

# **10<sup>th</sup> International EUV Initiative Resist Technical Working Group**

**February, 28, 2008**

**San Jose, USA**

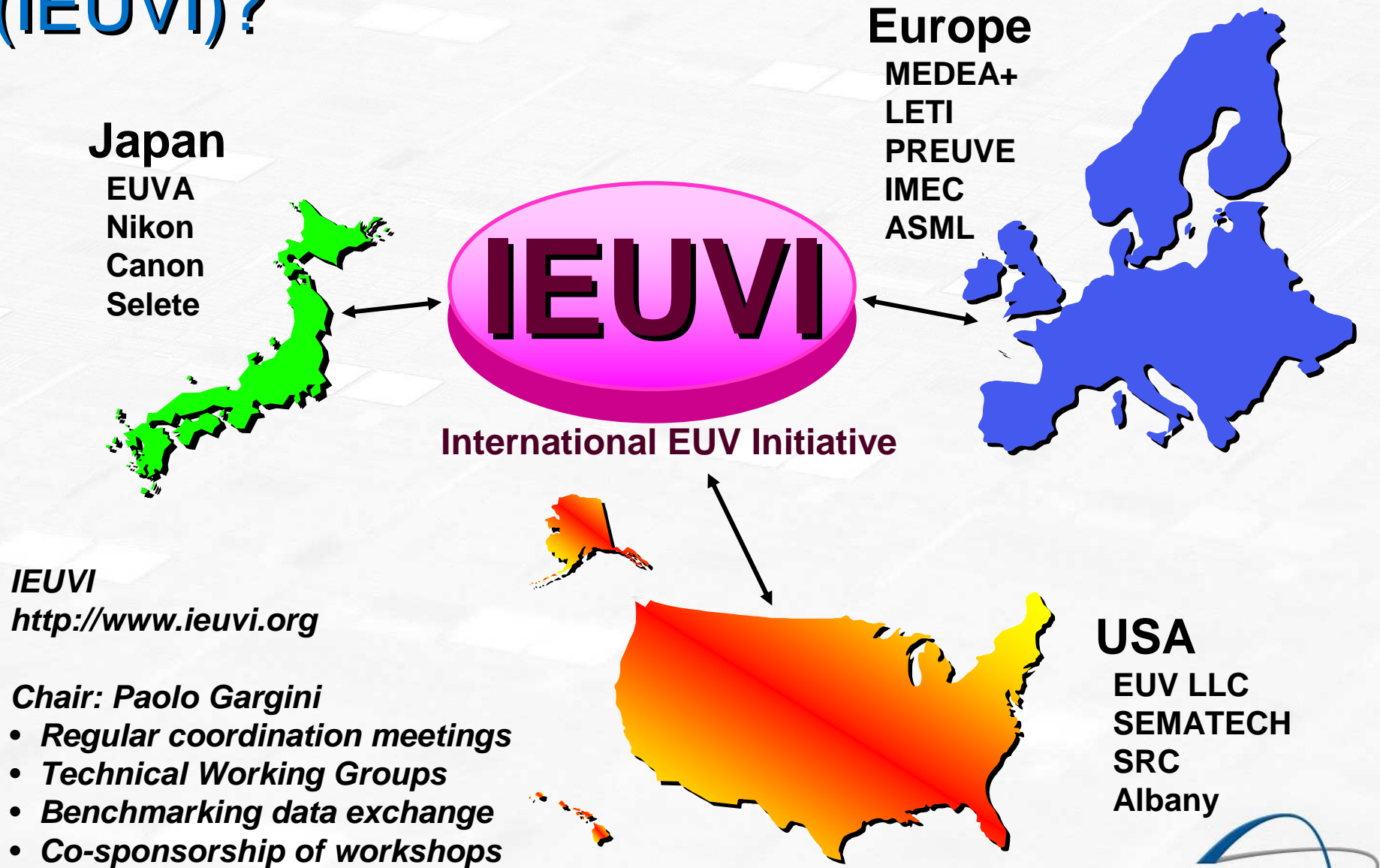
**Kim Dean, SEMATECH  
Serge Tedesco, CEA/LETI**



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# What is the International EUV Initiative (IEUVI)?



**IEUVI**  
<http://www.ieuvi.org>

**Chair: Paolo Gargini**

- *Regular coordination meetings*
- *Technical Working Groups*
- *Benchmarking data exchange*
- *Co-sponsorship of workshops*



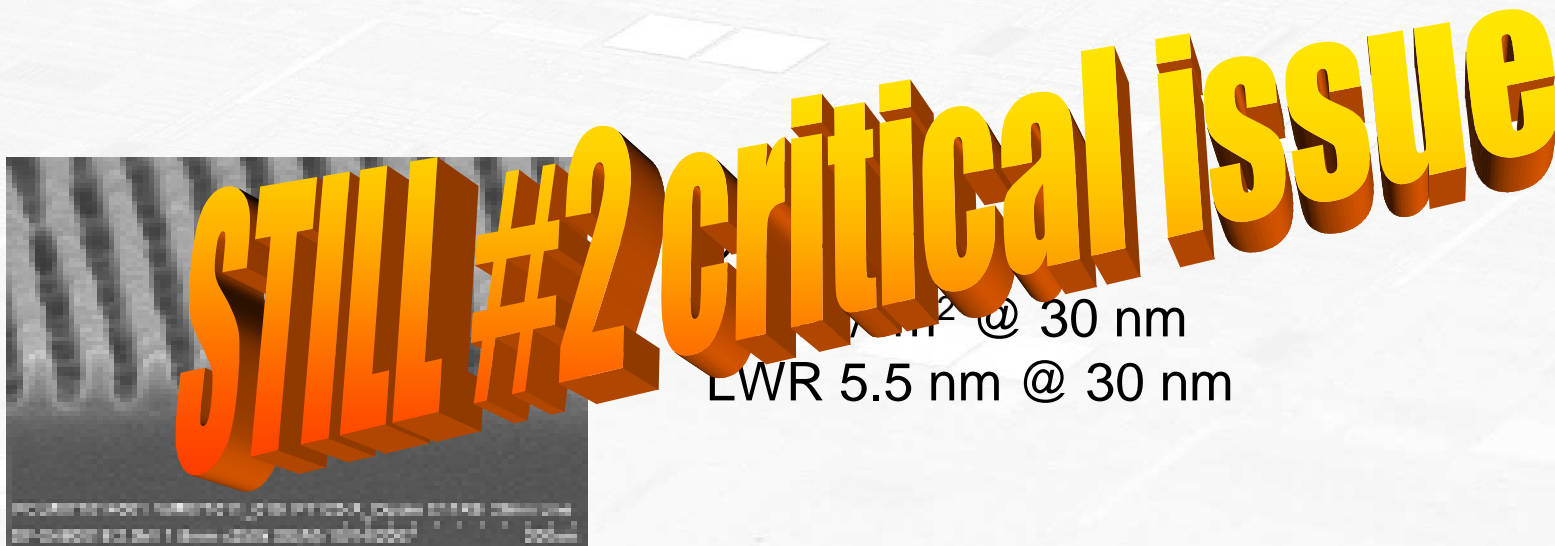
# Goals and Objectives of Resist TWG

- **Goal—increased cooperation among EUV resist community world wide**
- **Objectives—share data and information to speed development of EUV resist**



# Goals and Objectives of Resist TWG

- Remove resist from #2 top critical issue!



Courtesy of Sematech and Berkeley



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# **Confidentiality Notice**

## **- Non-Confidential Meetings-**

- **This is a Non-Confidential Meeting**
- **This meeting may be open to non-members**
- **If proprietary or confidential information is disclosed,**
  - The discloser does so at his/her own risk
  - The discloser does so with the knowledge that the audience may include non-members
  - SEMATECH will not accept presentation materials marked “confidential” or “proprietary” for distribution



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- U.S. export regulations require Foreign Nationals to sign a “**Written Assurance**” that technical information will not be disclosed to Restricted Countries\*
  - Not required of member personnel with confirmed registration
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- Foreign Nationals of Restricted Countries\* may not attend without the approval of the SEMATECH Export Manager
  - Applies to all, even member personnel
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# Questions?

- Please see your meeting chairperson IF
  - **You are a Foreign National who did not sign an Export Written Assurance**
    - **Unless pre-registered and a member employee**
  - **You are a Foreign National of a Restricted Country**
  - **You have questions about confidentiality or export requirements**

# Today TWG objective

## Help the source guys !

- Did the resist sensitivity measurements are accurate ?
- What level of resist sensitivity can we accommodate?
- Are we limited by:
  - Shot noise ?
  - Resist chemistry ?
  - Both?
  - Something else?

Please don't hesitate to interact !



# IEUVI Resist TWG Meeting Agenda

February 28, 2008 San Jose, California, Hilton

<b>12:00</b>	<b>Lunch</b>	<b>All</b>
<b>13:00</b>	<b>Welcome, Introductions</b>	<b>Serge Tedesco (CEA/LETI)/ Stefan Wurm (Sematech)</b>
<b>13:10</b>	<b>Tool Dose Calibration</b>	<b>Patrick Naulleau (LBNL)</b>
<b>13:35</b>	<b>Shot Noise Speaker 1</b>	<b>Chuck Szmanda (Rohm and Haas)</b>
<b>14:00</b>	<b>Shot Noise Speaker 2</b>	<b>Gregg Gallatin (Applied Math Solutions)</b>
<b>14:25</b>	<b>Shot Noise Speaker 3</b>	<b>Yehiel Gotkis (KLA-Tencor)</b>
<b>14:50</b>	<b>Break</b>	
<b>15:05</b>	<b>Shot Noise Speaker 4</b>	<b>Robert Bristol (Intel)</b>
<b>15:30</b>	<b>Shot noise; the importance of considering 2 dimensions</b>	<b>Hank Smith (MIT)</b>
<b>15:55</b>	<b>Shot Noise Speaker 6</b>	<b>Fabian Pease (Stanford)</b>
<b>16:20</b>	<b>Wrap up, Topics for Next Meeting</b>	<b>Serge Tedesco (CEA/LETI)</b>
<b>16:30</b>	<b>Adjourn</b>	

# Wrap Up



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# Topics and Speakers for Next TWG

- **Exposure tool dose calibrations and comparisons, Patrick Naulleau will follow up with Ezero data obtained on Calibrations and Standards beam line at LBNL. TWG requested data for MET-2D for ASML ADTs.**
- **Progress towards 16nm resists**
- **Recommendations: Report process windows, not just resolution. Standardize feature size reported for dose and LWR.**
- **LER/LWR of devices or etched features (EUV)--Ask Manish Chandhok (Intel) to present of 2004 SPIE paper**
- **Effects of 450 wafer size on resist processing?**
- **Aspect ratio, thin film effects**



# Plans for Next TWG Meeting

- **EUVL Symposium, Lake Tahoe, California**
  - **Thursday October 2<sup>nd</sup>, 2008 (tbc)**

