Article Call Slate 2027

Newsletters

Newsletter Article Authors: Articles of about 1,300 words in length are requested by technologists, business leaders, educators, and scientists who are advocates for broadening diversity in science, technology, engineering, and education.

Critical Thinking Frontier in Education

How can primary education expand education pedagogy to encourage critical thinking to boost interest in careers in medicine and health science? Can it encourage problem-solving skills through science activities, or incorporate hands-on learning experiences, like science experiments related to health?

In an era defined by rapidly evolving technological landscapes, the ability to think critically stands as a cornerstone for academic and professional success. Are students being prepared to analyze information and evaluate arguments?

Provide examples of students working together in exercises and in non-judgmental explorations of questions offered by fellow students. How have experiences like this given K12 students with abilities to move beyond superficial comprehension? How can critical thinking learning help students make informed decisions based on evidence and logical reasoning?

Due Date – **January 30, 2027**

Smart Roadways or Men on Mars?

What is the more prudent choice between investment in infrastructure upgrades or defense and space exploration spending? At this crucial point in the future of the economy, how should these upcoming commitments be prioritized?

Generally, upgrading infrastructure will pay off in the long run. But so will establishing a station on the moon as well as Mars and Investments in building up roadways, creating jobs, education, and utilities. All can have a broad impact on the economy and are essential for longer term sustainability.

Recently, the reported depletion of equipment and training of our military has placed demand for near term spending as global social, and economic threats abroad place national security as a high priority. At this crucial point how should these decisions be prioritized?

Please discuss the host of choices as we move along decision schedules to prevent the next bridges falling or maintaining leadership in space science and exploration, and national defense.

Due Date –5/8/2027

Can technical and community colleges meet the needs of shifting workforce shortages?

What is the role of community colleges to become the engine for training workers at scale to develop the skills and fluency needed in a labor market increasingly shaped by AI? Over 80% of community colleges offer workforce development programs that meet industry standards, ensuring graduates are job-ready. But can they respond to skilled worker shortages and demand new training?

Tech colleges are incorporating new technology with online learning and hybrid models designed to make education more accessible and flexible for students. At the same time availability of subject matter instructors and preparedness of secondary students is questionable and remains challenging. Trade groups have stepped up to ease the instructor gap. Several certificate programs are now available for those interested in semiconductor processing and microelectronics. industry.
Partnerships with local businesses and organizations have helped colleges tailor their offerings to meet specific workforce needs while strengthening community ties. However, CTE is regionally inconsistent, and many HS graduates read below level and lack the required math capability.

Authors should provide examples where CTE at tech colleges deliver innovative education programming in partnership with public education that can address high work skills shortages.

Due Date – 8/13/2027

Why are white males most of the people developing code and AI?

Artificial Intelligence (AI) is a technology that often puts women and minority groups at a disadvantage because it tends to be developed by homogenous groups of white males. They build their ethics, objectives, intended use, and world view into the code produced.

Ethical and moral issues surrounding AI and its influence on employment, education, and health equity continue to be topics of discussions at technical conferences of women and minority professional organizations. Is momentum for emphasis on equitable deployment of AI becoming concerning?

Women remain significantly underrepresented across the artificial intelligence ecosystem — from the workforce and research labs to leadership roles and venture capital. While progress is being made, Blacks and women are seldom seen in AI creation and leadership roles. Women and minorities at many tech companies who are committed to resolving ethical issues can often be viewed as not mainstream.

The AI gender gap is multi-layered: women constitute only 22–30% of the global AI workforce, hold fewer than 15% of senior executive AI roles, and author just 25% of AI research papers. Data is scarce for Hispanics and Blacks. The research pipeline reveals an even starker gender imbalance, with women's representation in AI research declining relative to their male counterparts over the past decade.

Why does this situation exist and is there need for gender/race equity across AI? Please discuss this in your article.

Due Date – 11/12/2017

White Papers

White Paper Subject Matter Experts : Persons who has accumulated professional experience and knowledge in a particular field or topic and is recognized to have demonstrated in-depth discussions of high interest to the global community of technical professionals, high education administrators, and business executive. We invite article submissions from educators, technologists, and administrators of at least 1,800 words in length presenting research-backed insights, evidence-based practices, or real-world case studies addressing the topic.

Can AI and DEI co-exist?

Diversity and Inclusion considerations in artificial intelligence (D&I in AI) are vital in designing, developing, and deploying AI systems, not only for ethical reasons but also for delivering trustworthy, reliable and equitable outcomes.

What are ways to achieve it? Address these related issues. (1) what should developers do to have teams reflect cultural competency on matters involving healthcare and education, and (2) will new AI algorithmic development help make hiring and promotion decisions reduce unconscious bias, and (3) will or can AI identify gaps in decision making for improvement through human interventions?

With countless AI tools available to help with everything from recruiting and interviewing to using more inclusive language, can a greater role for human decisions provide equity security? Will DEI training scenarios help businesses and education systems build operational structures to support greater inclusion in organizations or will the gamification build more human derived education outcome experience?

Provide your experience-based vision and knowledge in a discussion of this question.

Due date – January 23, 2027

Can the momentum and direction of science funding be restored?

How can changes in science education investment influence broader participation in engineering, technology development and science research to achieve student agility when entering the workforce. With the cuts inf science education investment, can we remain competitive with other nations?

Cuts in funding have undermined the U.S.'s position as a global leader in science and technology, affecting research pipelines and the careers of future STEM professionals. What priorities should there be within early education, building teacher workforce and schools, and research investment?

The U.S. has historically led in STEM fields, but recent trends show a decline in our global standing. Nations such as China are rapidly advancing in scientific capacity, which will have implications for U.S. technological leadership and national security. Can more collaboration between academia, industry, and government could help bolster the U.S.'s competitive position? Provide examples when and to what extent are shifts in political will and awareness have become impediments? What corrections are needed?

Please include in your submission, a discussion and ranking among options and with rationale for suggestions.

Due date – 5/15/2027

Is our ability to respond to a national health crisis in jeopardy?

There is a lot of discussion about the future of medicine. What is the future of science in equitable medicine? There and many questions.

What transformative advancements are expected in 10 years to make healthcare more accessible and efficient? Are we truly poised for transformative change in the creation of more access to healthcare in undeserved regions and building the capability to respond and protect against epidemics? We wish to receive thoughts with answers to these and related questions.

Can holistic approaches be made that considers the complex interactions within biological systems, leading to better understanding and treatment of unknown and existing diseases?

Will innovations focusing on mental and physical health driven by AI data-informed personalization be sufficient to address the current healthcare challenges and improve patient outcomes significantly? Can the sharing of gene editing, personalized cancer vaccines, and robotic surgery, among medical professional groups and nations have significant impact?

Describe what you view as the state of health science in view of these questions in view of our current environment and those in your experience.

Due date – 8/27/2027

Will the infrastructure be ready on time?

Difficult budget priorities often arise when allocating limited resources among competing needs. This situation is common in both government and personal finance contexts, where decision-makers must balance various demands against available funds.

Can the infrastructure of roadways and transportation corridors and enabling systems accommodate autonomous vehicles in time for more adoption and deployment? What advancements in highway and road construction and vehicular technology are needed to enable emerging autonomous vehicle technology to be more broadly employed?

Bridges, roads, rail transit, subways, cables, transformers, sewers, and water treatment plants that governments have installed over the decades are the under pinning of a sound infrastructure. As too many projects have difficulty gaining local and regional support and exceed their budgets or fall behind schedule, can they remain reliable as the usual option?

Provide thoughts on how research and manufacturing science can be applied in ways to help large infrastructure investments be less vulnerable to political whims and be delivered when needed.

Due date - 11/22/2027