

# NSF Integrated Circuit Research, Education, and Workforce Development Workshop

## October 14-15, 2021

<https://www.nsf-ic-education.com/>



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*University of California Santa Cruz, USA*



# This workshop....

- Address the shortage of VLSI design engineers in the US.
- Two days of initial position statements, conversations, and framing
  - Virtual – you're here right now!
- Follow-on in-person workshop in May 2022
  - Follow up on major themes
  - Give participants time to act on the ideas and conversations from these two days
  - Focus on proposed solutions, interventions, and action items
  - Write a report to the NSF with recommendations

# Organizing Committee

## Chair



[Matthew Guthaus](#)

UC Santa Cruz

## Program Manager



[Erik Brunvand](#)

National Science Foundation



[Christopher Batten](#)

Cornell University



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# Questions Asked (as examples)

- For academics:
  - What infrastructure would you need to allow students the best VLSI experience?
    - EDA tools? PDKs? IP? Design/simulation models?
    - Fabrication infrastructure? What nodes make sense? Different for education vs. research?
- For Industry/Government
  - What are the workforce needs?
    - What type of training supports those needs?
    - How does academic research / education intersect with your industry?
- <https://nsf-ic-education.com/questions/>



# Workshop Format

- Each position statement has 20 minutes total (strictly enforced for the equity of presenters)
  - First 5-10 minutes – primary concerns and potential solutions
  - Follow up with questions as time permits
    - **Please raise your hand or chat a question**
- Each group followed by 20 minute Q&A
  - **Please raise your hand or chat a question**
- Wrap up with questions and action items for May 2022 meeting

# October 14 – Government (times PDT)

9:05	Erik Brunvand	National Science Foundation
9:20	Todd Younkin	Semiconductor Research Corporation
9:40	Qing Wu	Air Force Research Labs
10:00	George Suarez	NASA
10:20	Government Q&A	

# October 14 - Academia (times PDT)

10:40	Ken Mai	Carnegie Mellon University
11:00	Gayatri Mehta	University of North Texas
11:20	Daniel Limbrick	North Carolina Agricultural and Technical State University (NC A&T)
11:40	Tina Hudson	Rose-Hulman Institute of Technology
12:00	Kenneth O	University of Texas Dallas
12:20	Michael Taylor	University of Washington
12:40	Academia Q&A	

# October 15 - Foundry (times PDT)

9:00	Geoff Porter	Muse Semiconductor
9:20	Hui Fu	Intel Corporation
9:40	LaMar Hill	NY CREATES
10:00	Christoph Studer	ETH Zurich
10:20	Ross Miller	Skywater Technology
10:40	Foundry Q&A	



# October 15 - Industry (times PDT)

11:00	Andrew Kahng	UCSD/OpenRoad/Startups
11:20	Rob Mains	CHIPS Alliance
11:40	Tim Ansell	Google
12:00	Mohamed Kassem	eFabless
12:20	Zoran Zvonar	Analog Devices
12:40	Industry Q&A	