



TRANSDUCER
RESEARCH FOUNDATION
connecting big ideas and small tech

TRF Wants You! – to Propose and Lead a Topical Workshop

Submission Deadline: **November 6, 2026**

The [Transducer Research Foundation](https://transducer-research-foundation.org)* **solicits your ideas and leadership** for a topical workshop. The key goal of each Workshop is to engage stakeholders in forward-looking exchanges of ideas and strategies in different fields / applications of micro sensors, actuators, and microsystems, focusing on several Objectives:

- ⇒ Address current, pressing needs – societal, environmental, quality of life and health
- ⇒ Define critical gaps in the drive to impact and enable future priority applications
- ⇒ Brainstorm and explore new ideas for emerging fields and technologies, linking priorities and activities across disparate disciplines, articulating the impactful role of micro sensors, actuators, and microsystems
- ⇒ Broaden the extent and impact of knowledge transfer, inter-institutional networking, and technology infusion and commercialization for transducers and microsystems
- ⇒ Prepare a high-quality technical report/white paper that can serve as an authoritative document for government/industry leaders and policymakers

Workshop Parameters (all are open to revision):

- Dates: 2027, 2028
- Duration: 2 – 3 days
- Size: 100 participants ($\pm$ ~25%), international
- Location: organizers' choice, worldwide, readily accessible
- Target audience: industry leaders, policy makers, business development leaders, entrepreneurs, academics, program managers, students, researchers
- Format: single session, keynote + invited speakers, posters with “lightning” introductions,** breakout brainstorming sessions
- Logistics: meals and social time built into Workshop agenda and registration fee
- Partnering: TRF will assist as needed to refine your topic, suggest invited speakers, and actively participate in your workshop
- Assistance: TRF underwrites, provides organizational leadership, markets, publicizes, and handles logistics
- Outputs: Exchange of new ideas, networking, new colleagues, new ventures

Proposals invited now through **November 6, 2026 to workshop@transducer-research-foundation.org**.

All proposals must:

- Be 2 – 4 pages in length (12 pt., 1”/2.5-cm margins)
- Describe your topic, emphasizing and explaining in detail how it responds to the Objectives, and the linkage to, and role of, sensors, actuators, microsystems

- Address the workshop parameters above
- Provide initial ideas for keynote/invited speakers and their likely topics
- Explain the communities this workshop will serve and why they will be keen to participate
- Discuss the anticipated mix of academic, industry, and government attendees

Questions? email workshop@transducer-research-foundation.org

Possible topics include (but are not limited to) the **roles of, and impacts upon, transducers and microsystems relevant to:**

- ⇒ **CHIPS Act:** impact, ramifications, opportunities
- ⇒ **Climate change** – managing the consequences, tracking our environment
- ⇒ **Additive manufacturing:** new and emerging micro-scale applications
- ⇒ **3D Printing, Additive Manufacturing**
- ⇒ **Packaging:** hermetic, vacuum, wafer-scale, batch, custom, 3D IC, Mixed-Mode
- ⇒ **Materials:** Engineering, new exciting ones for the world of MEMS, applications, needs
- ⇒ Preparing for the **next pandemic**
- ⇒ **Cutting-edge diagnostics** including CRISPR
- ⇒ **MEMS Optical Interconnects and Switches**
- ⇒ **MEMS in Data Centers**
- ⇒ **MEMS Cooling for ICs and Data Centers**
- ⇒ **Bioelectronics/bioengineering**
- ⇒ **Implantables and Ingestibles**
- ⇒ **MEMS for Cyborgs**
- ⇒ **Artificial intelligence and machine learning** and their role in future smart microsystems
- ⇒ **Digital twins for MEMS / microsystems**
- ⇒ **Quantum sensing, communication, computing**
- ⇒ **5G, 6G, nG:** communication, networking
- ⇒ Transducers for a **smart metaverse**
- ⇒ **Vehicle autonomy** needs MEMS
- ⇒ Microsystems-enabled **last-mile and shared transportation** solutions
- ⇒ Microsystems and transducers for **agriculture, space & other extreme environments**
- ⇒ MEMS to the Rescue: **Human/machine interfaces** need even more sensors
- ⇒ **Microbots and nanobots**
- ⇒ Workforce **training and education**, including the impact of digitalization
- ⇒ **Security:** food & water safety, information/identity security, trusted electronics
- ⇒ **Green MEMS** / green transducers and the enablement of **Green Tech**
- ⇒ The path to **successful startups** in MEMS and microsystems
- ⇒ **Plasmonics and photonics**
- ⇒ **MEMS Inside:** publicizing the secret life of micro-transducers
- ⇒ **Useless MEMS:** artistic, inspiring, elegant, educational
- ⇒ **The Next Big Thing:** unimagined applications, orders of magnitude improvements

*The Transducer Research Foundation (TRF) is a nonprofit organization whose mission is to stimulate research, development, and networking in the science and engineering of transducers, microsystems, and nanosystems, fostering the exchange of ideas and information between academic, industrial, and government researchers worldwide. More information available at: <https://transducer-research-foundation.org/>

**A lightning introduction is a brief (0.5 – 3 min) oral presentation to stimulate interest in the presenter's topic, enticing workshop participants to visit the poster and engage the author in discussion.