

KENTUCKY ENGINEER



**2025 Annual
Convention Recap**

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About the Kentucky Engineering Center

The [Kentucky Engineering Center \(KEC\)](#) is the professional home for Kentucky's engineers.

Located in Frankfort, Kentucky, KEC houses the American Council for Engineering Companies of Kentucky (ACEC-KY), the Kentucky Society of Professional Engineers (NSPE-KY), the Kentucky Engineering Foundation (KEF), and the Kentucky Board of Licensure for Professional Engineers and Land Surveyors.

As the engineering hub for Kentucky, KEC hosts professional meetings for engineering organizations and state leaders. KEC and its partner organizations support engineering education, promote the ethical practice of engineering, advocate for licensure, and enhance the well-being of engineers in Kentucky.



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Cover photo by Jeremy Bishop on Unsplash
Magazine design by Hayley Robb Price

President's Message

Stephanie Blain, PE

It is an incredible honor to serve as President of the Kentucky Society of Professional Engineers (NSPE-KY).

As I step into this role, I do so with gratitude for those who came before me, with excitement for the year ahead, and with a deep sense of responsibility to our profession and our members.

We kicked off this new leadership year with an energizing and successful Annual Convention, held in April at the Embassy Suites in Lexington. It was especially meaningful for me personally – not just because Lexington is my hometown, but because the enthusiasm, collaboration, and sense of purpose we experienced reminded me why our work as engineers – and our connection through NSPE-KY – matters. And what a more beautiful way to end the time together than the most beautiful Friday afternoon at Keeneland.

The convention brought together professionals from all over the Commonwealth. We shared ideas, recognized achievements, and reinforced our collective commitment to the future of engineering. Through thought-provoking technical sessions we hope you found the program was both substantive and inspiring. You can read more about the convention on pages 14-17.

As I look ahead to the year to come, my goals as President are rooted in three key priorities: connection, advocacy, and growth.

CONNECTION

Connection means strengthening the relationships within our engineering community.

Whether you're a recent graduate or a seasoned principal, there is a place for you in NSPE-KY. I want to ensure that our chapters continue to be

vibrant, welcoming spaces where professionals can exchange ideas, mentor emerging talent, and build lasting professional relationships. We will be working to support local chapter events, create more opportunities for cross-chapter collaboration, and make sure our communication tools – like this magazine – reflect the breadth and depth of activity happening across the state.

ADVOCACY

Advocacy remains a cornerstone of our mission. As engineers, we have a unique voice when it comes to matters of public policy, infrastructure investment, licensure protection, and public safety. This year, we will continue to strengthen our relationships with lawmakers, agencies, and allied organizations to ensure that the voice of the professional engineer is not only heard – but respected and valued. We'll also be looking to engage more members in our legislative outreach efforts, because your stories and expertise are powerful tools in shaping policy that works for Kentucky. Every day we get to build something meaningful, whether it's a road, a community, or a connection with someone – we should count that as a win.

GROWTH

And finally, growth. Our profession is evolving, and NSPE-KY must evolve with it. That means attracting and retaining new members – especially young professionals and students who are the future of engineering. We'll be working with university chapters, expanding our outreach to EITs, and promoting the value of licensure through all stages of a professional career. We also recognize the importance of diversity in our profession, and we are committed to fostering a culture within NSPE-KY where all engineers feel represented and empowered.

Serving as your President is both a professional milestone and a personal commitment. As a wife,



mother of three, and engineer who has built her career here in Kentucky, I am deeply invested in the success of our society. I believe that engineers not only design the physical world – we shape the future. And I believe that NSPE-KY has a vital role to play in ensuring that future is strong, ethical, innovative, and inclusive.

Thank you for your trust, your engagement, and your dedication to this great profession. I look forward to working with all of you in the year ahead.

As we move forward, I encourage each of you to stay involved, share your ideas, and invite others into the NSPE-KY community. Whether that means attending a chapter meeting, mentoring a younger colleague, participating in a legislative visit, or simply reaching out to a fellow engineer – you have a role to play in shaping the future of our profession. The strength of NSPE-KY comes from the passion and participation of its members, and together, we can ensure that engineering continues to be a respected, rewarding, and resilient career path for generations to come. Let's build something great together.

Stephanie Blain, PE
NSPE-KY President
2025-2026





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MEMBER SPOTLIGHT

NSPE-KY is dedicated to promoting the ethical, competent, and licensed practice of engineering while enhancing the professional, social, and economic well-being of both returning and new members of the organization. Please welcome Peyton Payne to NSPE-KY.



MEET PEYTON

PEYTON PAYNE
Geotechnical Project Engineer
STV

1 Tell us about yourself.

I grew up in the small town of Glasgow, Kentucky, where weekends were often spent out on the lake with family and friends. I graduated from Western Kentucky University in 2020 and started working at STV (formerly AEI) the very next week, which really set the pace for my career. Now, I live in nearby Smiths Grove with my husband of four years and our five-year-old pup. Staying close to home and working in Glasgow has been such a gift – it means I get to spend time with my parents regularly, which is something I don’t take for granted.

Outside of work, I love exploring new places and spending time outdoors – especially hiking or soaking up sunshine on the lake. I’m also a big reader, always diving into a good fiction book, and recently my husband and I have been taking cooking classes together, which has added some fun (and occasionally chaotic) variety to our dinner table.

“Experience is the name everyone gives to their mistakes.” – Oscar Wilde

2 Why engineering?

I was always curious about how things worked below the surface – why some structures hold firm while others don’t. Geotechnical engineering felt like the perfect blend of problem-solving, science, and real-world application. It’s hands-on and essential, and no two projects are ever the same.

3 What’s your favorite part about your job?

Solving complex problems that literally support our built environment. I love that my work has a direct impact on the safety and stability of structures. Also, there’s something incredibly satisfying about drilling into the unknown and turning soil data into real-world decisions.



4 Why did you join NSPE-KY?

I hope to contribute to advancing the profession and promote licensure and lifelong learning. I’m also passionate about inspiring the next generation of engineers and encouraging diversity within the field. I saw joining NSPE-KY as a great first step toward getting more involved in organizations that are focused on improving the community. I’m excited to start building those connections and finding meaningful ways to contribute.



5 Best engineering memory?

One of my favorite engineering memories is the first project I was involved in – start to finish. I had the opportunity to review the proposed site concepts and develop a boring plan, then go into the field to log the soils. I also created the lab testing plan, helped conduct the tests, and ultimately used all of that data to write a high-level geotechnical report. Being involved in every stage of the project helped me understand the importance of each step. It was incredibly rewarding and solidified my passion for geotechnical engineering.

Board of Licensure Report

Kyle Elliott, Executive Director

INDIVIDUAL LICENSE RENEWALS

The online individual license renewals have opened on the Board’s website. If your last name begins with a letter A through K, your individual license is up for renewal this year and will expire on June 30, 2025.

[Please renew your license online.](#) License renewal payments may be made with a credit card or by electronic check. The online renewal process is quick and secure. Please make sure you answer the renewal questions honestly and completely. Renewing early saves the Board mailing and printing costs.

All licenses renewed after June 30 will be automatically assessed a 10% late renewal fee for each month or portion of a month the renewal is late.

While **KRS 322.160** allows a licensee to renew his or her license for up to one year after it expires, that licensee is not authorized to practice his or her profession while his or her license is expired per **KRS 322.180**.

UPCOMING REGULATORY CHANGE PROPOSALS

As required by **KRS 13A.3102** and **3104**, the Board of Licensure is in the process of reviewing all the administrative regulations in 201 KAR Chapter 18.

- We will soon be filing proposed updates with the Legislative Research Commission to the following administrative regulations:
- 201 KAR 18:040, Fees (no fee changes proposed)
 - 201 KAR 18:060, Rejections
 - 201 KAR 18:072, Experience
 - 201 KAR 18:080, Display of licenses

In addition, based upon amendments made to **KRS 322.040** during the 2025 legislative session, we will be proposing a new administrative regulation, **201 KAR 18:096**.

EFFECTIVE REGULATORY CHANGES

- On March 4, 2025, proposed changes to the following regulations became effective:
- 201 KAR 18:010, Classes of applicants for licensure for professional engineering and land surveying
 - 201 KAR 18:030, Engineer in training and land surveyor in training certificates
 - 201 KAR 18:115, License reinstatement for professional engineers and land surveyors
 - 201 KAR 18:192, Continuing professional development for professional land surveyors
 - 201 KAR 18:196, Continuing professional development for professional engineers

These updated regulations can be seen at the [Legislative Research Commission website](#).

Enforcement Actions Summary

January 1 – March 31, 2025

Heather L. Baldwin, PE, PLS, Director of Enforcement

DISCIPLINARY ACTIONS

CHRISTOPHER M. CULLINAN CARPENTER & CROSS, LLC

On April 21, 2023, Christopher M. Cullinan entered into a Consent Decree with the Board of Licensure for failing to respond to a Continuing Professional Development (CPD) audit notice for the 2021/2022 reporting period within 30 days and failing to complete 30 professional development hours (PDH) for the 2021/2022 reporting period, and for aiding and abetting his company, Carpenter & Cross, LLC, in the unlicensed practice of engineering. Among other terms, Cullinan was required to complete and provide proof of completing 30 PDH for the 2023/2024 reporting period by January 10, 2025. Cullinan failed to meet this term of the Consent Decree.

On January 13, 2025, Cullinan was notified that he was in default of the April 21, 2023, Consent Decree and that he had 14 days to cure the default, or his professional engineering license would be suspended, and the business entity permit of Carpenter & Cross, LLC would be suspended. Cullinan did not respond or submit evidence of completing 30 PDH for the 2023/2024 reporting period. Christopher M. Cullinan’s professional engineering license was **SUSPENDED**, and the business entity permit of Carpenter & Cross, LLC was **SUSPENDED** on January 28, 2025.

After the suspensions were in effect, Cullinan had 30 days to cure the default, or his professional engineering license would be revoked, and the business entity permit of Carpenter & Cross, LLC would be revoked. On February 28, 2025, Cullinan was sent a notice of default and revocation, and he was given 14 days to cure the default. Cullinan did not respond or submit evidence of completing 30 PDH for the 2023/2024 reporting period. Christopher M. Cullinan’s professional engineering license was **REVOKED**, and the business entity permit of Carpenter & Cross, LLC was **REVOKED** on March 17, 2025.

ALISON GWYNN, PE #33090

On May 14, 2024, Alison Gwynn, PE #33090, renewed her Kentucky PE license eleven months late, subjecting her to a Continuing Professional Development (CPD) audit due to late renewal for the 2021/2022 reporting period. Gwynn did not respond to the CPD audit notice within 30 days, as required, and failed to respond to numerous subsequent attempts by Board staff to contact her. On November 18, 2024, an Administrative Complaint was filed against Gwynn for her failure to respond to the CPD audit notice within 30 days, failure to submit evidence of completing 30 professional development hours (PDH) during the 2021/2022 reporting period, failure to cooperate with a Board investigation, and for renewing her PE license without meeting the CPD requirements. To resolve the complaint, Gwynn entered into a Consent Decree with the Board and agreed to: (1) receive a Letter of Reprimand; (2) complete the 3 PDH Texas Tech Engineering Ethics course prior to June 30, 2025; (3) complete and provide evidence of completing 30 PDH to satisfy her CPD obligation for the 2021/2022 reporting period prior to June 30, 2025; (4) complete and provide evidence of completing 30 PDH to satisfy her CPD obligation for the 2023/2024 reporting period prior to June 30, 2025; (5) not renew her PE license until she has completed the 3 PDH Texas Tech Engineering Ethics course and completed the CPD requirement for the 2021/2022 and 2023/2024 reporting periods; and (6) complete an additional 30 PDH to satisfy her CPD obligation for the 2025/2026 reporting period by December 31, 2026, and provide evidence of completion to the Board by January 10, 2027. The Board of Licensure approved this Consent Decree on April 11, 2025.

CALENDAR OF EVENTS 2025

July 18	Board of Licensure Meeting	Frankfort, KY
Aug. 19 – 22	NCEES Annual Meeting	New Orleans, LA
Oct. 17	Board of Licensure Meeting	Frankfort, KY

TRIUMPH SERVICES, LLC

Triumph Services, LLC is a limited liability company organized in the state of Ohio. The company entered into a Settlement Agreement with the Ohio State Board of Registration for Professional Engineers and Surveyors on February 13, 2024. On December 16, 2024, the company applied for a Kentucky business entity permit to practice engineering and failed to disclose the Ohio disciplinary action on its application in violation of KRS 322.180(1). The subsequent investigation found that the company had offered to provide and provided engineering services for one project in Kentucky prior to applying for and being issued a business entity permit to practice engineering in violation of KRS 322.060(1)(a). To resolve the investigation, the company, through its president Jared Perry, entered into a Consent Decree with the Board and agreed to: (1) receive a Letter of Reprimand; (2) pay a fine of \$2,000 within 30 days; and (3) maintain a current and valid business entity permit for any period of time in which the company is providing engineering services in Kentucky. The Board of Licensure approved this Consent Decree on April 11, 2025.

THOMAS E. EATON, PE #9721

On December 30, 2023, Thomas E. Eaton, PE #9721, renewed his Kentucky PE license six months late, subjecting him to a Continuing Professional Development (CPD) audit due to late renewal for the 2021/2022 reporting period. Eaton did not respond to the CPD audit notice within 30 days, as required. On March 6, 2024, Eaton submitted some CPD documentation, but did not have evidence of completing 30 professional development hours (PDH) for the 2021/2022 reporting period. After Eaton failed to respond to numerous subsequent attempts by Board staff to contact him regarding his deficiency, an Administrative Complaint was filed on November 18, 2024, for his failure to respond to the CPD audit notice within 30 days, failure to submit evidence of completing 30 PDH during the 2021/2022 reporting period, failure to cooperate with a Board investigation, and for renewing his PE license without meeting the CPD requirements. Eaton did not respond to the Notice of Administrative Complaint nor participate in a telephonic Prehearing Conference held on January 17, 2025. On March 18, 2025, the Hearing Officer issued Findings of Fact, Conclusions of Law, and Recommended Order of Default Judgment which recommended that the Board be granted default judgment and enter a Final Order revoking Eaton’s PE license. The Board of Licensure accepted and adopted the Hearing Officer’s Findings of Fact and Conclusions of Law and ordered Thomas E. Eaton’s PE license, #9721, to be REVOKED by Final Order entered on April 11, 2025.

STEVEN JAMES BOUNCHAREUNE, PE #34907

On September 29, 2023, Steven James Bouchareune, PE #34907, renewed his PE license three months late, subjecting him to a Continuing Professional Development (CPD) audit due to late renewal for the 2021/2022 reporting period. Bouchareune did not respond to the CPD audit notice within 30 days, did not have evidence of completing 30 PDH during the 2021/2022 reporting period, and did not have evidence of completing 30 PDH for the 2021/2022 reporting period when he renewed his PE license on September 29, 2023. On February 1, 2024, Bouchareune was issued a Written Admonishment for these violations. He was scheduled for another CPD audit for the 2023/2024 reporting period and was sent notice of that audit on December 10, 2024. On January 10, 2025, Bouchareune submitted evidence of completing 30 PDH on January 10, 2025, after the end of the 2023/2024 reporting period. To resolve the investigation, Bouchareune entered into a Consent Decree with the Board through which he placed his PE license in “inactive” status in lieu of other penalties. The Board of Licensure approved this Consent Decree on April 11, 2025.

MARTHA ELISABETH HYDE, PE #20255

On October 10, 2023, Martha Elisabeth Hyde, PE #20255, renewed her PE license four months late, subjecting her to a Continuing Professional Development (CPD) audit due to late renewal for the 2021/2022 reporting period. Hyde did not submit evidence of completing 30 professional development hours (PDH) during the 2021/2022 reporting period. On November 30, 2023, Hyde was issued a Written Admonishment for this violation. She was scheduled for another CPD audit for the 2023/2024 reporting period and was sent notice of that audit on December 10, 2024. Hyde submitted 7 PDH during the 2021/2022 CPD audit that could be applied to the 2023/2024 reporting period and submitted an additional 16 PDH on January 10, 2025, leaving her 7 PDH short of the 30 PDH required for the 2023/2024 reporting period. To resolve the investigation, Hyde entered into a Consent Decree with the Board through which she placed her PE license in “retired” status in lieu of other penalties. The Board of Licensure approved this Consent Decree on April 11, 2025.

CHRISTOPHER A. JONES, PE #27430

On September 11, 2023, Christopher A. Jones, PE #27430, was selected for a random audit of his Continuing Professional Development (CPD) credits for the 2021/2022 reporting period. Jones did not respond to the CPD audit notice within 30 days, did not maintain his CPD records, and did not submit evidence of completing 30 professional development hours (PDH) during the 2021/2022 reporting period. On December 18, 2023, Jones was issued a Written Admonishment for these violations. He was scheduled for another CPD audit for the 2023/2024 reporting period and was sent notice of that audit on December 10, 2024. Jones submitted 1.5 PDH during the 2021/2022 CPD audit that could be applied to the 2023/2024 reporting period and submitted an additional 2 PDH on January 10, 2025, leaving him 26.5 PDH short of the 30 PDH required for the 2023/2024 reporting period as of January 10, 2025. Jones did not submit evidence of completing 30 PDH for the 2023/2024 CPD audit within 30 days, did not maintain his CPD records, and did not have evidence of completing 30 PDH for the 2023/2024 reporting period. To resolve the investigation, Jones entered into a Consent Decree with the Board and agreed to: (1) receive a Letter of Reprimand; (2) pay a fine of \$2,000 within 60 days; (3) provide proof of completing an additional 26.5 PDH to satisfy his CPD requirement for the 2023/2024 reporting period within 60 days; (4) not renew his PE license until he has paid the \$2,000 fine and completed the CPD requirement for the 2023/2024 reporting period; and (5) complete an additional 30 PDH to satisfy his CPD requirement for the 2025/2026 reporting period by to December 31, 2026, and provide evidence of completion to the Board by January 10, 2027. The Board of Licensure approved this Consent Decree on April 11, 2025.

DALTON TYLER HANKINS, PE #35185

On February 1, 2024, Dalton Tyler Hankins, PE #35185, renewed his PE license seven months late, subjecting him to a Continuing Professional Development (CPD) audit due to late renewal for the 2021/2022 reporting period. Hankins did not respond to the CPD audit notice within 30 days and did not submit evidence of completing 30 professional development hours (PDH) during the 2021/2022 reporting period. On March 20, 2024, Hankins was issued a Written Admonishment for these violations. He was scheduled for another CPD audit for the 2023/2024 reporting period and was sent notice of that audit on December 10, 2024. On January 7, 2025, Hankins submitted evidence of completing 30 PDH on January 6 and 7, 2025, after the end of the 2023/2024 reporting period. To resolve the investigation, Hankins entered into a Consent Decree with the Board and agreed to: (1) receive a Letter of Reprimand; (2) pay a fine of \$1,000 within 60 days; (3) not renew his PE license until he has paid the \$1,000 fine; and (4) complete an additional 30 PDH to satisfy his CPD requirement for the 2025/2026 reporting period by December 31, 2026, and provide evidence of completion to the Board by January 10, 2027. The Board of Licensure approved this Consent Decree on April 11, 2025.

NON-DISCIPLINARY ACTIONS

Cases Closed with a Written Admonishment – 11

- PE – Admonishments for CPD violations – 6 (late renewal audits 2024)
- PLS – admonishments for CPD violations – 3 (late renewal audits 2024)
- Firm (engineering) – Practicing engineering with an expired permit – 1
- Firm (land surveying) – Practicing land surveying with an expired permit – 1

Cases Closed with an Educational Letter – 4

- PE – Educational letter about the definition of responsible charge – 1
- PE licensed in another jurisdiction – Practicing engineering and using the post-nominal PE designation on a Kentucky project – 3

Cases Closed with No Action – 6

- PE licensed in another jurisdiction – No violation – 1
- PE – No violation – 2
- PLS – No violation – 1
- Firm (engineering) – No violation – 2

2025 Annual Convention Recap

Story by Hayley Robb Price

Each year, professional engineers from across the state gather to network, learn, and celebrate one another at the three-day NSPE-KY Annual Convention.

This year’s convention was held at Embassy Suites Lexington/UK Coldstream with more than two dozen sponsors and exhibitors represented.

Attendees were able to earn Professional Development Hours (PDHs) and hear from experts across the state. Presentations featured topics like: airport terminal growth in Kentucky; advancing work zone safety; communicating with clarity and confidence; statistics for structural engineers; dam safety; and more.

The first day concluded with an ice breaker event at Battle Axes, an entertainment venue with axe-throwing, bowling, high-speed go karts, and ziplines.

The keynote presentation was delivered on Thursday by Kentucky Sports Radio host, Ryan Lemond. Dave Servis, former NSPE-KY President, facilitated the installation of officers, and the passing of the NSPE-KY President’s gavel from Dusty Barrett to Stephanie Blain. Another former NSPE-KY President, Wes Sydnor, chaired this year’s Awards Committee and presented the honors.

Mike Vickers, Chair of the Leadership PE Committee, introduced the 2024-25 Leadership PE graduates and called for 2026 applications.

- This year’s award winners, included:
- **Seth Dawson, PE** | Charles R. Scroggin Memorial Leadership PE Award
 - **Charles D. “Chad” McCormick, PE, CFM** | Outstanding Contribution to Leadership PE Award
 - **Nathan Roberts, PE** | D.V. Terrell Award
 - **Neal Crawford, PE** | Distinguished Service Award
 - **Bluegrass Chapter** | Most Active Chapter Award

- **Tyler J. Means, PE** | Outstanding Contribution to MATHCOUNTS Award
- **Jordan Basham, PE** | New Professional Engineer of the Year Award
- **2024-2025 Leadership PE Class** | Charla Barnes, PE; Chris Boggs, PE; Chris Buntin, PE; Erman Caudill, PE; Josh Coburn, PE; Seth Dawson, PE; Michael Edwards, PE; Andrew Esarey, PE; Lindsay Griggs, PE; Kari Horn, PE; Jonathan Kellogg, PE; Jonathan McCracken, PE; Austin Miller, PE; Alston Noronha, PE; David Osborne, PE; Kyle Rice, PE.

On Friday, Qk4’s Neal Crawford closed the conference with an update on how Qk4 is working alongside Keeneland Racetrack, one of Kentucky’s National Historic Landmarks, to enhance its facilities while preserving its historic charm.

Construction includes building new operations and office buildings, improvements to the paddock and sales barns, and the addition of a chalet overlooking

the paddock for expanded customer seating.

“These enhancements reflect Keeneland’s commitment to maintaining its rich tradition while elevating the experience for horsemen, patrons, and racing enthusiasts,” said Crawford. “I was glad to share our hard work with the rest of the engineering community.”

The presentation was a perfect precursor to the optional tailgate offered at the track following the final day.

Thank you to our sponsors, exhibitors, attendees, and all volunteers who helped make this convention come to life. We couldn’t do it without each of you.

Make sure to save the date for next year’s convention – April 15-17, 2025 at the Galt House in Louisville. Interested in learning more? Contact kec@kyengcenter.org for more information.





1 COMMUNITY OUTINGS

Attendees got to choose between three local facilities to tour while in Lexington. Three groups visited the Lexington Sporting Club Stadium, Barrel House Distilling Co., and the ADS Infiltrator Facility. NSPE-KY always likes to host a fun activity to break the ice and allow members to mingle on the first night. This year's ice breaker was held at Battle Axes.



2 NETWORKING

One of the main reasons so many PEs join NSPE-KY is for the networking. The Annual Convention is the holy grail for networking. While the chapter meetings allow members to connect with nearby professionals, the convention draws professionals from across the state. The presentations, luncheons, and activities provide an environment perfect for building relationships.



3 AWARDS & RECOGNITION

NSPE-KY aims to always recognize the outstanding work happening across the Commonwealth. This year, 23 PEs were recognized for their contributions to the public health and safety of others. Four students from Paul Laurence Dunbar High School's Math, Science and Technology Center also presented their capstone research projects at the convention. These projects are completed over their junior and senior years alongside a University of Kentucky mentor.



4 CONTINUING EDUCATION

Sessions are held throughout the convention with experts sharing insights, case studies, and lessons learned. This year, attendees got the chance to tune into topics covering project design, work zone safety, and machine learning. Attendees also got to hear insights from notable projects like the Lexington Regional Airport, Brent Spence Bridge, and the Historic Locks along the Kentucky River.

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KENTUCKY MATHCOUNTS®

Each year, sixth, seventh, and eighth grade students at participating Kentucky schools compete in a statewide competition called [MATHCOUNTS](#), a mathematics competition that builds problem-solving skills and fosters achievement through fun, in-person “bee” style contests.

The program was founded in 1983 by the National Society of Professional Engineers, CNA Insurance Company, and the National Council of Teachers of Mathematics to increase interest and involvement in mathematics among all middle school students.

This year, 138 mathletes from 45 schools across the state competed at Western Kentucky University (WKU).

Ten students walked away with funds to support their higher education ranging in amounts from a full-tuition scholarship to \$1,500.

In addition to the individual contests, 26 teams competed at WKU. Winburn Middle School, led by coach Larken Laur, won the state title.

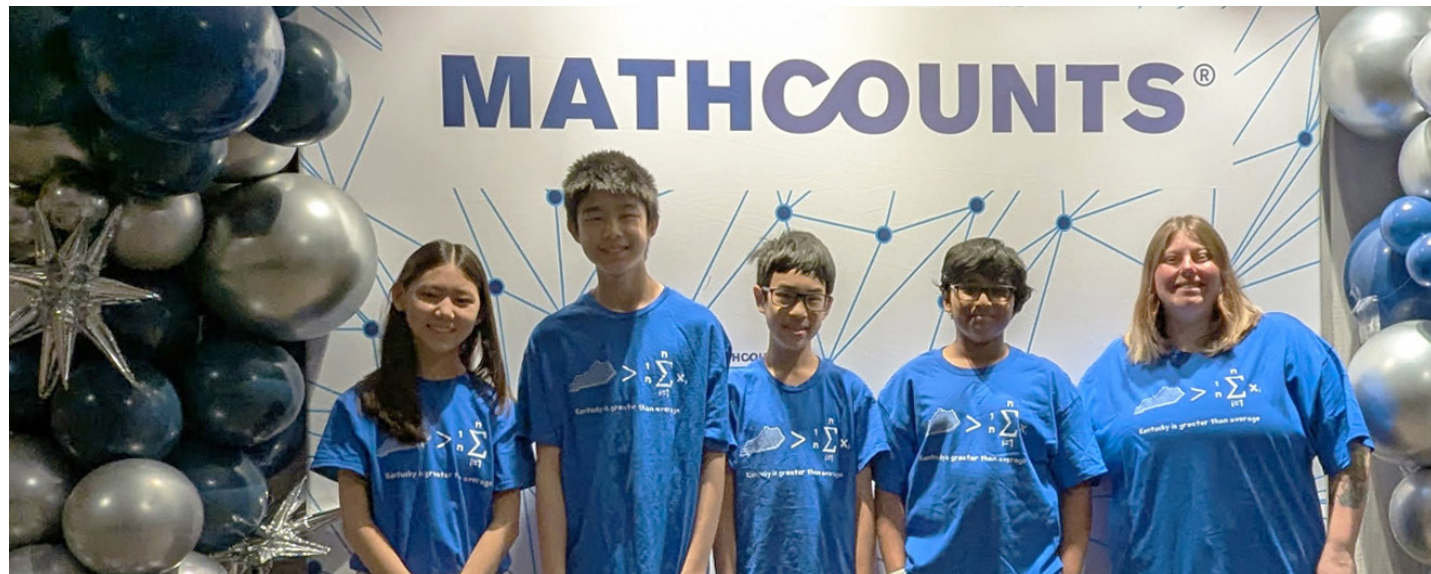
The top four individual-scoring students at the state competition represented Kentucky at the RTX MATHCOUNTS National Competition in Washington D.C. in May. Laur led the team at the national level.

Nathan Liu, a 14-year-old eighth grader from Richardson, Texas, won the national title amongst 223 competitors. His final question was “A regular octahedron has a surface area that is 44% greater than the surface area of a smaller regular octahedron. This smaller octahedron has a volume of 1,000 cubic inches. What is the volume, in cubic inches, of the larger octahedron?”

Liu calculated the correct answer, 1,728 cubic inches, in less than four seconds.

Massachusetts won first place in the team division. See the [final standings report here](#).

For more information on MATHCOUNTS, visit www.kentuckymathcounts.org or www.mathcounts.org.



2025 Results

Top 10 Individual Finalists

- 1 Sri Shubhaan Vulava of Meyzeek Middle School coached by Katie Miller
- 2 Joyce Liu of Winburn Middle School coached by Larken Laur
- 3 Victor Gong of Non-School Competitor
- 4 Brandon Tedja of Edith J. Hayes Middle School coached by Jessica Menke
- 5 Athena Yang of Lone Oak Middle School coached by Scott Dossett
- 6 Dhiraj Javvadi of Meyzeek Middle School coached by Katie Miller
- 7 George Zhou of Meyzeek Middle School coached by Katie Miller
- 8 Alex Wang of Winburn Middle School coached by Larken Laur
- 9 Ava Bogard of Calloway County Middle School coached by Scott Pile
- 10 Samuel Myint of Winburn Middle School coached by Larken Laur

Top 10 Team Finalists

- 1 Winburn Middle School coached by Larken Laur
- 2 Meyzeek Middle School coached by Katie Miller
- 3 Edythe J Hayes Middle School coached by Jessica Menke
- 4 Lone Oak Middle School coached by Scott Dossett
- 5 Highlands Latin School coached by Phillip Bramsen
- 6 Calloway County Middle School coached by Scott Pile
- 7 Kentucky Country Day School coached by Michelle Paschal
- 8 Boyle County Middle School coached by Kristina Grubb
- 9 Owensboro Middle School coached by Sarah Sullivan
- 10 Drakes Creek Middle School coached by Stacey Rose

AI and the Future of Engineering

Story by Hayley Robb Price

When it comes to artificial intelligence (AI), you're either on or off the fence about it. However, the one factor we can all agree on is it's not going away.

In NSPE's latest Engineering Outlook Survey, 92% of engineers stated they anticipate AI impacting the engineering profession in the near future. In April 2025, OpenAI, the start-up responsible for ChatGPT, said they had [500 million weekly users](#). Microsoft stated in their recent [Work Trend Index Annual Report](#), 24% of all leaders have deployed AI company-wide with only 12% remaining in pilot mode.

As AI continues to grow, it's important to note [NSPE's public stance](#): "NSPE believes that in upholding ethical standards, prioritizing safety, and promoting transparency and accountability, Professional Engineers play a pivotal role in ensuring AI benefits society while minimizing its risks."

There are a few different types of AI, generative AI like ChatGPT, Microsoft Copilot, and Gemini, being some of the most common. Other options include: autonomous systems, which may be used to improve self-driving cars or aerial drones; design optimization, which is ideal for industries like the automotive or aerospace industries; and robotics automation.

EMBRACING AI, CAREFULLY

So, how are Kentucky engineers embracing this rapid acceleration while upholding the public's health and safety?

"We're embracing it, carefully," said Trey DeRoche, Senior Associate at Hazen and Sawyer.

In 2023, Hazen and Sawyer launched a six-month pilot program with Microsoft Copilot and 300 employees to see if generative AI could assist employee productivity. Due to the high usage internally, Hazen is planning to increase its available

licenses to 1,500 in the coming year, which is 75% of the total staff.

DeRoche said Hazen is using AI in a variety of ways internally and externally, including: creating presentations, meeting agendas, and summarizing internal webinars and technical presentations; predicting pipe breaks in utility transmission systems; optimizing equalization basins using meteorological data, and predicting presence of lead pipes in lead and copper rule improvements.

HDR has embraced AI in a similar manner, ensuring any tools implemented are guided by a strong ethical framework.

Mitch Dabling, Technology Director for HDR's water practice, said the real value comes from the time savings that get added to projects.

"Through AI, not only can we evaluate more design alternatives, but we can free up time that can be spent conducting thorough and comprehensive quality reviews," said Dabling. "Ultimately, these tools allow our teams to add significantly higher value to our clients' projects."

IS YOUR INFORMATION SAFE?

One concern with AI tools is the data security and the risk of exposing sensitive information.

Gresham Smith combated this concern by creating their own ChatGPT-like bot named "GIA," which stands for "genuine ingenuity assistant." This bot prevents any sensitive information from exiting the company and protects the firm's industry knowledge.

"External tools are problematic because you're sharing your information," said Mike Sewell, Director of Innovation at Gresham Smith. "And so we really quickly got to work on, 'How do we bring the tech internally to our system?' So we wouldn't have to share information externally."



(Above) Gresham Smith provides an example of a progressive flow of how they're augmenting their designers through an incremental approach. Step one: Sketching (far left photo); Step two: Application of realistic materials (*middle photo*); Step three: "Pushing the bounds" option (*far right photo*).

Gresham Smith adopted AI very early. In fact, it was recently named one of the "Most Innovative Companies" by Fast Company.

Sewell said they saw the cost-saving, time-saving, and creative opportunities, and jumped on it. Gresham Smith has tried to find ways to introduce AI in all of its service areas but design was an area with lots of potential.

Today, they offer a couple different platforms, GIA Chat and GIA Imagine, which is a generative image and video platform that allows designs to stretch the bounds.

"We've tried to build very specific things that allow (designers) to sketch and allow them to still express their creativity," said Sewell. "Then, we use AI for what it's good for, which is the application of materials and the imagination of different scenes of a building or a place and it's doing really well."

AI is also helping Gresham Smith bridge the gap between seasoned professionals with years of experience and new engineers. Through GIA, they've created custom knowledge bases that allow younger professionals to access decades of industry-specific knowledge and design insights.

"When I say a custom knowledge base, I mean it's a custom language model that looks and feels and understands what those senior level professionals do," said Sewell.

The goal? To transfer institutional knowledge in a way that goes beyond traditional training methods like workshops or PowerPoints, creating a more

dynamic and interactive knowledge transfer system.

WHO'S BEST SUITED FOR AI?

Implementing internal, customized AI solutions require large financial investments and flexibility. External solutions can be more cost-effective, which may appeal to smaller firms, but they don't always have strong governance or privacy policies.

On the other hand, larger firms can afford the customized solutions but it becomes harder to adapt to new tools when they must be deployed to tens of thousands of employees.

For that reason, Sewell said medium-sized firms are best-positioned to adapt and leverage AI technologies.

"You've got enough money to invest, you've got the right talent to invest in it, and you can also be agile and responsive when you find something cool," Sewell said.

The downfall to AI? Well, it's not human.

"AI – specifically large language models like Gemini, ChatGPT and Copilot – is programmed to provide an answer, regardless of whether it has the necessary data to be accurate," said Dabling.

All three experts emphasized the importance of human expertise and ethical judgment.

"Garbage in, garbage out," said DeRoche. "The quality of AI output depends on the input and human oversight."

KNOW SOMEONE WHO NEEDS TO JOIN NSPE-KY?

Refer a fellow PE today!

