



Semiconductor  
Research  
Corporation

# JUMP 2.0 SAB F2F with Center Leadership

April 25-26, 2023

ADI @ Wilmington, MA



Roman Caudillo  
JUMP 2.0 and JUMP Director

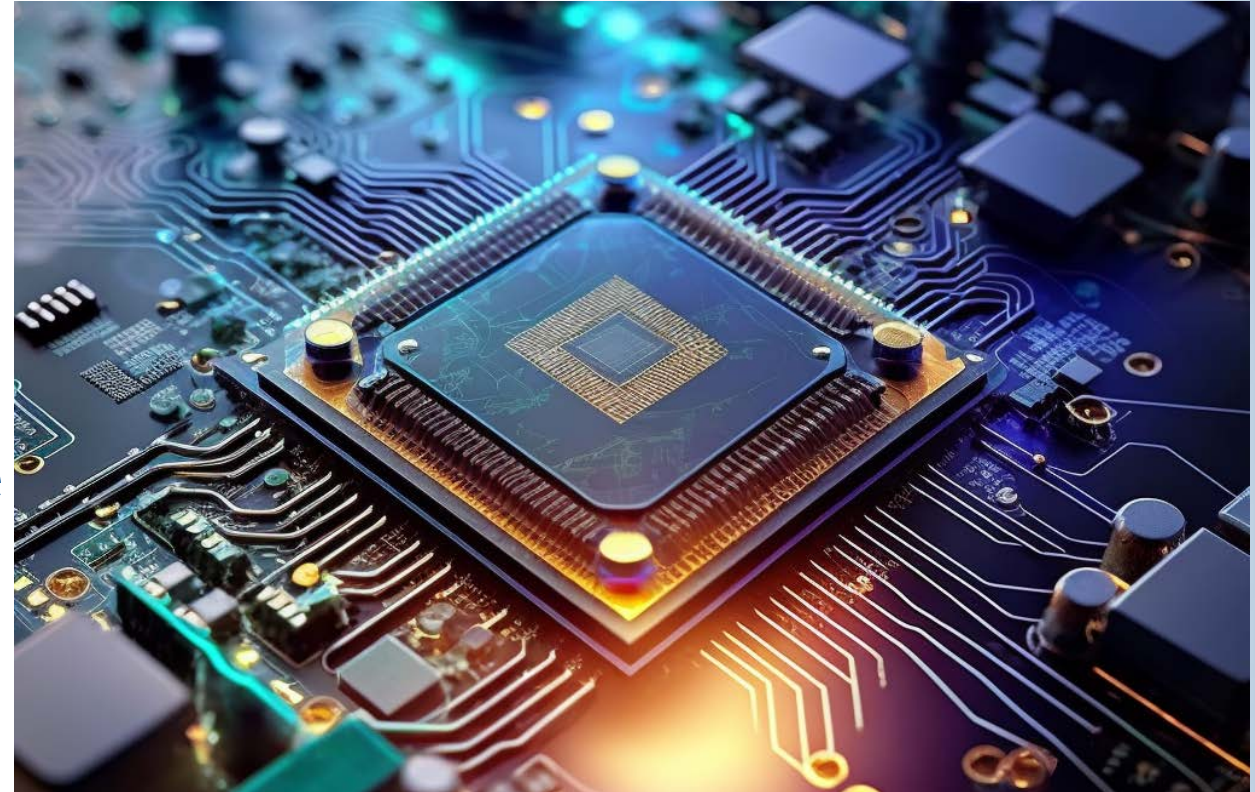
# Imagining a great 2-day F2F meeting

Midjourney prompt: A meeting of semiconductor industry experts and university professors and researchers in Boston



# Re-Imagining a great 2-day F2F meeting

Midjourney prompt: A meeting of *diverse* semiconductor industry and academic experts coming together to define the research that will determine the technologies of tomorrow



Anshu A O  
Senior Research Scientist  
Intel Corporation, USA  
Formerly at Intel Corporation, USA  
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Neelgopal  
Senior Research Scientist  
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Formerly at Intel Corporation, USA  
Research Scientist



# Broadening Participation – JUMP 2.0

- **Proposal Requirements:**

- $\geq$  25% New (non-SRC) faculty – **minimum of 5**
- $\geq$  25% Young faculty: ‘Young’  $\leq$  3 yrs in Tenure track – **minimum of 5**
- Broadening Participation Plan included in SOW
  - Increase student workforce and broadening participation as cost-share priorities

- **Broadening Participation Result: SUCCESS!**

- Broadening Participation Plan: **100%**
  - All proposals included BP plan amplifying University DEI efforts
- New Faculty: **34%** of performers
- Young Faculty: **29%** of performers
- 3/7 Center Directors are female



Keren Bergman  
Columbia



Tajana Rosing  
UC/San Diego



Huili (Grace) Xing  
Cornell

# List of Attendees – SAB (15 sponsors attending)

Get to know each other over these next 2 days!

We will be working together over the next 5 years to build the most successful SRC-DARPA program yet!

<u>Organization</u>	<u>Last Name</u>	<u>First Name</u>
Arm	Hermes	Jon
Analog Devices, Inc.	Robertson	David
Analog Devices, Inc.	Wallrabenstein	John Ross
Analog Devices, Inc.	Zvonar	Zoran
Boeing Company	Lee	Timothy
DARPA	Chang	Tsu-Hsi
DARPA	Palmer	William D.
EMD Electronics	Kanjolia	Ravi
EMD Electronics	Moinpour	Mansour
Global Foundries	Viggiani	Nick
HRL Laboratories	Chow	David H.
IBM Corporation	Chen	Ching-Tzu
Intel Corporation (Remote)	Young	Ian
Intel Corporation (Remote)	Dasu	Aravind
MediaTek, Inc.	Manganaro	Gabriele
Micron Technology, Inc.	Akel	Ameen
Micron Technology, Inc	Kramer	Steve
Raytheon Technologies	Burkland	Mike
Raytheon Technologies	Martinez	Edgar
Raytheon Technologies	Zanoni	Raymond
Samsung Electronics Co., Ltd.	Ahosan Ul Karim	Muhammed
Samsung Electronics Co., Ltd.	Simka	Harsono
Samsung Electronics Co., Ltd.	Song	Woo-Bin
SK hynix Inc.	Kim	Hoshik
SRC	Bell	Tameka
SRC	Caudillo	Roman
SRC	Knapp	Adam
TSMC	Chang	Marvin
TSMC	Diaz	Carlos H.

# List of (Registered) Attendees – Centers

**Get to know each other over these next 2 days!**

**We will be working together over the next 5 years to build the most successful SRC-DARPA program yet!**

<u>Center</u>	<u>Last Name</u>	<u>First Name</u>	<u>Organization</u>
ACE	Minlan	Yu	Harvard University
ACE	Mircea Radu	Teodorescu	Ohio State University, Columbus
ACE	Torrellas	Josep	University of Illinois at Urbana-Champaign
CHIMES	Sorger	Volker	George Washington University
CHIMES	Swaminathan	Madhavan	Pennsylvania State University
CoCoSys	Lin	Yingyan	Rice University
CoCoSys	Panda	Priyadarshini	Yale University
CocoSys	Raghunathan	Anand	Purdue University
CoCoSys	Seo	Jae-sun	Arizona State University
CoCoSys	Raychowdhury	Arijit	Georgia Tech
COGNISENSE	Bakir	Muhannad S.	Georgia Institute of Technology
COGNISENSE	Mukhopadhyay	Saibal	Georgia Institute of Technology
COGNISENSE	Romberg	Justin	Georgia Institute of Technology
CUbiC	Bergman	Keren	Columbia University
CUbiC	Ghobadi	Manya	Massachusetts Institute of Technology
CUbiC	Krishnaswamy	Harish	Columbia University
CUbiC	Niknejad	Ali M.	University of California, Berkeley
PRISM	Gavrilovska	Ada	Georgia Institute of Technology
PRISM	Kim	Nam Sung	University of Illinois at Urbana-Champaign
PRISM	Narayanan	Vijaykrishnan	Pennsylvania State University
PRISM	Yu	Shimeng	Georgia Institute of Technology
SUPREME	Giustino	Feliciano	University of Texas at Austin
SUPREME	Khan	Asif I.	Georgia Institute of Technology
SUPREME	Palacios	Tomas	Massachusetts Institute of Technology
SUPREME	Xing	Huili	Cornell University

# Spotlight on JUMP 2.0!

**Forbes**

## More Than \$250 Million To Be Invested In Seven University Microelectronic Research Centers

Michael T. Nietzel Senior Contributor

*I am a former university president who writes about higher education.*

Follow

Jan 6, 2023, 06:00am EST



## SRC Launches JUMP 2.0 Consortium Aimed at Leap-Ahead Microelectronics Revolution

*JUMP 2.0, led by the Semiconductor Research Corporation, expands collaboration in new program spanning 7 U.S. university research centers*

January 04, 2023 09:00 AM Eastern Standard Time

**The Register**

## DARPA wants to upgrade the way we make chips. How exactly will that work?

Dr Dev Palmer talks us through a JUMP in materials, algorithms, tools

Thomas Claburn

Mon 23 Jan 2023 // 23:14 UTC



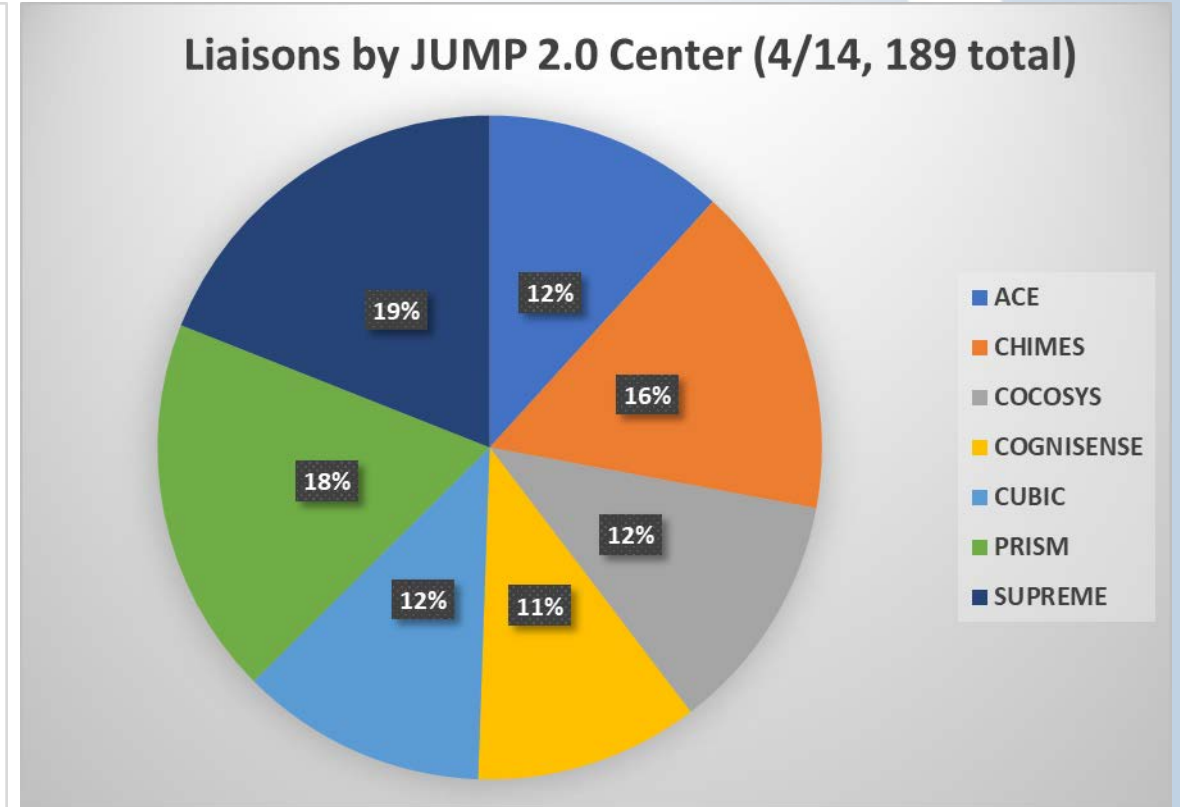
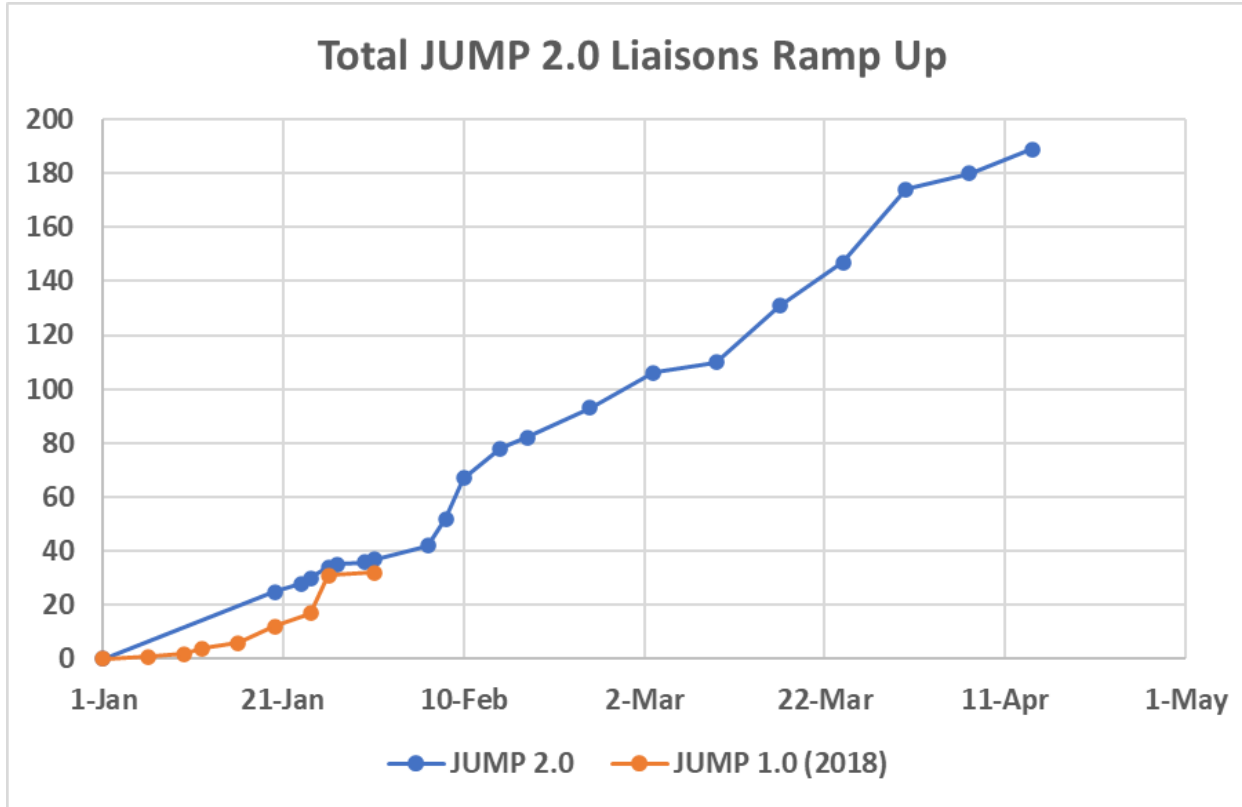
## JUMP 2.0 Consortium Targets Microelectronics Innovation

**JUMP 2.0 SRC and DARPA announcements on Jan 4<sup>th</sup>  
Picked up and amplified by Press – Forbes on Jan 6<sup>th</sup>**

**See great interviews with Dev Palmer in the Register and Adam Knapp in Photonics Media**



# JUMP 2.0 Liaisons – Tracking the Ramp Up

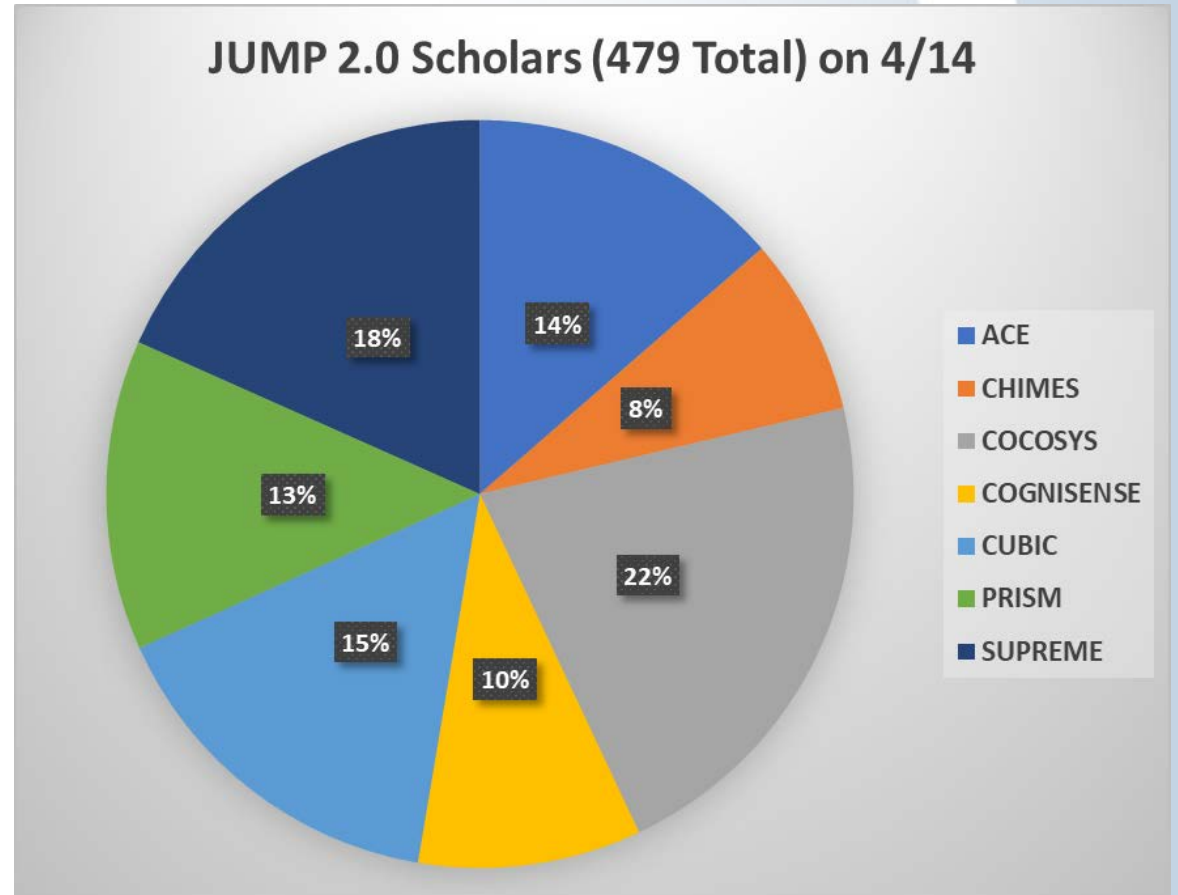
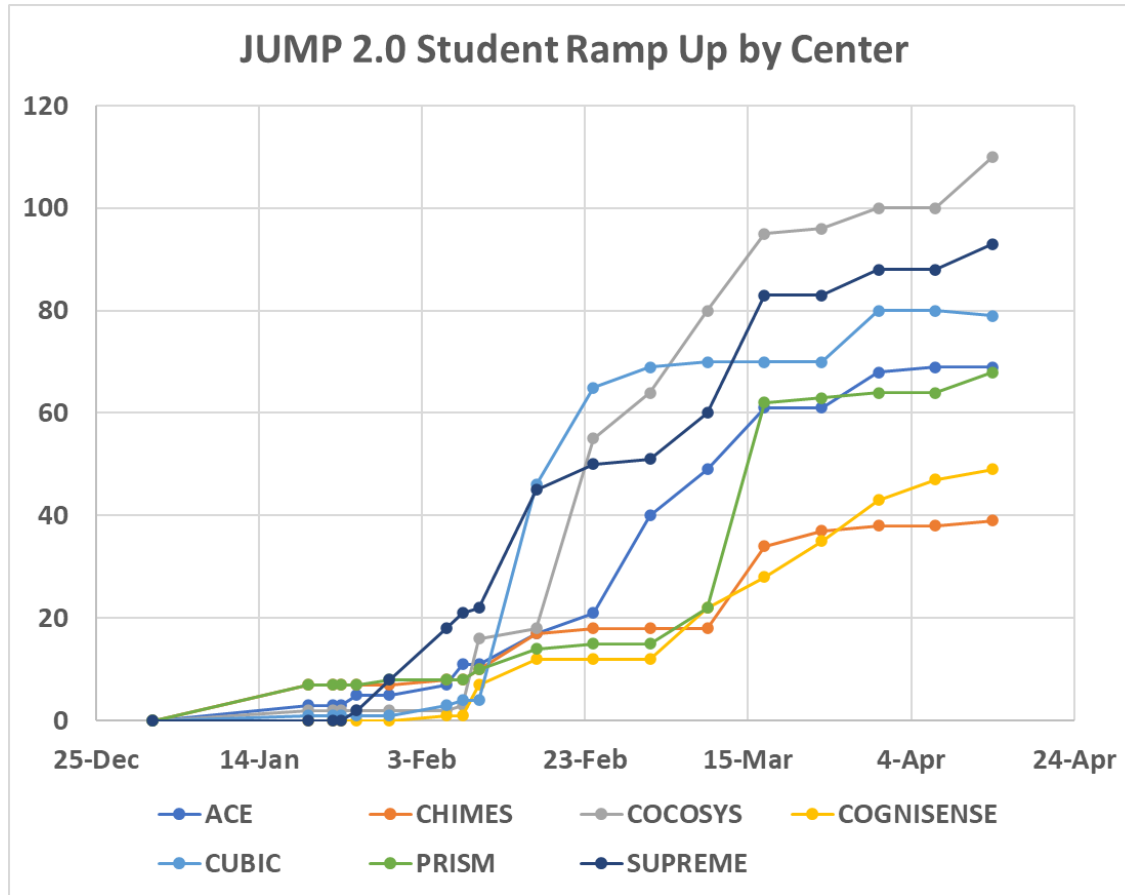


**JUMP 2.0 Ramp Up is on track with 189 liaisons signed up (out of 254 slots) and liaison meetings have kicked off**





# JUMP 2.0 Research Scholars – Tracking the Ramp Up



**JUMP 2.0 Student Ramp Up is underway (479 scholars 4/14)**  
**Goal ~600 Scholars in 6 months**  
**1<sup>st</sup> Six NSF REU Sites to be announced – Let's connect!**



# Liaison Meetings Ramp Up

Monday	Tuesday	Wednesday	Thursday	Friday
<p>CHIMES 8-9:30 PT T2: 3/13 ... ?</p>	<p>PRISM All-day Spring Event 4/11</p> <p>ACE 4-5pm PT Odd months</p>	<p>CoCoSys 8-9am PT Start 4/12?</p> <p>PRISM: 9-10am PT T1: 3/1 ... ?</p> <p>COGNISENSE: 8 am PT Every Wednesday</p> <p>CUBIC: T1 12 pm PT T2 9 am ET Every 6 weeks</p> <p>SUPREME 1-2pm PT Start 4/5</p> <p>PRISM: 5-6pm PT T2: 4/5 ... ?</p>		<p>CUBIC: T3 10 am ET Every 6 weeks</p> <p>ACE 10-11am PT Even months</p>

Center Liaison Meetings are filling up the weekly calendar

# Agenda – Day 1

## Plenty of Opportunities for Q&A, Discussion, and Teambuilding



Tuesday, April 25, 2023		
8:00 - 9:00 am	On-site Registration / Check-in	
9:00 - 9:15 am	SRC Welcome and Introductions	Roman Caudillo / SRC
9:15 - 9:30 am	ADI Welcome	Susan Feindt / ADI
9:30 - 9:50 am	DARPA Vision	Dev Palmer / DARPA
9:50 - 10:10 am	COSOSYS Plan of Action from Center Director	Arijit Raychowdhury / Georgia Tech
10:10 - 10:50 am	COCOSYS Panel with Director(s) and Theme Leaders with Q&A	Arijit Raychowdhury / Georgia Tech Anand Raghunathan / Purdue Priyadarshini Panda / Yale Jae-sun Seo / Arizona State
10:50 - 11:10 am	Coffee Break and Informal Discussions	
11:10 - 11:30 am	CUBIC Plan of Action from Center Director	Keren Bergman / Columbia
11:30 - 12:10 pm	CUBIC Panel with Director(s) and Theme Leaders with Q&A	Keren Bergman / Columbia Ali Niknejad / UC Berkeley Harish Krishnaswamy / Columbia Manya Ghobadi / MIT
12:10 - 1:10 pm	Lunch	
1:10 - 1:30 pm	COGNISENSE Plan of Action from Center Director	Saibal Mukhopadhyay / Georgia Tech
1:30 - 2:10 pm	COGNISENSE Panel with Director(s) and Theme Leaders with Q&A	Saibal Mukhopadhyay / Georgia Tech James Buckwalter / UC Santa Barbara Vijay Raghunathan / Purdue Justin Romberg / Georgia Tech
2:10 - 3:10 pm	Industry Panel - Learnings from previous JUMP/STARnet Experiences (round robin introductions and recommendations from previous experiences)	<b>Moderator:</b> Roman Caudillo / SRC <b>Panelists:</b> Mike Burkland / Raytheon Carlos Diaz / TSMC Ameen Akel / Micron
3:10 - 3:30 pm	ACE Plan of Action from Center Director	Josep Torrellas / UIUC
3:30 - 4:10 pm	ACE Panel with Director(s) and Theme Leaders with Q&A	Josep Torrellas / UIUC Minlan Yu / Harvard Radu Teodorescu / Ohio State Manya Ghobadi / MIT
4:30 - 6:30 pm	Social (drinks/heavy hor d'oeuvres)	