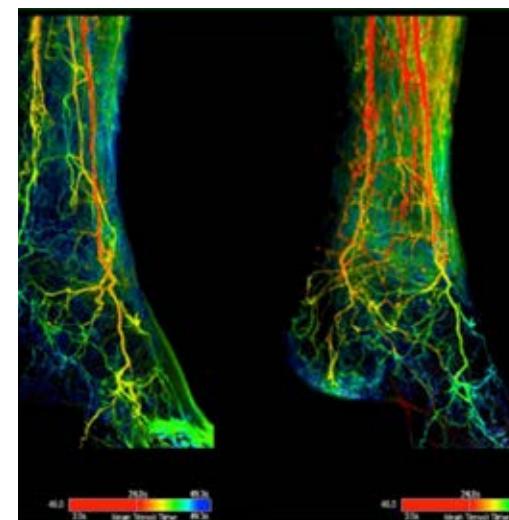


Image from an Artis zeego

A very special thank you to Siemens for their Diamond level sponsorship of AVIR!! Please be sure to visit Siemens Healthineers booth #138 at the SIR/AVIR meeting in LA or go to <https://usa.healthcare.siemens.com/angio/interventional-radiology-portal> for more information.



AVIR

As the continuing education guidelines for imaging technologists continue to evolve, the AVIR promises to provide **more** to our membership to meet these needs through:

- Monthly updated Directed Reading Journal CEs
- Unlimited Access to webinars through our partner, Medlantis
- FREE monthly CE credits through Medlantis
- AVIR Annual Meeting (30+ CE credits)
- NEW- Online VI Board Exam Review and Mock Registry
- Regional Meetings and VI Board Reviews
- Quarterly Newsletters with Interventional Radiology's hottest topics
- Discounted Conference Registration Through our Partner Associations Like: ISET and GEST
- Professional Networking
- Local Chapter Events - AVIR has several active State Chapters throughout the US!
- Monthly Educational and Annual Meeting Emails
- Our credits will meet the NEW coded ARRT CE guidelines

ONE-YEAR ACTIVE MEMBERSHIP – \$75

Connect with us on social media

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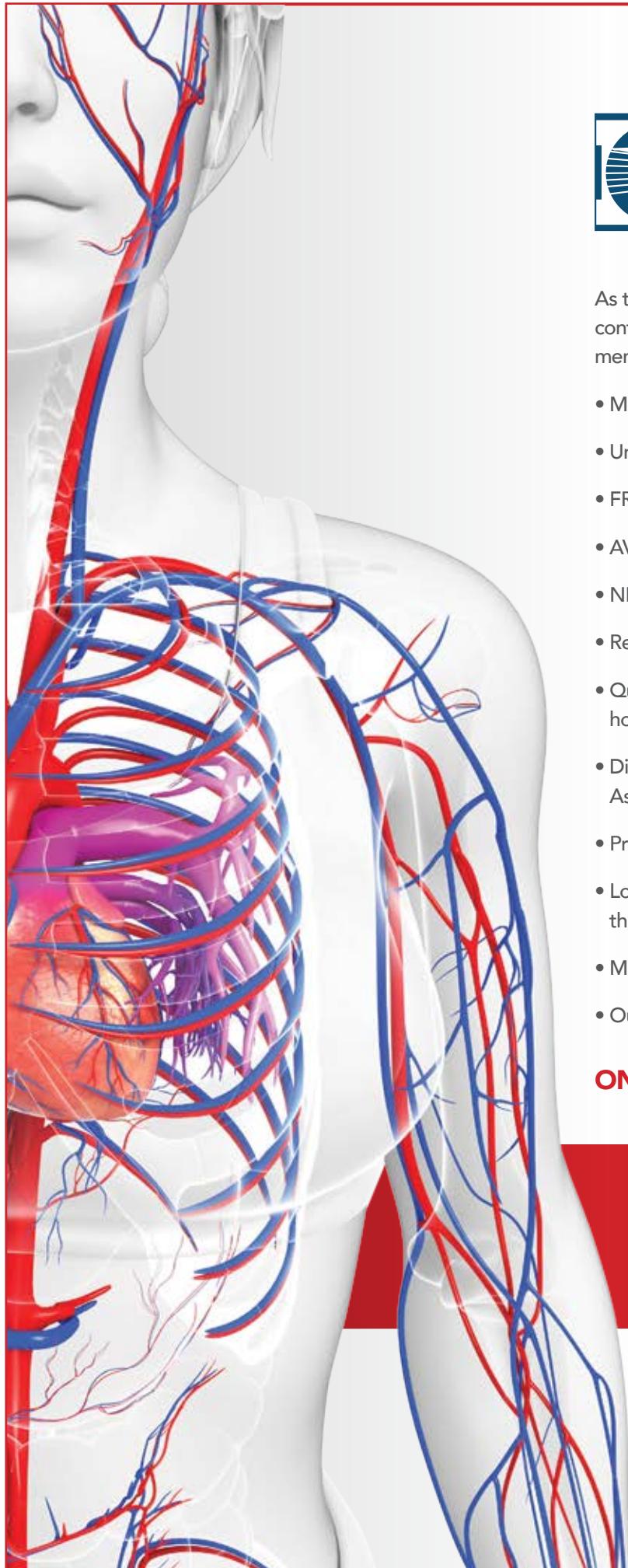
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AVIR LOCAL CHAPTER HAS BENEFITS

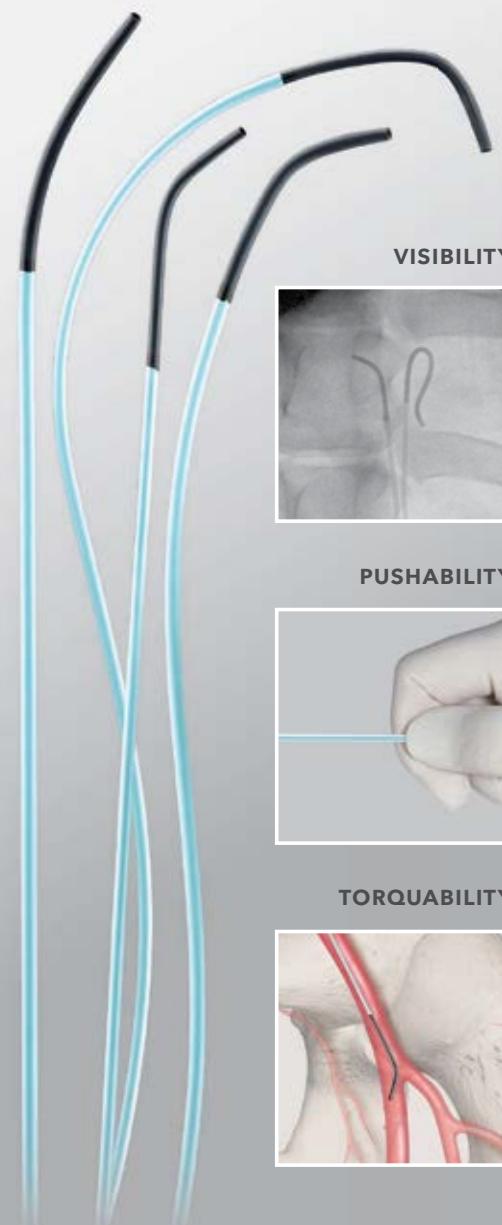
In appreciation of those chapters providing Regional or Local Meetings with a minimum of 7 hours of continuing education for the chapter's attendees, the AVIR is going to extend one FREE registration to the Annual Scientific Meeting of that year per year.

The category A credit hours will have to be approved by a RCEEM recognized by the ARRT(AVIR being one of these) and will need to be submitted to the AVIR office prior to the AVIR/SIR registration deadline.

Any questions concerning the formation of new chapters or existing ones please call the AVIR office at 703 234-4055 or the Director at Large:

Mike Kelly AVIR
Email: mikekelly041@yahoo.com
Phone 757 753-4110
Again, thank you

It's back.



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THE AVIR TAKES MIAMI!!

by: By Kristen L Welch, RT, R, VI



In February I had the opportunity to attend the 30th Annual International Symposium on Endovascular Therapy (ISET) conference with our Mike Kelly and Izzy Ramaswamy. ISET is held each year in conjunction with the Symposium on Clinical Interventional Oncology (CIO). The two conferences were developed and are led by the faculty of Miami Cardiac and Vascular Institute. This conference attracts interventional leaders from around the globe to discuss our fields hottest topics.

The conference hosts a Nurse Technologist symposium each year that offers presentations on topics of particular interest to nurses and technologists. This year, one of our fields pioneers Dr. Barry Katzen opened up with the keynote presentation: ISET at 30 years and addressed the future of Interventional Radiology. Other topics included Vascular laboratory tests and how to interpret them, cross sectional imaging, understanding IVUS and OCT, identifying and managing retroperitoneal bleeds, and several case based discussions. If you have the opportunity to attend ISET in the future, this is sure a meeting you don't want to miss!





2018 CHAPTER UPDATES

By: Mike Kelly, RT(R), (VI), RCIS

Austin, Texas (HCIR) Hill Country Interventional Radiographers

Contact: Derek Stearns

Email: avirhctx@gmail.com

Derek and his team are off to a great start this year and really kicking things up. They have already held two educational meetings with more to come. The March educational meeting will cover Peripheral Interventions. Please reach out to Derek to see how you can get involved with the HCIR chapter.

Atlanta Chapter

Contact: Teresa Wynn

Email: tntwynn@comcast.net

Contact: Diane Forbes

Email: dianeforbesra@gmail.com

We are excited to now have a team in Atlanta building a local chapter. They held their first meeting on February 17th in which they discussed the structure of the Atlanta AVIR chapter and provided an educational lecture. Dr. Michael Miller, spoke on the importance of maintaining Quality in our IR departments and Dr. Janice Newsome expressed her excitement of the beginning of this chapter and offered her support. They are excited to begin offering education on cutting edge procedures and techniques to the area Technologists. Please follow them on Facebook and Twitter @avir_atl to stay up to date on their chapter happenings.



Arizona, Chapter

Contact: Alfredo Yanez

Email: ayanezavir@gmail.com

The Arizona chapter is based out of Phoenix. Alfredo is currently looking for professionals in the Phoenix area that would like to help get this chapter up and running. Whether you would like to help with planning of events or just be a part of an event, please reach out to Alfredo or the AVIR for more information.



Boston Chapter

Contact: Rob Sheridan

Email: robsheridanavir@gmail.com

Contact: Brian Oakes

Email: brianoakesavir@gmail.com

The Boston chapter is up and running and just recently held a 5 CE credit event on October 28th at Lahey Hospital. They had some great lectures given by Dr. Irani, Dr. McCarthy, Dr. Schainfeld, Dr. Thabet, and our very own Rob Sheridan. Some of the topics included Complex IR Cases, Radiation Safety, and ATTRACT DVT Trials. This event was just the first of many to come.

They are looking to host another event in April or May of this year. So, please keep a look out for that! Please follow @Boakesavir and @robsheridanavir on Twitter for future events.



Pictured: Brian Oakes and Rob Sheridan

Chicago (Chicagoland) Chapter

Contact: Stefanie Manack

Email: Stefanie.manack@gmail.com

Chicagoland held its 1st Annual Chicagoland AVIR Conference on October 14th, 2017 at Joe's Live @ MB Financial Park. This meeting was a great success and was very well attended. The team worked very hard to put this 7 CE credit event together. This chapter has put together a few events in just the short time of being active so be sure to keep up to date on what the Chicagoland Chapter has planned for future events.



Pictured: Kevin Lynch, Kristen Welch, Dr. Kumar Madassery

Jacksonville AVIR (Sacksonville)

E-mail: Sacksonvilleavir@gmail.com

President and Social Media Coordinator: Jessica Borges

Vice President: Natalie Schiller

Secretary: Meghan Barber

We are pleased to announce the start of the Jacksonville, FL AVIR chapter, also known as the Sacksonville AVIR in honor of the Jacksonville Jaguars tremendous defense!!! The three contacts listed above along with a few other great team members have gotten this chapter up and running. They are planning on having their first educational event in April so be sure to follow them on Facebook and Twitter @SacksonvilleAVIR for details as they become available. Please reach out to them to get your name on their contact list for future events. They have a great team and really looking forward to working with them.



Knoxville, Tennessee

Contact: Dan Bernard

Email: djbernard@me.com

The TN AVIR is currently finalizing dates for their upcoming TN AVIR Annual Meeting. The meeting will be held in Nashville, TN in the Spring. The team will be announcing the meeting in the upcoming weeks so please keep posted for that. For more information please call Dan Bernard at 1(865) 406-0514.

Be sure to follow them on their TN chapter Facebook page. They have been using their Facebook page for chapter communication and to post articles and cases of the month that are always open for discussion. Please join, like and share their page.

The TN Chapter's current board consist of:

Dan Bernard – Chapter President

Alan Buck – Chapter Vice President

Gary Anders – Chapter Secretary/Treasure

Brad Mitchell – Chapter Director at Large

Chris O'Fallon – Corporate Liaison

South Florida-Miami Chapter

Contact: Roberto Telleria, RT R CV CT

Email: avir.miami.rt@gmail.com

The Nurses and Technologists Symposium at ISET provided an overview of the latest therapies and technologies in endovascular care, including reviews of diagnostic treatment and management strategies for interventional radiology and neuroradiology, vascular surgery, vascular medicine, and interventional cardiology patients. The program was directed toward comprehensive learning needs of nurses and technologists working in interventional labs, surgery, pre- and post-care, inpatient care, and office practices who care for patients with cardiac

and vascular disorders. New this year was a live vascular exam, practical how-to sessions, and "things that can go wrong" interactive case study challenges, where a multidisciplinary panel and the audience will identify and solve clinical complication scenarios. This year once again, the presence of AVIR members was noted.

The members of MCVI in Baptist Hospital, Miami Florida will like to thank all the attendees for their support.



Wolverine State Chapter (Michigan)

Contact: Samantha Kobeissi

Email: Sskobeis@med.umich.edu

Contact: Andrea Reid

Email: Andreado@med.umich.edu

The Wolverine State Chapter is based out of Ann Arbor, MI. They have hit the ground running and have been holding events every couple of months with great speakers and topics. Their March event will be on the topic of IVC Filters.

Please follow them on Twitter @ WolverineAVIR. If you are interested in getting involved please reach out to Samantha or Andrea.



AVIR-Wolverine State Chapter

@WolverineAVIR

Join Today to receive information on our upcoming events!

❖ Continuing Education Credits
❖ Educational Opportunities
❖ Networking

Association of Vascular and Interventional Radiographers

Join Wolverine State Chapter!

WolverineStateChapter@gmail.com

New York City Chapter

Contact: Rennie Mohabir RT(R) (CV)

Email: mohabirh@mskcc.org

The NYC chapter has plans to put together some events in the near future. If you are interested in being a part of this chapter please reach out to Rennie or the AVIR.

2017 CHAPTER UPDATES

Capital Region New York Chapter

Contact: James Black
Email: tdstechno.jb@gmail.com

Contact: Stefanie Rockwood
Email: stefavir@gmail.com

The Capital Region NY Chapter is up and running again!! They just held another event on the topic of "Complex Brain Aneurysms and New Therapy Options" with lecture given by Dr. Charles Matouk from Yale. James and Stefanie have plans to keep these educational events going so be sure to keep your eyes open for future events or reach out to them to find out when the next event will be. As you can see from pictures, it was very well attended and looks like great food to go along with a great lecture.



North Carolina Chapter (NCAVIR)

Contact: Amy Scarborough
Email: Amy.Scarborough@carolinashealthcare.org

Contact: Marcia Stegall
Email: Marcia.Stegall@carolinashealthcare.org

NC AVIR is based out of the Charlotte, NC area. Amy and Marcia will be holding their first event on March 28th at 6:30pm at the Speedway Club at Charlotte Motor Speedway sponsored by Medtronic. Dr. Mark Lessne and Dr. Michael Meuse will be presenting on Peripheral Arterial and Venous Disease. Please contact Amy or Marcia if you have interest in joining this chapter and finding out more about this and future events.

North Texas Chapter

Contact: Sven Phillips RT (R)VI
Email: sven427@yahoo.com

Sven and his colleagues are currently in the process of preparing educational opportunities around the Dallas area. Sven is hoping to possibly start holding quarterly meetings. Please reach out to him if you are interested in becoming involved.

Ohio AVIR Chapter

Contact: Jamie Hiott RT (R) (CV)(M)(CT)(VI)
Email: Hiott1@yahoo.com

Contact: Shelly Brancatelli, MSRS, RPA/RRA, RT(R), CV
Email: brancas@ccf.org

This Chapter will encompass the Columbus and Cleveland areas. This chapter is currently looking for interested professionals that are interested in getting involved. They are currently in the process of developing this chapter and hope to have an event planned soon, maybe even a VI Review. There is huge potential for this chapter!!! Keep your eyes out for more information or reach out to the team for more information.

Orange County California Chapter (OCAVIR)

Contact: Brett Thiebolt (R)
Email: brett.thiebolt@stjoe.org

The Orange County California Chapter has been involved with an Angio Club that meets quarterly for the last few years. On January 31, 2018, they held their first Angio Club of the year where they had 45 in attendance. They ask multiple facilities in the Orange County and LA area to provide case presentations. They usually ask for teaching cases or cases that have complications. The Angio Club is open to Physicians (IR Radiologists, Cardiologists and Vascular Surgeons), Fellows, Residents, RT's and Rn's.

Seattle Chapter

Contact: Cris Cassady RT(R)
Email: christina.cassady@providence.org

Contact: Leona Benson RT (R)(CV) FAVIR
Email: seattleavir@hotmail.com

Leona and Cris have gotten the Seattle chapter back up and running. These ladies currently are planning on a few events for the year so be sure to reach out to them to find out more information. Also, if you are interested in possibly helping with this chapter do not hesitate to reach out to them.

Texas Gulf Coast Chapter

Contact: Heather Cleveland
Email: hxlevel@texaschildrens.org
Phone: (214) 498-2962

Heather is dedicated to relaunching the Gulf Coast Chapter. Heather has some great ideas for this chapter. If you are interested in being a part of this chapter or possibly helping Heather with this task, please reach out to her. There is no doubt that this can be a great chapter.

Utah Chapter

Contact: Ivan Cutler
Email: cutler.ivan@gmail.com

This new chapter will be based in the Salt Lake City area. Ivan is very motivated to get this chapter up and running. Please reach out to Ivan or the AVIR if you are interested in becoming a part of this chapter

Virginia Chapter VA AVIR

Contact: Hannah Smith
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Contact: Mike Kelly
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The VA AVIR recently held their 15th annual symposium at the Great Wolf Lodge in Williamsburg, VA on Nov. 3rd & 4th. Once again, the meeting was a huge success with over 150 registrants which included students, IR/Vascular/Cardiac professionals, and vendors. We also had the privilege of having the National AVIR Board along with a few past AVIR presidents in attendance as well. Attendees had the opportunity to earn up to 12 A+ CE credits.

Over the two days of lectures, topics such as PAE, Vascular Gone Wild, Advanced Cardiac Procedures, Interventional Oncology, Dynamic Teamwork, Radiation Protection, Renal Denervation, and many more were discussed.

Planning is already taking place for the 16th Annual VA AVIR meeting that will be held at Great Wolf Lodge, November 9-10, 2018. There will be a few changes this year, to include hands-on simulators on Friday evening! We are very excited about the upcoming meeting and the new additions on the horizon!

We strive to provide educational information for our Vascular and Interventional RT's, RN's and Physicians in a fun way, so please come and join us at the next meeting!

More information will be coming soon so please sure to follow the VA Chapter on their Facebook page (<https://www.facebook.com/VAAVIR>) and Twitter @VaAVIR



Wisconsin Southeast Chapter

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Email: Debra.Barnes@froedert.com

The Southeastern Wisconsin chapter of the AVIR held a "Back to the Basics" event on November 14th, 2017. This event was presented by two of our own SEW AVIR coordinators; Kristen Welch and Debra Barnes and was sponsored by Cook Medical. In this presentation, we discussed the basic construction and uses of needles, catheters, wires and sheaths in Interventional procedures.

On February 20th, 2018, a collaborative event was held with Stryker Neurovascular and the SEW AVIR. Dr. Osama Zaidat from Mercy Health in Toledo Ohio spoke on the STRATIS stroke registry results. The STRATIS registry discussed the systemic evaluation of patients treated with neuro-thrombectomy devices for acute ischemic stroke.

We are also in the planning stages of our annual Spring Symposium on April 28th, 2018. Please save the date! This all-day Saturday event offers 8 CEU credits relevant to Interventional Radiology. Some topics to include this year are: Complex IVC Filter Removals and Interventional Oncology. We look forward to offering more learning opportunities for our members in the coming year!

INTERESTED IN STARTING A NEW CHAPTER

By: Mike Kelly, RT(R), (VI), RCIS



Chapter development and growth is an exciting component of the AVIR. Regional Chapters foster local education, collaboration, and support for AVIR members across the nation. Some examples of Chapter events that are happening include:

- Journal Club Dinners
- Vendor Workshops
- VI Board Prep
- Weekend conferences
- One day conferences
- Monthly lecture series
- Medlantis Webinar sessions

These events provide relevant educational materials that engage staff, improve patient care, and encourage continued passion for IR.

Supporting and developing new Chapters is vital to the core mission of the AVIR, and that is why we have dedicated Chapter Growth sessions scheduled throughout the week of our national meeting. These sessions will be led by our current Director at Large, Mike Kelly, and he will address questions such as "Where do I begin with starting a new Chapter?" "How do I find a Chapter in my area?" "How do I submit my events for CE's?" and more.

Please refer to the meeting program to find dedicated times and locations for these informal information sessions. Don't miss out on an incredible opportunity to network, ask and answer questions, and share with peers in a low key environment! You, and the Chapters you found and mentor, are a crucial component of the continued growth and education of IR technologists. For more information, please email us at info@avir.org or feel free to contact Mike personally at (757)753-4110.

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Association of Vascular and Interventional Radiographers President's Message: A Call for Standardization in Technologist Education

Alisha Hawrylack, RT(R)(VI), Ziv J Haskal, MD, FSIR, and John F. Angle, MD, FSIR

ABBREVIATIONS

AVIR = Association of Vascular and Interventional Radiographers, VI = vascular interventional

The term “interventional radiologist” was first coined by Alexander Margulis in an editorial in the March 1967 issue of the *American Journal of Roentgenology* (1). He predicted that interventional radiology (IR) would become a unique part of radiology, requiring specific curricula, clinical knowledge, technical skills, and close cooperation with surgeons, internists, and high-quality radiologic imaging equipment. The specialty has fulfilled and exceeded all forecasts. Interventionalists are recognized by referring providers and patients as specialists who provide the full spectrum of image-guided interventional and longitudinal care. Given the diversity of conditions that are treated, IR technologists share a unique specialty expertise: working in an IR suite is far different from diagnostic radiography or a cardiac catheterization laboratory.

Today, the specialty of IR is entering a new era, one that should affect technologists as much as it does future physicians. Until now, US interventional radiologists pursued a 1-year fellowship after completing 4 years of diagnostic radiology residency. Board examinations granted certification in diagnostic radiology and separate certificates of added subspecialty expertise in vascular and interventional radiology. That pathway has now disappeared. IR has been granted the status of a primary specialty, akin to pediatrics, internal medicine, and diagnostic radiology. US medical students will now directly enter IR residencies and graduate with primary specialty certification in IR. IR fellowships

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will disappear, but graduates will leave their training with more clinical skills and more procedure experience in the same number of years of training.

Interventional radiographers should realize they are at the same tipping point. Our complex and unique career merits specific clinical training and structured examination preparation for certification. In 2016, the national pass rate for the American Registry of Radiologic Technologists Vascular Interventional (VI) Board was 57%. These do not reflect a gap in effort or clinical skill, but highlight the necessity for consistent formalized training. In the same way that physicians are taught and prepared, IR technologists need tailored and standardized formal training to be adequately prepared for VI boards as well as safe practice (Table 1). A lack of educational resources and standardized education finds many radiographers practicing the specialty without ever seeking certification. Their clinical skills may be sufficient for their specific situation, but they may be ill-prepared to move into other job opportunities, or passed over in favor of candidates with formal training in IR.

There are many existing models for providing structured IR technologist education, including didactic courses coupled with on-the-job experience, formal programs that provide both clinical and didactic instruction after completion of a radiography program, or including it in a bachelor’s program. Whatever the format, IR technologist training programs should consist of comprehensive didactic lectures and sufficiently broad supervised clinical experience (Table 2). Program faculty could be a mix of IR technologists, appropriately trained nurses, interventional radiologists, administrators, and radiologic physicists. The curriculum will naturally evolve in parallel with the field of IR, but fundamental curricular topics should include advanced vascular anatomy, principles of patient care, radiation physics, diagnostic and implantable devices, pathology commonly seen in IR procedures, and team-building skills. In 1973, the University of Virginia created a year-long dedicated postgraduate training program for radiologic technologists interested in IR careers. Graduates of this

Table 1. Existing and Proposed Prerequisites for VI Board Certification

Current VI Board Prerequisites	Proposed AVIR Board Prerequisites
1) Postgraduate Registered Radiographer	1) Postgraduate Registered Radiographer
2) Complete prerequisites as prescribed by the ARRT (16 Structured Continuing Education Credits and required clinical exposure)	2) Complete prerequisites as prescribed by the ARRT (16 Structured Continuing Education Credits and required clinical exposure) 3) Graduate of IR program or IR training pathway

ARRT = American Registry of Radiologic Technologists; AVIR = Association of Vascular and Interventional Radiographers; VI = vascular interventional.

Table 2. Existing Models and Proposed Pathways for Structured VI Technologist Education

Current Educational Pathways	Proposed AVIR Educational Pathway
1) On-the-job training, or 2) Formal internship, or 3) Didactic courses coupled with formal clinical instruction	1) Completion of didactic courses (either web based or through a formal IR program) as endorsed and prescribed by the AVIR, and 2) Completion of clinical rotations designed to meet ARRT VI Board clinical requirements; clinical rotations must occur under the guidance of a VI radiographer and be endorsed by a board certified radiologist, and 3) Completion of 16 Structured Continuing Education Credits as prescribed by the ARRT

ARRT = American Registry of Radiologic Technologists; AVIR = Association of Vascular and Interventional Radiographers; VI = vascular interventional.

program have demonstrated a 99% pass rate of the post-primary VI board examination. This model may represent the intense end of the training scale, but elements of similar existing training programs can be culled to produce written, web-based, or oral courses. Teaching may be provided at local preceptorships or built into nationally available curriculum materials, both of which are reviewed and recommended by the Association of Vascular and Interventional Radiographers (AVIR). These materials can be of equal value to international societies of IR technologists seeking to elevate their own member training.

We challenge the AVIR to commission, create, and encourage standardized education as a prerequisite to VI board examination eligibility. The AVIR has a longstanding history of being the premier organization for providing VI education, and creating this curriculum would be a natural evolution in the educational offerings of the AVIR. The curriculum should be recommended by the AVIR and endorsed by interventionalists as the model that accredited institutions will adopt as standard education for their technologists. We envision the launch of an AVIR-supported curriculum in 2019. Those intending to practice IR should be encouraged to seek board certification and anticipate being well prepared to achieve high pass rates similar to other boards' examinees. Hospital administrators should support this training by requiring that all endovascular procedures have such a trained technologist in the room.

Interventional radiographers hold one of the most gratifying and unique positions in medicine. They are experts at using complex imaging and post-processing tools to optimize diagnostic information. They hold expert knowledge for the devices used and are best suited to assist physicians in their appropriate and safe use. They are first assistants to physicians and, with consistent and broad training, will be recognized as essential. They are experienced circulators correctly anticipating and meeting procedural needs, often providing the

recommendations for devices and tools. Although the role evolves and changes with the institutions and divisions served, the education and the prerequisites required to qualify for this dynamic career should not. An intimate understanding of anatomy and the design, construction, and application of IR inventory, along with a comprehensive and compassionate approach to patient care, allows radiographers to be integral contributors to patient outcomes, and share in the same frustrations and satisfactions as their physician colleagues.

Appropriately trained technologists become the educators, innovators, and leaders of tomorrow. Implementation creates graduates that will accelerate the practice and evolution of IR, improve IR team care of patients, and, hopefully, improve career advancement opportunities and colleague collaboration. It is essential that we continue to support our field by seeing ourselves as our physician colleagues see us: a requisite to the future of IR, consistent partners to interventionists, and core contributors to the exceptional and irreplaceable patient experience that only IR can provide.

Our field attracts innovators, thought leaders, hard workers, and patient advocates. We are vital to interventional radiologists, vascular surgeons, oncologists, orthopedic surgeons, interventional urologists, dialysis centers, outpatient clinics, and interventional neuroradiologists. As the IR model evolves, so too must the pathway of the technologists who seek careers in IR. As technologists, credentials mark our expertise. They are a nationally accepted measure of ability, a quantifiable indicator that not only can we be expected to meet a standard of practice, but that our specialty defines a standard of practice. As technologists, we need to elevate our role through a universal call for standardized curriculum.

REFERENCE

- Margulis A. Interventional diagnostic radiology—a new subspecialty. *Am J Roentgenol* 1967; 99:763–765.

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SPOTLIGHT ON: RUSH UNIVERSITY

by: Kristen L. Welch RT, R, VI

I had the opportunity to tour Rush University's Interventional Radiology department. For those unfamiliar, Rush is located in the heart of downtown Chicago and has a high functioning Interventional Radiology department. I got to sit down with Drs. Bulent Arslan, Osman Ahmed, Kumar Madassery and technologist Joe Canino to discuss some of our fields hottest topics, research, education, and the teamwork within their lab.

If you had only a couple of sentences to describe IR to someone who knew nothing about it, how would you do so?

BA: IR performs image guided minimally invasive procedures that replaces most surgeries with minimal complications and side effects to the patients.

KM: IR is the new age innovative way to treat anything from simple to complex diseases. We place venous access lines and also treat cancer. It's the most minimally invasive way to achieve a cure or palliation

OA: First I'd explain that I am a radiologist-meaning I am trained to interpret xrays. I then completed specialized training as an interventional radiologist, so I can perform minimally invasive procedures on people using those images to treat a wide variety of diseases.

How many cases does your team complete during a typical work day?

OA: We're a really busy academic medical center in Chicago. We typically complete 30-40 cases per day within our Vascular Interventional Radiology Department.

What procedures are performed within your lab?

KM: Any type of case you can stick a needle. We perform simple procedures such as placing a picc line to complex aortic and revascularization cases and liver directed therapy. We also perform non vascular procedures involving the hepatobiliary and genitourinary systems. We're currently working on a paper with gynecology summarizing our work with fallopian tube recanalization. Any disease from head to toe (not including the hearts) can be treated in IR.



Dr. Bulent Arslan



Dr. Osman Ahmed



Dr. Kumar Madassery



Joe Canino RT, R, VI

OA: We perform a wide variety of procedures at Rush. Anything essentially from head to toe. We do treat peripheral vascular disease as well as liver directed therapy, non vascular procedures, MSK intervention, complex caval filter placements and removals and we pulmonary interventions. My clinical interests include filters, chronic DVT, and Interventional Oncology.

How does your lab communicate amongst staff to stay on top of change?

KM: We have weekly meetings on Wednesdays to educate the nurses and technologists on a variety of topics including new products, procedures, anatomy, and disease processes. We also have a monthly global endovascular conference which includes all interventional service lines- IR, Cardiac Cath, and Neuro Interventional. The nurses, techs, and physicians all attend and each specialty presents cases. It's a great learning environment. It's a great opportunity to stay up to date on new products being brought into the lab as well as workflow changes within the department.

OA: Each afternoon we have a daily huddle that includes our scheduler, charge nurse, technologist, and physicians that are on call the following day. We review the next days patients to discuss special equipment and product that may be needed, labs needed, and the schedule for the day.

JC: At the end of the day our board nurse and the rest of the call team will go over the cases to be done the next day. We then figure out the cases that should go into each room and prioritize more time sensitive procedures.

Describe the most challenging and rewarding aspect of caring for patients in IR

KM: The most challenging aspect is getting patients to understand the complex

procedures and disease management we can provide for them. The most rewarding part is being able to tell patients about great outcomes. I like to show my patients their pre and post procedure imaging, which helps them understand the magnitude of the procedure performed.

BA: The most rewarding is seeing that my patients are doing better when following up is extremely gratifying. The most challenging is dealing with poor outcomes and complications.

How do you deal with those complications?

BA: When complications happen, usually peoples first reaction is avoidance. For myself, and what I tell my colleagues is that is the time you want to be more involved with the case. You need to talk to the family, explain what happened, and don't hold anything back. You take care of it as promptly as possible. I also like to get someone else involved as a second opinion in the case that there was something that I missed. At Rush, we review all of these cases at a monthly IR Mortality and Morbidity (M&M) conference. In addition there is hospital-wide medical surgical M&M that includes the intensive care units and surgical specialties.

Who were/ are your mentors in IR?

BA: I have a few mentors that have made a significant impact in my career. My first mentor was my chief, who trained me at the University of Rochester, David Waldman. In my career, Mike Dake and Alan Matsumoto. I learned a lot from the two of them. Alan taught me more about how IR department is ran and how to collaborate with other specialties. Mike Dake taught me that there are no limits to what can be achieved in medicine.

KM: Bulent Arslan and Cenk Turba. Both of those two are very contrasted individuals

in terms of their approaches, techniques, and demeanor. However, they both have the same ultimate goal which is achieving the best outcomes possible. They both inspire the same message, but through different routes. Someone else that also mentored me before when I was a surgery resident was Dr. Hector Ferral. He was the one that made me realize that I belonged in IR instead of surgery. All three of these mentors are local and I get to work with them everyday.

OA: I'm really lucky in my career path in regards to the education I've received. My first mentor was Brian Funaki with the University of Chicago in my residency. He is the person who actually got me into academic medicine in general. I really admire all of the work he has accomplished. He trained me to be a good researcher and clinician. At Stanford during my IR fellowship, my biggest mentor was Rusty Hoffman and Will Kuo. They were both very influential in my interventional training. Dr. Kuo is the reason for my interest in complex filter removals. After I came to Rush, Bulent Arslan became one of my biggest mentors. He's incredible. For me, he really filled the last step in my career- how to be a well rounded physician in general from building a practice, to how to talk to patients, and pushing limits in medicine.

Could you describe an early moment in your career in IR when you were fascinated by what the specialty could achieve?

KM: The earliest moment was during an acute thoracic dissection rupture case. Seeing us go into the hybrid OR and lead the show. Within a hour the patient was stabilized and headed out to recovery. We weren't just in the OR to offer wires and catheters. It was IR that led the planning, cannulating the gait, and deploying the graft. It was very inspiring that we could lead the show on something so complex.

OA: Definitely in fellowship working with Will Kuo. I had never participated in filter retrievals prior to my training with him. He has an international draw; with patients coming from around the world to see

him for the removal of the caval filters. He takes on some of the most complex cases I've seen on patients who have been told their filters could not be removed. It was very rewarding to be a part of. These experiences really shaped my career and are the reason I got involved in IR.

How is your department staffed during the week? What staff makes up your call team?

JC: During the week we usually have one tech and one nurse scheduled in each room. We have an early shift team and a late shift team. We have dedicated techs for each service line. We have 8 body and 6 neuro technologists with the neuro team rotating through body IR as well.

We have separate call teams for Neuro IR and Body IR. Those teams are each comprised of a tech, nurse, and physician.

What are some IR procedures that you think are in validation phase that will play a more significant role in our field once there is more data?

BA: Gastric and Prostate embolization, ablation procedures and NanoKnife. There's a lot more utilization for IRE it than it is currently being used. The technology has a lot potential, but unfortunately there are a lot of problems with reimbursement for it, which limits the procedures we can perform. We do about 10-15 of these procedures annually.

KM: Prostate artery embolization. It's a hard market to get into because everything that we do that is innovative and significant is taking away dinner from someone else in theory. I think as we move towards an era of less financial compensation and fewer insurance reimbursements, I think other specialties perspectives may start to change and we can all do what's best for the patient. A few other areas that I believe will continue to grow are prostate cancer ablation., bariatric embolization, and other interventional oncologic therapies. With more data on outcomes with radioembolization and segmentectomy I do believe what we offer patients will become curative rather than as palliative or

a bridge. We can treat these patients with liver directed therapy and achieve nearly the same result as surgical resection.

OA: The next thing to really evolve is probably prostate artery embolization. There has been a lot of literature in JVIR recently with data to support it has a huge societal interest. Some other fringe procedures may be included are left gastric and geniculate artery embolizations.

IR is widespread, but so much of what IR does, someone else does as well.. How do you fight that battle? At Rush, what role does Interventional Cardiology and Vascular Surgery play in the treatment of PAD?

BA: Fortunately, IR plays a major role in the treatment of PAD at Rush. Cardiology does do some cases here and there and we have a very great relationship with Vascular Surgery. Our complex aortic cases are performed together with both departments in our Hybrid OR suite.

KM: At Rush, prior to Drs Arslan and Turba IR really only performed diagnostic angiograms. They really opened a door between IR and Vascular Surgery in the treatment of PAD. They began treating the patients that otherwise would have been candidates for amputation. We now perform nearly 100% of the endovascular PAD work at our institution. Historically, in any institution it can be hard for IR to have a seat at the table in treatment of these patients if we're not getting referrals. IR doesn't own the patients. At rush we really changed the paradigm for our CLI patients and are able to provide great outcomes.

How do you feel the IR/DR training model will affect our field?

BA: This is going to be the best thing for our field. It will also depend how the track is utilized. There are a lot of radiology programs that see them as additional residents in their programs. They need to have a more dedicated focused pathway. Each program is allowed to create their own rotations. In our program, we include a surgery internship as a categorical program. So the residents don't do an intern year.

They come straight to us. We have our first group of residents starting in July.

KM: Its going to affect our field by developing far better trained graduates. Our field has evolved so much to include more subspecialties like IO, arterial, and women's health which is nearly impossible to cover in just a one year fellowship. I think the training model will change the market. This will lead to less hybrid practices and there will be more competent proceduralists vs radiologists that just dabble in interventional work

OA: I think the new training model will be a really great thing for IR. The new training pathway will attract more students that want to focus on IR.

Do you think there needs to be a similar change to the educational pathways for technologists and/or nurses working in IR?

BA: Absolutely, yes. I used to work at the University of Virginia, where the technologists had a great educational pathway and a school that trained them to become professionals in IR.

The program produced great technologists that then became leaders within our field. I do think that these programs should be a mandatory requirement to becoming an IR technologist.

These programs would elevate the specialties status in the medical field.

KM: Yes. There is a disparity in technologists' procedural knowledge. We need to do what we can to help standardize their education so we can produce well rounded competent technologists. The techs contribute to the efficiency of patient care through their knowledge of the anatomy, disease processes, and procedural workflow. It is vital for them to have more of a standardized curriculum. I'm really looking forward to being a part of this endeavor with the AVIR.

What makes a good technologist?

BA: Good technologists care about the patients in the same regard that I do. These individuals focus is on the case from start to finish. A good technologist offers ideas procedurally or on product by anticipating the needs of the patient.

KM: A good technologist can plan ahead, predict, and adapt. As proceduralists we may be too focused on one aspect of the case, that we may not realize another alternative or limitations to devices that the technologists can offer suggestions on. A good technologist has a vast knowledge base of our equipment and the procedure being performed.

OA: The same thing that I think makes anyone good at their job, taking pride in the job you do. A really good tech is engaged in the procedure, often anticipating what I may ask for before I can ask because they know what the next step in the procedure is. Individually, the techs that I enjoy working with the most are the ones that can remember the way I do things.

Does your lab require their technologists to take the VIR registry exam?

JC: It is not a requirement, but it is suggested. Rush has recently rolled out an Advanced Technologist Level program, and being VI certified helps our technologists get promoted to different levels and is required to become a Technologist Level III

What does Rush do to promote professional growth for its employees

BA: We have weekly educational meetings for technologists, nurses, and physicians. We start our cases late on these days to have these educational events. Once a month we have a global endovascular meeting that all of our technologists, nurses, and physicians come together to discuss cases. It's very well attended. In addition, in our department we have didactic sessions dedicated to nurses or technologists.

OA: We have a monthly global endovascular conference which includes all of the interventional service lines, Radiology, Cardiology, EP, and Neurology. All of the

techs, nurses, and physicians attend. Two of the service lines then present a complex case they've done recently. We all learn from each other during these meetings. We also sponsor a technologist to attend the annual AVIR and SIR Scientific Meeting each year. AVIR has a Chicago Chapter that is run by one of our technologists, Kevin Lynch and those meetings are highly attended by Rush techs.

JC: As far as promoting professional growth, they offer substantial tuition reimbursement for their employees. They also send technologists and nurses to conferences throughout the year. In neuro IR the department sends nurses and techs to World Live Neurovascular Conference. Our Neuro Chief, Dr. Lopez is a very big spokesperson for the conference and we broadcast live cases into the conference each year.

With more data behind Interventional Oncology procedures and as people in the oncology field see the value of what interventional oncologists can provide, do you think these procedures can move forward to become frontline cancer treatments? Do you think interventional oncologists will be seen as frontline members of the cancer team to deliver longitudinal care?

BA: I think in some aspects, we already are. The reason the question even exists lies in the fact that in medicine there are a lot of egos. Everyone thinks their ideas and judgment is the best. If we can embrace new ideas, procedures, and team members we can provide better treatment and longitudinal care for our patients.

KM: This needs to happen, but I do agree - we need better data. We will become a primary manager for patients in Oncology, but we need the data to be stronger. Without that, we don't have a strong enough seat at the table.

OA: Yes. The key part of that question is with more data. I think we still have a long way to go in accumulating that data. The field of oncology, radiation oncology, surgical oncology has been around for far much longer than IO. We need to gather

as much data. As we do that and the data essentially shows superior to more conventional approaches to cancer we'll naturally move to the frontline.

The Rush faculty have an impressive publication record. Tell me about some of the current research Rush is involved with:

BA: My main research interests revolve around complex procedures, particularly the creation of percutaneous extravascular bypasses with covered stent grafts. We've done 5-6 cases here at Rush including a caval reconstruction. Some other interests of mine include aortic intervention for thoracoabdominal aneurysms and CLI outcomes.

KM: My research interest is mostly in arterial work and women's health. A couple of things I'm currently working on are a manuscript on direct stick peroneal SAFARIs and also a paper with OBGYN on fallopian tube recanalization. Institutionally, we're also working on projects with varicocele embolization and drug coated balloon technology.

OA: With Rush being involved in so many types of procedures that really lends to being able to do research on a wide variety of topics. I tend to focus my research on IVC filters and the use of suction thrombectomy in different applications. I have a background in economics, so I also have an interest in public health and national databases looking at procedural trends.

Which new techniques and technologies in our field will you be watching closely in the future?

BA: I will be closely watching the evolving technology with nanoknife. They're currently working on a single probe model which I believe will be a potential game changer in ablation. Another product that I'm waiting for is a liquid embolic agent that is more versatile and functional than the current embolics. There are companies working on products that are more modifiable. You can adjust the viscosity allowing the liquid to travel more distally in complex embolization procedures.



KM: I'm really interested in below the knee devices including drug coated balloons and stents. I'd like to see a covered stent that's approved for not just emergency use. For me, below the knee work because that's an area we have the most power to affect limb salvage patients directly.

From your perspective, what is the biggest problem in healthcare today?

BA: The biggest problem in healthcare is cost. The reason that cost is high is because healthcare, as it should be- is very unregulated. One aspect that affects this is the fact that there are proceduralists out there performing procedures they haven't adequately been trained to perform and there is no one regulating or controlling this. When these procedures result in poor outcomes, more procedures need to be performed. I believe a tight quality assurance program along with a dedicated focused outcome related payment system will resolve this issue. This system would ensure people are getting paid for the service they provide, and not just the CPT codes.

KM: The biggest problem I think in healthcare today is the disparity in care that's being offered around the country and who can provide it. From an interventional

perspective, there are so many procedures that get denied by insurance companies as "experimental" regardless of the procedures being performed for the last 20 years. I often have to fight denials for uterine fibroid embolizations because the insurance companies which is incredible because it's a procedure that has been performed, documented, and published. The providers then have to go through the appeal process, while the patients sit while struggling with their symptoms.

OA: I think the biggest problem facing healthcare today is healthcare expenditure and how to solve wasteful spending. It's clear the fee for service model is broken and lends to inappropriate spending by physicians for either monetary gain or defensive medicine. I think moving forward our government and private insurers must find a way to reward physicians and hospitals for quality of care as opposed to quantity. I think for this reason there is huge opportunity for research in IR in this arena as many of our procedures represent low cost alternatives to Surgery with similar if not superior outcomes.

READY TO TAKE YOUR POST PRIMARY VI EXAMINATION? HERE'S WHAT YOU NEED TO KNOW

Kristen L Welch, RT, R, VI
President-Elect



Are you interested in sitting for your Vascular and Interventional post-primary exam?! Well, we've got all the info you need here to apply and prepare yourself for your examination. You can also

view a comprehensive overview at www.arrt.org/handbooklinks

Still have questions?! Please feel free to reach out to the Education Committee Chairman at: kristenavir@gmail.com

Preparing to take the Exam Beginning the Application Process

You can submit your application through your ARRT online account. Applications for certification and registration are subject to a processing fee of \$200. Reapplication fees are \$175. Once approved you must schedule your exam appointment in a 365-day window assigned by ARRT. For a list of locations to take your exam you can visit: www.pearsonvue.com/arrt

Ethics Requirement

You can view the ARRTs Standards of Ethics. This document articulates the types of behaviors they expect of RTs. Applicants are required to report any violations

Clinical Experience Requirement

Candidates for Vascular Interventional Radiology certification must document performance of a minimum of 200 procedures. These procedures are documented, verified, and submitted through an online tool through My ARRT Info in your ARRT online account.

The ARRT recognizes 61 different procedures in the following categories:

- A. Neurologic
- B. Thoracic
- C. Abdominal and Pelvic
- D. Genitourinary and Gastrointestinal
- E. Peripheral
- F. Venous Access
- G. Miscellaneous

for a complete list of procedures visit: www.arrt.org

Candidates must document a minimum of 200 procedures and follow these rules:

- The candidate does not need to select procedures from all 7 above categories
- Each selected procedure must be performed a minimum of 5 times in order to receive credit
- Each procedure may be counted a maximum of 20 times
- For any given patient per day, you may count only one diagnostic procedure, but multiple interventional procedures

Examples

Candidate A: This person identified 10 different procedures from the list and performed each of those procedures 20 times ($10 \times 20 = 200$)

Candidate B: This person identified 25 different procedures from the list. The applicant performed 15 of those procedures 10 times ($15 \times 10 = 150$), and the other 10 procedures five times ($10 \times 5 = 50$)

Candidate C: This person identified 40 different procedures from the list and performed each of those procedures five times ($40 \times 5 = 200$)

For the procedures to qualify for documentation the technologist must demonstrate active participation in a primary role with appropriate:

- Preparation of supplies and maintenance of equipment
- Evaluation of order and patient identification, patient preparation, and administration of medications as required
- Patient monitoring during procedure
- Post procedure patient care
- Image processing, including evaluation of images to ensure they demonstrate correct anatomy, radiographic technique, and identification / labeling

Continuing Education Requirement, Effective January 1, 2016

Technologists wishing to pursue post-primary certification in Vascular and Interventional Radiology must submit 16 CE credits specific to Vascular and Interventional Radiology before qualifying to sit for their examination.

Structured Education Requirement, Effective January 1, 2018

In order to sit for your boards, you will be required to provide 16 structured education CEs. What does this mean?! These credits are specific to your modality, but also have been approved by the ARRT as Structured Education. These credits will be "coded" into a category. The three required categories include: Patient Care, Image Production, and Procedures. Each applicant must have atleast 1 credit from each of the 3 categories.

How do you know which category your CEs fall into? After you complete your CE activities, log into your ARRT account and use their post-primary tool to directly submit your education to the ARRT. Your credits will be processed within 2 business days. Specific topics within each category are addressed in the content outline on www.arrt.org

Studying for Your VI Board Exam

AVIR Now Offers Online VI Review

The AVIR now offers a 4.0 CE video led online VI Review and Mock Registry Exam. The video content and mock registry are up-to-date and relevant to the current ARRT VI Examination.

Our review includes:

- Patient Care and Pharmacology Review
- An in-depth Look at Vascular Anatomy and Pathology
- A Review of Inventory Vital to Our Field Including Diagnostic and Implantable Devices
- Review of Routine and Complex Interventional Procedures
- A 120-question Mock Exam with Answers

Textbooks

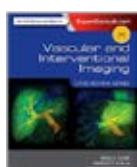
I've put together this list of textbooks that some of our members have found helpful in studying for their exam.



ARRT Examination in Cardiovascular Interventional Technology (Admission Test Series)
by Passbooks
ISBN 13: 978-0837358178
ISBN-10: 0837358175



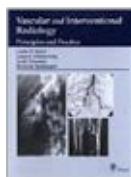
Vascular and Interventional Radiography: A Comprehensive Text & Examination Review 2nd Edition
by Jonathan J. Schwartz
ISBN 13: 978-1500443504
ISBN 10: 1500443506



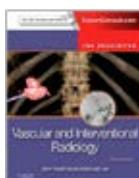
Vascular and Interventional Imaging: Case Review Series, 3rd Edition
by Wael Saad, Minhaj Khaja, and Suresh Vedantham
ISBN 13: 978-1455776306
ISBN 10: 1455776300



Handbook of Interventional Radiologic Procedures, 5th Edition
by Krishna Kandarpa, Lindsay Machan, and Janette Durham
ISBN-13: 978-1496302076
ISBN-10: 1496302079



Vascular and Interventional Radiology: Principles and Practice 1st Edition
by Curtis W. Bakal, James E. Swilberzweig, and Seymour Sprayregen
ISBN 13: 978-0865776784
ISBN 10: 0865776784



Vascular and Interventional Radiology: The Requisites, 2nd Edition
by John A. Kauffman and Michael J. Lee
ISBN 13: 978-0323045841
ISBN-10: 0323045847



Todd's Cardiovascular Review Book Vol 1: Invasive Basics (Cardiovascular Review Books) 5th Edition
by Wesley Todd
ISBN 13: 978-1490507323
ISBN 10: 1490507329

The Exam

The table below represents the major content categories and subcategories covered on the examination. The number of test questions in each category and subcategory are listed below. Specific topics within each of those categories are addressed in the content outline at www.arrt.org. The ARRT also includes 50 pilot questions. Pilot questions are un-scored questions. They use the data from pilot questions to evaluate new questions. These questions will appear on your exam like all the other questions and are unidentifiable.

Content	Number of Scored Questions
Category:	
Patient Care	30
Patient Interactions and Management (30)	
Image Production	25
Image Acquisition and Equipment (25)	
Procedures	105
Vascular Diagnostic Procedures (50)	
Vascular Interventional Procedures (35)	
Nonvascular Procedures (20)	
Pilot (un-scored questions)	50
Total	210

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AVIR has partnered with Medlantis to bring you a comprehensive learning experience. As an AVIR Active Member you are entitled to one free CE credit per month on Medlantis. Just sign up on their website, and we will provide you with a coupon each month in your inbox.

ATTENTION ALL WRITERS

The Interventional Informer is offering \$100 to the best article. This is awarded for each issue of the Informer. The article should be originals. No limit in size, but they must pertain to Interventional Medicine. Just submit your article with name and address for the AVIR Board of Directors to review.

Best of Luck!

AVIR would like to acknowledge the following writer for their publication in the past issue.

"Taming the Mind"

By: Stefanie Rockwood

Congratulations!

NEWSLETTER ADVERTISING RATES:

Type	Dimensions Inches	Ad Rate
Classified Ad	1 column inch	\$ 125.00
1/8 page color ad	2 1/4 x 3 3/4	\$ 525.00
1/4 page color ad	4 1/2 x 3 3/4	\$ 825.00
1/2 page color ad	4 1/2 x 7 1/2	\$ 1,200.00
Full page color ad	8 1/2 x 11 (+ 1/8 bleed)	\$ 2,000.00

Issue	Close Date	Mail Date
2018 Summer	May 20	June 1
2018 Fall	August 23	September 3

Full payment must accompany ad order

Mechanical Specifications

Dimensions:

Trim Size: 8.5"x11"

Live Area should be kept 1/4" from trim on all sides including gutter.

Bleed extends 1/8" beyond trim on all sides.

File Submission

Digital files should be provided in high resolution PDF format, including crop marks and bleed if applicable. Although not recommended, we will accept the following formats: .eps, .tif, or Adobe InDesign native files with all support links and fonts. The following file formats are not accepted: Corel, Microsoft Word, Powerpoint or Publisher documents.

All images must be 300dpi and in CMYK or Grayscale color format. All fonts should be embedded or in outlines where applicable. Artwork should be submitted at 100% scale.

NOTES

NOTES



MEMBERSHIP APPLICATION

ASSOCIATION OF VASCULAR AND/OR INTERVENTIONAL RADIOGRAPHERS

2201 Cooperative Way | Suite 600 | Herndon, VA 20171 | 571.252.7174 | Fax: 571.858.7174 | Email: info@avir.org

FULL PAYMENT MUST ACCOMPANY COMPLETED APPLICATION FORM

Membership Category — Select only one | Please print or type

Active | \$ 75/yr*

Clinical Associate | \$ 65/yr

Corporate Associate | \$ 65/yr

Student | \$ 45/yr

International | \$85/yr

*ACTIVE – Submit ARRT Certification or Canadian Equivalent

Mr Mrs Ms NAME / FIRST

M.I. LAST GENERATION (JR., SR., II, III)

CREDENTIALS

LICENSURE

DEGREE/S

REGISTRATION/S

PREFERRED ADDRESS

HOME

WORK

HOME STREET

CITY

STATE

ZIP

PHONE

FAX

EMAIL (for official AVIR business only)

WORK INSTITUTION NAME

DEPT.

STREET (include department, room number, mail stop codes, etc., if appropriate)

CITY

STATE

ZIP

PHONE

FAX

EMAIL (for official AVIR business only)

Length of Time as Tech Area of Expertise: _____

Size of Institution (# of beds): _____

____ Private ____ Academic

Number of Exams Performed at this Institution:

____ Vascular _____ Interventional

Are You a Member of: ARRT Yes No **ASRT** Yes No

(If YES, please attach photocopy of membership card/s)

Other Professional Organizations of Which You Are a Member:

Related Interests (CQI, Teaching, Publishing, etc.):

Payment Information: Check Enclosed

OR Charge Credit Card: AmEx MasterCard Visa

ACCT NUMBER

EXP DATE

NAME ON CARD

SIGNATURE

Student Members Only

DIRECTOR

PROGRAM ADDRESS

CITY STATE ZIP

PHONE

WHAT IS AVIR?

The Association of Vascular and Interventional Radiographers (AVIR) is the national organization of healthcare professionals within Vascular and Interventional Radiology and involved in standard of care issues, continuing education and related concerns.

Who Can Become a Member of AVIR?

ACTIVE: Radiographers with a primary focus in Vascular and/or Interventional Radiology. Active members must be ARRT registered or have Canadian equivalent. Submit copy of certification with application.

Dues are \$75 per year.

ASSOCIATE: Related healthcare professionals working with or having a special interest in Vascular and/or Interventional Radiology, including Nurses, Medical/Cardiovascular Technologies and Commercial Company Representatives.

Dues are \$65 per year.

STUDENT: Students in certified programs for Vascular and/or Interventional Radiographers.

Dues are \$45 per year.

INTERNATIONAL: Healthcare professionals working or having special interest in CIT and who reside outside of the United States and Canada. This category includes, but is not limited to, medical technologists, radiologic technologists, registered nurses, licensed practical nurses, Physicians and commercial company representatives.

Dues are \$85 per year.

All Memberships are renewable annually each January.



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