



Carolyn Duran, PhD
Vice President, Intel Corporation
Data Center and AI Group

Background

Intel:

- Memory and IO Technologies
- Product Development
- Sustainability/Corporate Responsibility
- Process Engineering

Research/Academia

- Materials Research Society, Vice President
- Adjunct Professor, Materials Science and Engineering, Northwestern University

Perspectives on Convergent Manufacturing

Heterogeneous Materials Interfaces

- Micro Scale: Semiconductor Manufacturing
 - Scaling leads to interfaces dominating properties
 - Cluster tool development – disparate materials via in situ processing
- Mid Scale: Hybrid Bonding
 - Enables miniaturization, improves device performance
 - Integration of disparate silicon types
- Macro Scale: Focus “in field”
 - Product Adaptability / repurposing
 - In field repair