

**Tooling Technologies for Composites Manufacturing –A “Hands-On” Workshop – Day 1**

**February 26, 2019**

| <b>Start</b> | <b>End</b> | <b>Element/Company</b>                                   | <b>Subject Title &amp; Speaker</b>  | <b>Technical Topic Coverage</b>  |
|--------------|------------|--|---|--|
| 7:30 AM      | 8:30 AM    | Breakfast & Networking                                   | Breakfast & Networking, Into @ 8:00 AM – Workshop Welcome by Lou, Scott & Phil  | SAMPE Workshop Focus & Who SAMPE is ...  |
| 8:30 AM      | 9:00 AM    | Compotool  | Neil Hamlin   | High Temperature Ceramic Tooling Board Materials and Applications                  |
| 9:00 AM      | 9:30 AM    | Duna-USA   | Brad Burnett  | High Temperature Polyurethane Tooling Board Materials and Applications             |
| 9:30 AM      | 10:00 AM   | TenCate Advanced Composites                              | Eric Howard   | Low Temperature Curing Tooling Prepregs  |
| 10:00 AM     | 10:30 AM   | Carbon Innovations (CFOAM, LTD) Tooling                  | Bill Castaneda  | C-Foam Tooling Technology for Lightweight and Controlled Temperatures              |
| 10:30 AM     | 11:00 AM   | Break  | Break, Email Refresh and Networking   |  |
| 11:00 AM     | 11:30 AM   | Polynt Composites USA, Inc.                              | Rick Pauer  | High Temperature 300F Low Shrink Polyester Infusion CF Tooling                     |
| 11:30 AM     | 12:00 PM   | Spintech, LLC (Smart Tooling)                            | Robert Graziano   | Smart Tooling and Tooling for Complex Shapes                                       |
| 12:00 PM     | 12:30 PM   | Rubbercraft Tooling                                      | Finley Miller   | Elastomeric Tooling Applications for Hollow Composite Structures                   |
| 12:30 PM     | 1:30 PM    | Lunch  | Lunch   |  |
| 1:30 PM      | 2:00 PM    | Stratasys, Inc.  | David Dahl  | Additive Manufacturing Tooling Solutions for Composites Processing                 |
| 2:00 PM      | 2:30 PM    | Airtech International, Inc.                              | Cole Standish   | Tooling Prepregs—and New Systems   |
| 2:30 PM      | 3:00 PM    | Cincinnati, Inc.   | Rick Neff   | BAAM: Big Area Additive Manufactured Tools   |
| 3:00 PM      | 3:30 PM    | Break  | Break   |  |
| 3:30 PM      | 4:00 PM    | Coast Composites/Ascent Aerospace                        | Don Sowers  | Unique Cure Tooling and Hybrid Material Options                                    |
| 4:00 PM      | 4:30 PM    | Advanced Ceramics Manufacturing                          | Dr. Zachery Wing  | Washout Ceramic Tooling Materials and Best Practices for Technology Solutions      |
| 4:30 PM      | 5:00 PM    | Composites One   | Will Chafin   | High Temperature Tooling Prepregs  |
| 5:00 PM      | 5:15 PM    | Day 2 Introduction & Plans                               | <ul style="list-style-type: none"> <li>• Lou Dorworth – Abaris Training Resources</li> <li>• Schedule – Dr. Scott Beckwith, Phil Sears – SAMPE</li> </ul> | Plans & Activities for Day 2 Demos and “Hands-on”                                  |
| 6:00 PM      | 8:30 PM    | Networking Function with local SAMPE Los Angeles Chapter | LA Chapter Dinner & Technical Presentation – Networking – LA Chapter/Event attendees  | Technical Presentation (“Tooling Technology Overview” and Pizza/Soft Drink Dinner) |

**[Tooling Technologies for Composites Manufacturing –A “Hands-On” Workshop – Day 2](#)**

**February 27, 2019**

| <b>Start</b> | <b>End</b> | <b>Element/Company</b>  | <b>Subject Title &amp; Speaker</b>   | <b>Technical Topic Coverage</b>  |
|--------------|------------|---|--|--|
| 7:00 AM      | 8:30 AM    | Breakfast & Networking  | Breakfast & Networking   |  |
| 8:30 AM      | 9:15 AM    | Tour USC Laboratory Facilities  | Drs. Steve Nutt & Tim Centia – Univ. So. Cal.  | Working Lab for Demos & Hands-On   |
| 9:15 AM      | 10:30 AM   | Prepreg Tooling Layup Exercises & Ceramic Tooling Demo  | <ul style="list-style-type: none"> <li>• David Dahl – Stratasys, Inc.</li> <li>• Lou Dorworth – Abaris Resources</li> <li>• Eric Howard – TenCate Adv. Composites</li> <li>• Dr. Zachery Wing – Adv. Ceramics</li> </ul> | <ul style="list-style-type: none"> <li>• AM Tool Prepregs &amp; Lay-up “Hands-On”</li> <li>• Heat Shrink Tape Use</li> <li>• Ceramic Tool Lay-up Demo</li> </ul> |
| 10:30 AM     | 11:00 AM   | Break   | Break  |  |
| 11:00 AM     | 11:45 AM   | PierCan Bladder Molding Demo  | <ul style="list-style-type: none"> <li>• Alberto Bulcao – PierCan USA, Inc.</li> <li>• Neil Smith – Composites One</li> </ul>  | Demo of Bladder Molding, Prepreg, Tooling  |
| 11:45 AM     | 12:30 PM   | Smart Tooling Demo  | Robert Graziano (Spintech) & Instructors   | Demo of “Smart Tooling” Shape Memory   |
| 12:30 PM     | 1:30 PM    | Lunch   | Boxed Lunches  |  |
| 1:30 PM      | 2:00 PM    | <ul style="list-style-type: none"> <li>• Remove/Demold Parts (Part 1)</li> <li>• Ceramic Washout Demo</li> </ul>  | <ul style="list-style-type: none"> <li>• Attendees, Instructors</li> <li>• Dr. Zachery Wing –Adv. Ceramics Mfg.</li> </ul>   | <ul style="list-style-type: none"> <li>• Demolding Operations on Some Parts</li> <li>• Demo of Washout of Ceramic Tooling</li> </ul>                             |
| 2:00 PM      | 2:45 PM    | Rubbercraft Demo: Lay-up Flat Sheets, Angle Ply Samples, Initiate Cure Cycle  | <ul style="list-style-type: none"> <li>• Rubbercraft Tooling – Finley Miller</li> <li>• Abaris Resources – Lou Dorworth</li> </ul>   | Lay-up of “Off-angle” flat sheet parts (anisotropic) and angle sections – followed by cure and cured part removal  |
| 2:45 PM      | 4:30 PM    | <ul style="list-style-type: none"> <li>• Remove/Demold Parts (Part 2)</li> <li>• Demold Tool Laminates (Part 3)</li> <li>• ROUNDTABLE Discussions with Attendees</li> </ul> | Attendees, Instructors: <ul style="list-style-type: none"> <li>• Rubbercraft Tooling</li> <li>• USC Lab Staff</li> <li>• Abaris Resources – Lou Dorworth</li> </ul>  | <ul style="list-style-type: none"> <li>• Demold other parts and laminates</li> <li>• Discussion with attendees – Q&amp;A period</li> </ul>                       |
| 4:30 PM      | 5:00 PM    | Workshop Closure Discussions with Attendees – WRAP-UP ...   | <ul style="list-style-type: none"> <li>• Attendees, Instructors, Presenters and Organizers</li> <li>• Instructors, Organizers</li> </ul>   | Wrap-up Session: <ul style="list-style-type: none"> <li>• With attendees</li> <li>• With instructors, organizers</li> </ul>                                      |

**[Back to Tooling Technologies Website](#)**