

## FOCUS CENTER RESEARCH PROGRAM: Government-Industry Co-sponsorship of University Research

### FCRP = A Public Private Partnership

Since 1997 the Department of Defense and the U.S. semiconductor and supplier industries have jointly funded university research through the **Focus Center Research Program (FCRP)**. By focusing on mid- to long-term research projects of greatest interest to DoD and the semiconductor industry, FCRP maintains U.S. leadership in a technology vital to U.S. prosperity, security and intelligence.

FCRP is administered by the Defense Advanced Research Projects Agency (DARPA) and the Semiconductor Research Corporation, with Defense representatives active on the FCRP Governing Council. Defense provides \$20 million and \$20 million is from industry partners including AMD, Applied Materials, Freescale, GLOBALFOUNDRIES, IBM, Intel, Micron, Novellus Systems, Raytheon, Texas Instruments, United Technologies and Xilinx. **All funds go to the universities performing the research.**

### FCRP Benefits

Our armed forces rely on semiconductors for state-of-the-art communications, security, navigation, and weaponry. Equipping our military with the best technology requires advances in semiconductor research advances. Over the past ten years, the FCRP has generated over 3,400 published papers, over 100 patent disclosures, and research results that have been incorporated into other DARPA programs. Current FCRP funding supports 200 research professors and 400 graduate students at 35 universities, and over the next decade the program has the potential to double the number of industry-funded Ph.D. graduates in electrical engineering and computer science. Beyond the military applications and workforce benefits, FCRP technologies contribute to U.S. economic prosperity.

### Continuing FCRP's Success: Action Requested

Congress should support the \$20M in the Administration's FY 2011 DARPA budget request to match the industry's commitment.

### FCRP universities are in:

- Arizona
- California
- Colorado
- Connecticut
- Florida
- Georgia
- Illinois
- Indiana
- Maryland
- Massachusetts
- Michigan
- New Hampshire
- New Jersey
- New York
- North Carolina
- Pennsylvania
- Texas

*"... three way partnerships among industry, academia, and government are needed to catalyze progress in the high-cost area of future process and design."*

*"the Focus Center Research Program developed by the Semiconductor Research Corporation could be usefully augmented through increased direct government funding."*

National Academies  
"Securing the Future"  
DATE

**FOCUS CENTER RESEARCH PROGRAM – PARTICIPATING COLLEGES AND UNIVERSITIES**

University Participants	Multi-Scale Systems Center (MuSyC)	GigaScale Systems Research Center (GSRC)	Circuit & System Solutions (C2S2)	Interconnect Focus Center (IFC)	Materials, Structures and Devices (MSD)	Functional Engineered Nano Architectonics (FENA)
Arizona State				X		
Caltech	X		X	X		X
Carnegie Mellon		X	*		X	
Columbia		X	X	X	X	X
Cornell			X		X	
Dartmouth				X		
Ga Tech		X		*		
Harvard		X			X	
MIT		X	X	X	*	X
NC State	X					X
Northwestern						X
Penn State					X	
Princeton		*				
Purdue					X	X
Rice University	X					
RPI				X		
Stanford	X	X	X	X	X	X
SUNY Albany				X	X	
Texas A&M			X			
U. Florida				X		
U. Maryland	X					
U. Massachusetts		X			X	X
U. Michigan	X	X	X			
U. Pennsylvania		X			X	
UC Berkeley	*	X	X	X	X	X
UC Los Angeles		X	X			*
UC Riverside				X		X
UC San Diego	X	X	X		X	
UC Santa Barbara		X				X
UC Santa Cruz				X		
USC	X					X
UIUC	X	X	X		X	
UT Austin					X	
UT Dallas			X		X	
Yale						X

35 universities

\* Lead University