

State News for NSPE Members

Show Your PE Pride!

NSPE-AK members recently celebrated the contributions of the profession during the sixth annual [PE Day](#). But don't wait until next year's national event to show off this commitment to the profession. NSPE President Rick Guerra, P.E., F.NSPE, believes that proud members of the NSPE community can do so in the following ways all year round:

- Introduce yourselves as Licensed Professional Engineers
- Get to know your fellow PEs
- Use [#ProudPE](#) in your communications and social media posts

Fairbanks PE Appointed as DOT Commissioner

Governor Mike Dunleavy named Ryan Anderson as the new commissioner of the Alaska Department of Transportation and Public Facilities on September 3. He replaces John MacKinnon who served as commissioner since December 2018, according to the governor's news release.

Ryan Anderson is a 20-year employee of the Department of Transportation and Public Facilities and most recently served as its Northern Region director. Governor Dunleavy recognized Anderson for building an admirable record of achievement and public service during his tenure at the agency. "He is widely respected across northern Alaska for cultivating positive relationships with all impacted stakeholders while completing vital public transportation projects on time and within budget," Dunleavy stated. "I look forward to working with him, and fulfilling the department's mission to Keep Alaska Moving through service and infrastructure."



Under Anderson's direction, the department is responsible for the planning, design, construction, and the maintenance and operation of Alaska's transportation system, public buildings, and facilities. He believes that a sound transportation system is a foundation for community vitality, and that connecting people and cultures through infrastructure provides economic opportunities that improve people's lives.

Since moving to Alaska in 1993 to pursue an engineering degree and career, he has worked both in mining and transportation. Anderson's transportation career began in 2000 as an entry level engineer for the department. Since then, he has worked through the ranks designing and managing road and airport projects, with a focus on improving transportation in rural Alaska.

Since receiving his professional engineering license in 2003, he received recognition for transportation excellence and innovation from the Northwest Arctic Leadership Team, WASHTO, FAA, FHWA, and the Alaska Society of Professional Engineers, Fairbanks Chapter.

Anderson earned a bachelor's degree in geological engineering from the University of Alaska Fairbanks in 1997. He resides with his wife and two children in Fairbanks.

State Licensing Board Meeting

The Alaska Board of Registration for Architects, Engineers, and Land Surveyors (AELS) will hold its next meeting **November 15-16**. Access the [board website](#) for the meeting agenda and past meeting information.

All professional registration applications are due no later than 30 days prior to the board meeting. The next deadline is October 15. For additional information and assistance with applications, please contact the AELS Executive Administrator and

Research Shows Alaska Infrastructure at Risk of Earlier Failure

Roads, bridges, pipelines, and other types of infrastructure in Alaska (and elsewhere in the Arctic) will deteriorate faster than expected due to a failure by planners to account for the structures' impact on adjacent permafrost, according to research by a University of Alaska Fairbanks Geophysical Institute permafrost expert and others.

The researchers say planners must account for the sideward repercussions of their projects in addition to the usual projection of the direct top-down effects. They focused on a portion of the Dalton Highway on Alaska's North Slope about 10 miles south of the Prudhoe Bay oil fields. Sensors monitored the temperature at seven locations, three to the west of the highway and four on the east.

The researchers found that top-down thawing isn't confined to the area beneath the road surface. They found instead that thawing spreads outward, leading to destabilization of the embankment and ground underneath it. The thawing creates taliks—areas of subsurface ground that remain unfrozen year-round—under a roadway's toe, the prepared zone at the base of the embankment and abutting the natural terrain.

The result, the authors write, is an accelerating thaw rate and earlier than anticipated road failure—and a warning that other types of Arctic infrastructure such as pipelines, fuel storage tanks and airports will fail sooner than projected.

[Read more.](#)



NSPE's **Job Board** is your one-stop resource for professional engineering employment. Whether you are on the hunt for your next career move or looking for today's top engineering leaders and talent, you will find it here.

NSPE provides the tools PEs need to keep current in the profession and advance their careers.

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Stay up to date on legislative issues through the [NSPE Advocacy Center](#).

Anti-Licensing Forces Miss the Point

Extreme anti-licensing bills have popped up in numerous states and are posing a threat to the rigorous and established professional standards followed by PEs, architects, and others who design and construct the built environment, [according to an op-ed in The Hill](#).

Lawmakers calling for these extreme measures don't differentiate between barbers and manicurists, for example, and PEs and architects, say Tom Smith, executive director of ASCE, and Michael Armstrong, CEO of NCARB. "In their absolutist free-market view, reflected in the language of their model legislation, a visit to a barbershop or beauty salon should be treated the same as designing a bridge or water treatment plant."

The legislative proposals range from measures that [would eliminate licensing entirely](#) to so-called "Universal Licensing" bills that would require states to accept licenses from any state regardless of whether the out-of-state license had the same level of qualifications behind it.

NSPE Calls for PE Role in AI Risk Management

To protect the public from the potential dangers of artificial intelligence applications, NSPE is calling for the involvement of licensed professional engineers in the AI development process.

NSPE's [recommendations were submitted](#) to the National Institute of Standards and Technology in response to NIST's request for input on an artificial intelligence risk management framework. The recommendations advocate for professional engineers or certain certified individuals to be included within the risk management

framework, which covers all levels of development and implementation.

“This individual would be responsible for making decisions related to protecting the public, including those who would use or potentially be affected by an AI application,” wrote NSPE President Rick Guerra, P.E., F.NSPE. “Oversight responsibility should include having the authority to approve or reject the process, methodology, or other characteristics of the specific AI project. Having a credentialed individual to ensure these considerations are made can reduce risk that an artificial intelligence application will fail.”

Meet the 2021 Scholarship Winners

The [NSPE Education Foundation](#) recently awarded several scholarships to support talented students pursuing engineering. Meet the 2021 winners:

Markie Ash, of Waupaca, Wisconsin, is winner of the [Auxiliary Legacy Scholarship](#) and the [George B. Hightower, P.E. Fellowship](#). Ash is studying civil engineering with a structural emphasis at University of Wisconsin-Platteville. The \$2,500 auxiliary scholarship is awarded annually to a female undergraduate entering, or continuing, her junior year of a four-year ABET-accredited engineering program. The \$3,000 Hightower Fellowship is awarded annually to an engineering undergraduate or graduate student who is enrolled in, or graduated from, an ABET-accredited engineering program.



Justin Sivasothy is this year’s recipient of the [Maureen L. and Howard N. Blitman, P.E., Scholarship to Promote Diversity in Engineering](#). The \$5,000 scholarship is awarded to a high school senior from an ethnic minority going into an ABET-accredited engineering degree program at a four-year college or university. Sivasothy, of Sugar Land, Texas, is attending the University of Texas at Austin.

The \$5,000 [Steinman Scholarship](#) has been awarded to five students studying in ABET-accredited programs this academic year. **Michael Kadus** (Chicago, Illinois) is studying industrial engineering at Purdue University. **Robert Schneider** (West Coxsackie, New York) is studying civil engineering at Clarkson University. **Annabel Sharnowski** (Novi, Michigan) is studying mechanical engineering with a minor in electrical engineering at the University of Michigan. **Noah Struck** (Alexandria, Minnesota) is studying civil engineering at the University of Minnesota-Twin Cities. **Jacob Witlin** (Ellicott City, Maryland) is studying fire protection at the University of Maryland.



FROM LEFT TO RIGHT: MICHAEL KADUS, ROBERT SCHNEIDER, ANNABEL SHARNOWSKI, NOAH STRUCK, AND JACOB WITLIN

Nominations Open for Federal Engineer of the Year Award

Honoring the commitment of federal engineers to innovation and service is the hallmark of the [Federal Engineer of the Year Award](#) . Nominations for the award, which attracts participation from more than a dozen federal agencies, are open until **October 31**.

The FEYA ceremony is scheduled for February 24, 2022, at the National Press Club in Washington, DC. Tickets will be available for sale in January. [Apply or nominate a worthy engineer](#) .

The 2021 Federal Engineer of the Year

Major Monica Pickenpaugh, Ph.D., P.E., of the US Air Force, was named NSPE's 2021 Federal Engineer of the Year Award winner during a [virtual awards event](#) in February. As US Forces Korea's chief of construction, she directed \$5.7 billion of funded construction in the Republic of Korea. As part of a sharing agreement with the US, the construction program supports USFK commanders' defense efforts through critical projects.



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