

# MSDT II

## Mixed Signal Design Tools - PHASE II

Highly Integrated, Ultra-miniaturized 3D Mobile Computing Module

A Collaborative Industry/University Program between Georgia Tech & Politenico di Torino

### GOALS AND DELIVERABLES:

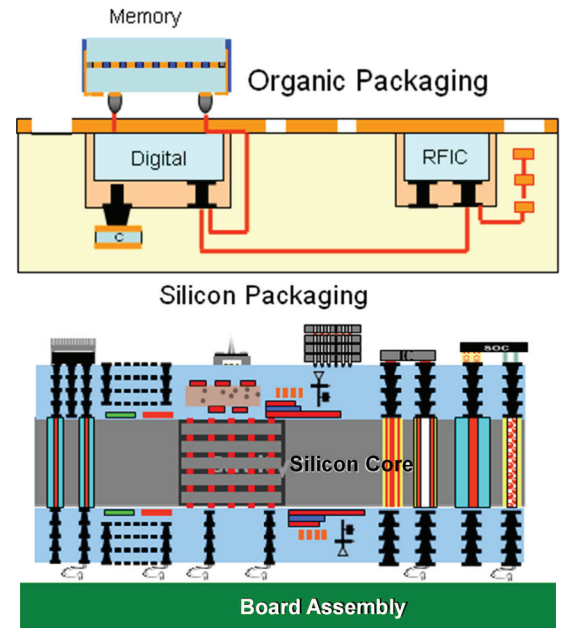
- Build on MSDT Phase 1 research for Phase 2
- Advance technology via strategic leading-edge research
- Tool technology transfer to industry
- Educate needed engineers

### EFFECTIVE PARTNERSHIPS WITH INDUSTRY:

- Participate in program definition and research content steering
- Leverage vast experience and facilities at Georgia Tech and Politecnico di Torino
- Access to faculty, engineers and students

### PROJECTS:

Project ID	Project Title	University
MSDT 1	Signal and Power Integrity Simulator for Complex Packages and Boards	GT
MSDT 2.1	Causal Circuit Simulator with S-Parameters	GT
MSDT 2.2	Delay-based macro-modeling of electrically large structures	Torino
MSDT 3.1	Automated Place & Route of Embedded Passives for Si & Organic Packaging	GT
MSDT 3.2	Passivity-Constrained Parameterized Macro-modeling	Torino
MSDT 4	Modeling of Multi-scale Structures for Chip-Package Co-Design	GT
MSDT 5	Electromagnetic Band Gap (EBG) Modeling and Synthesis for Inhomogeneous Substrate	GT
MSDT 6	Interconnection Modeling in 3D integration including TSV	GT
MSDT 7	Mixed Signal Design Verification	GT



### Phase II

July 2009 - June 2011

### Phase I

2007 - 2009

### Website:

[www.prc.gatech.edu/consortia/msdtII](http://www.prc.gatech.edu/consortia/msdtII)

### Faculty Leaders:

Professor Madhavan Swaminathan

### Academic Partner (Phase I):

POLITECNICO DI TORINO



### Program Manager:

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### INDUSTRY SPONSORS (PHASE I):

- EPCOS
- Infineon
- Panasonic
- Sameer
- NXP