CHIPS for America
Research and Development Updates

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Director, CHIPS R&D Office

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Vision

A **vibrant** and self-sustaining U.S. domestic semiconductor **ecosystem** that revitalizes American manufacturing, grows a skilled and diverse workforce, and leads the world in semiconductor research and innovation.

Mission

**Accelerate** the development and **commercial** deployment of **foundational** semiconductor **technologies** by establishing, connecting, and providing access to domestic tools, resources, workers, and facilities.
Vision for Success in 2030

U.S. Technology Leadership
The United States establishes the capacity to invent, develop, prototype, and deploy the foundational semiconductor technologies of the future.

Accelerated Ideas to Market
The best ideas achieve commercial scale as quickly and cost effectively as possible.

Robust Semiconductor Workforce
Inventors, designers, researchers, developers, engineers, technicians, and staff meet evolving domestic government and commercial-sector needs.
CHIPS R&D Programs

- National Semiconductor Technology Center
- Metrology Program
- National Advanced Packaging Manufacturing Program
- Manufacturing USA institutes (up to three)

Workforce Development
## CHIPS R&D Timeline

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<th>SPRING 2023</th>
<th>SUMMER 2023</th>
<th>FALL 2023</th>
<th>WINTER 2023</th>
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<tr>
<td>NSTC</td>
<td>Vision/strategy paper published</td>
<td>Selection Committee identifies Board of Trustees</td>
<td>Establish NSTC</td>
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<td>NAPMP</td>
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<td>NAPMP vision and strategy</td>
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<tr>
<td>Manufacturing USA institute(s)</td>
<td>RFI summary published</td>
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<td>Announce selected topic(s)</td>
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<tr>
<td>Metrology</td>
<td>Metrology gaps report published</td>
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<td>2 Grand Challenges Funded</td>
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<td>Standards</td>
<td>Interagency Semiconductor Standards Group</td>
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Update: Leadership Team

Eric Lin, Deputy Director

Neil Alderoty, Executive Officer

Richard-Duane Chambers, Associate Director for Integration and Policy

Marla Dowell, Director, CHIPS R&D Metrology Program

Subramanian Iyer, Director, National Advanced Packaging Manufacturing Program

Jay Lewis, Director, National Semiconductor Technology Center
Update: NSTC Board of Trustees

Inaugural Board of Trustees

Selection Committee

• Janet Foutty
• John Hennessy
• Jason Matheny
• Donald Rosenberg
• Brenda Wilkerson

• Robin Abrams (past CEO Firefly Comm, VeriFone)
• Craig R. Barrett (retired CEO and chairman, Intel)
• Reggie Brothers (principal MIT Lincoln Labs)
• Nick Donofrio (44-yrs IBM, led technology, innov strategy)
• Donna Dubinsky (past CEO Palm Computin)
• Erica Fuchs (Professor, eng. and public policy, CMU)
• Jim Plummer (Professor, Past Dean Eng., Stanford)
Update: Standards Summit

Goals:
• Establish the CHIPS R&D standards effort as a partnership with industry & SDOs
• Identify top standards priorities for the semiconductor community

Logistics:
• Sept. 26-27 in Washington DC
• Hybrid in-person (221 attendees) and virtual (409 attendees) event

Agenda:
• Four topics:
  1) Standards priorities
  2) Standards innovation, including incubators and accelerators
  3) Diverse standards-capable workforce
  4) Pre-standards research

Co-Hosts:
• 7 industry non-profit standards organizations/consortia, comprising > 4,000 corporate members:
  - ANSI
  - ISTO/IEEE
  - INEMI
  - IPC
  - joint development foundation
  - SEMI
  - SIA
  - NITRD
  - NIST

Outcomes:
• Shared community standards goals
• Foundations for community collaboration: CHIPS Standards Public Working Group & SDO Alliance
• Aligned with National Strategy for Standards and Critical and Emerging Technologies (NSSCET)
Virtual Meeting

Responses to previous recommendations

New recommendations to CHIPS R&D

IAC membership updates

Next: IAC Meeting (November 8, 2023)
Thank you