

# Model-Based Linewidth Metrology Project

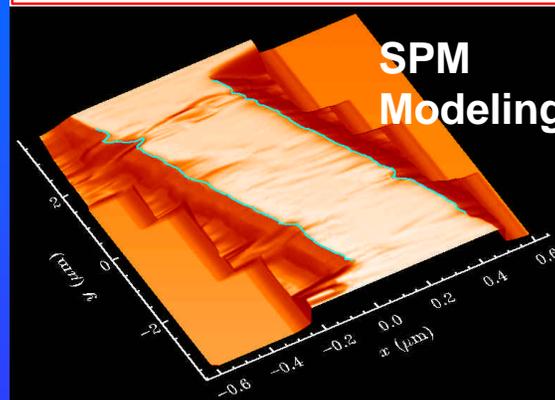
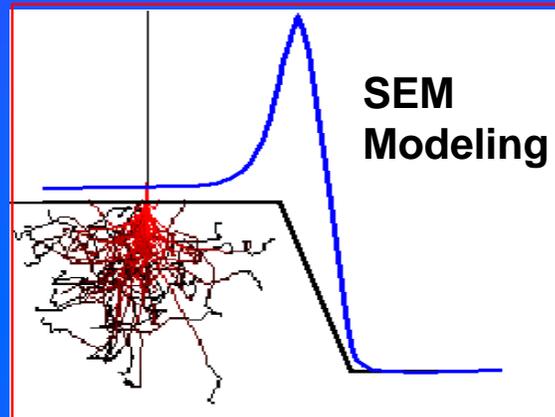
Project Leader: John Villarrubia

## 2001 Deliverables

- Design and implement a provisional model-based shape-sensitive linewidth measurement system for an industrially relevant sub-500 nm sample, complete the SEMATECH contract on Polysilicon linewidths, and present a paper on this topic at the SPIE Microlithography meeting.

## Customers and Collaborators

- International SEMATECH
- Office of Microelectronics Programs
- BFRL
- Dow Chemical



## FY 2000 Accomplishments

- Completed comparison of SEM and electrical linewidths on BESOI
- Publications: 5 on Linewidth measurement, SEM modeling, and SPM modeling.\*
- Oral Presentations: 6 (5 invited) to companies, industry consortia and conferences.
- Commercialization: Applied Probes and Image Metrology, announced products based upon our SPM modeling

- Publicity: Project results featured as "Industry News" in *Quality Magazine*.



- \* 3 additional "spin-off" publications: Our methods are now being used in Nanoindentation measurements