

World renowned partners

work together to support R&D, standardization, industry consortia, education and training, and much more...

AM CoE Leadership

Founding Partners



ASTM INTERNATIONAL



AUBURN
UNIVERSITY



We Manufacture Innovation



Strategic Partners



About ASTM International

Committed to serving global societal needs, ASTM International positively impacts public health and safety, consumer confidence, and overall quality of life. We integrate consensus standards – developed with our international membership of volunteer technical experts – and innovative services to improve lives... Helping our world work better.

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June 2021



CENTER of
EXCELLENCE

Research to Standards

ASTM INTERNATIONAL

Additive Manufacturing Center of Excellence

A synergistic, collaborative, and efficient environment in which R&D advances technical standards, helping all aspects of additive manufacturing flourish

www.amcoe.org

Clear Vision and Dedicated Mission

In 2018, ASTM International selected four globally recognized partners to form the Additive Manufacturing Center of Excellence (AM CoE). The Center acts as a focal point for bringing together experts and leaders across industry, academia, and government. The Center's directors, advisory board, and stakeholders support activities and specific projects that will help ensure a bright future for additive manufacturing. The Center of Excellence builds on ASTM International's global leadership in additive manufacturing, as represented by its 1000+ member Additive Manufacturing Technology Committee (F42).

Strategic Goals

- 01 Close standards gaps and meet standards needs
- 02 Carry out AM R&D to support development of consensus-based standards
- 03 Create strong global partnerships
- 04 Support education, training, proficiency testing, and certification
- 05 Host expert-oriented AM events, workshops, symposia, and conferences



Research and Development

Research priorities are identified by the top minds in the field and are matched from the start to the standards that need to be generated to ensure the resulting AM technology's success.

Under the leadership of the R&D Advisory Team, the AM CoE partners plan and conduct short-term R&D projects, prioritized annually and targeted to expedite the AM standards needed to address the most critical gaps in the AM ecosystem.

The AM CoE frequently communicates its activities and the current challenges and trends in the AM industry through roadmaps, strategic guidance, and landscape analysis reports.

Education and Workforce Development

The AM CoE provides comprehensive programs that educate and train the additive manufacturing workforce at all levels, while continually incorporating new advances to respond to industry needs and leverage standardization, certification, and AM CoE partner expertise. Programs include workshops, webinar series, personnel certificate courses, and e-learning.

The International Conference on Additive Manufacturing (ICAM), ASTM International's annual flagship event related to standardization, qualification, and certification with an emphasis on industry specific requirements addressing the entire AM process chain. This international conference is designed with multiple symposium tracks to bring in stakeholders from all applicable areas for additive manufacturing.

Industry Consortium

Companies from across a broad range of industries need to develop extensive material datasets in order to confidently implement Additive Manufacturing into the design and production of future products. These individual datasets can cost upwards of \$1M for full design datasets. Using a shared funding approach for developing material datasets with full pedigree, the ASTM AM CoE Industry Consortium greatly reduces the cost to each member organization.

Each year, consortia members select and execute materials and process data generation projects. Process Structure-Property relationships, material allowables, and application specific design properties (e.g., static, cyclic, thermal) are determined. While research output informs new AM standards development through F42 committees, members retain exclusive use of the full datasets to support their business.

Standards and Certification

Acting as a liaison to ASTM standards developing committees to assist with filling gaps in the AM standards roadmap and supporting the transfer of AM CoE related R&D projects. In addition to supporting the development of ASTM standards, the AM CoE facilitates technical publications, proficiency testing programs and product certification programs.

Advisory Services

The AM CoE offers a range of business and technical advisory services supporting AM implementation globally, including but not limited to, market and technology landscape analyses, roadmap development, and custom R&D and benchmarking.

Strategic planning services assist clients accelerating AM adoption through part identification, AM process selection, facility design, supply chain qualification, and developing business cases and demonstrating proof of concept. Customized enterprise training curricula with emphasis on industry standards are offered to ensure comprehensive AM knowledge transfer.

AM CoE operations support ensures smooth implementation of AM, assisting with development of work instructions, process specification and control documents, and integrating standards compliance requirements into Quality Management Systems, ensuring successful qualification and certification to production scale.