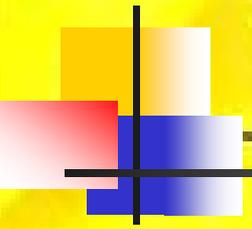


Efforts in Improving the Force and Displacement Resolution to Explore the Nano-World

3 Apr, 2006

Chung-Seog Oh: KIT (Mech. Eng)

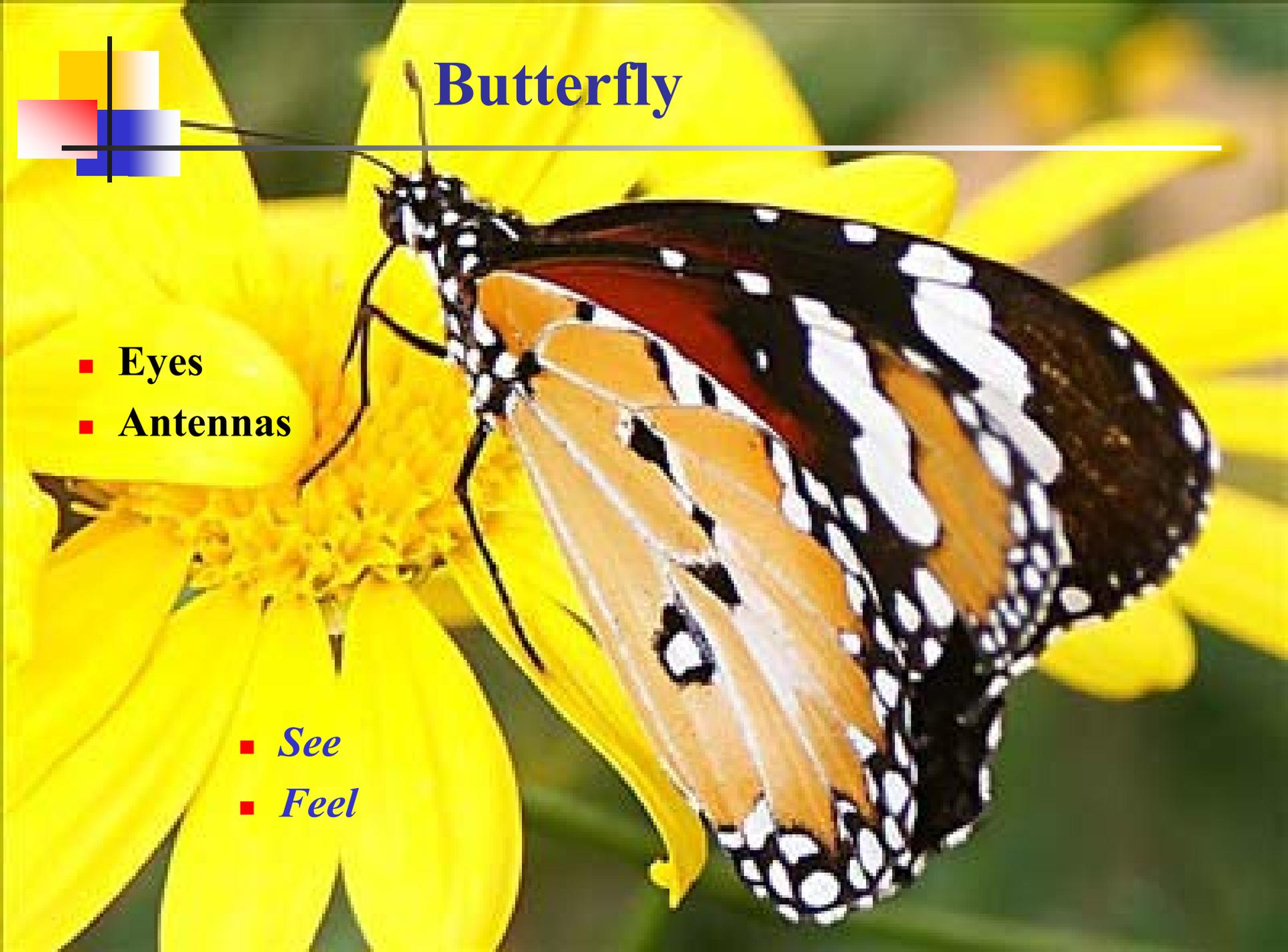
Collaborators: Hak-Joo Lee, Kiho Cho,
Jae-Hyun Kim (KIMM)

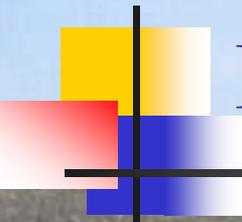


Butterfly

- **Eyes**
- **Antennas**

- *See*
- *Feel*





Land Survey

- Surveying Instrument to measure the distance.



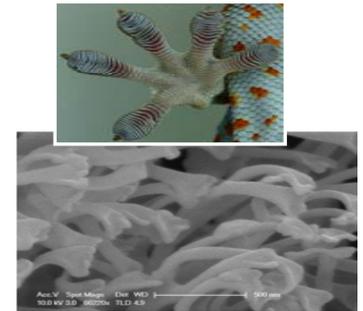
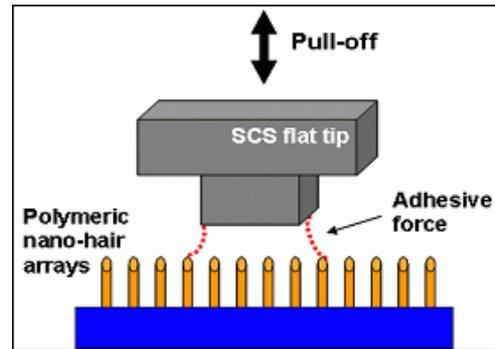
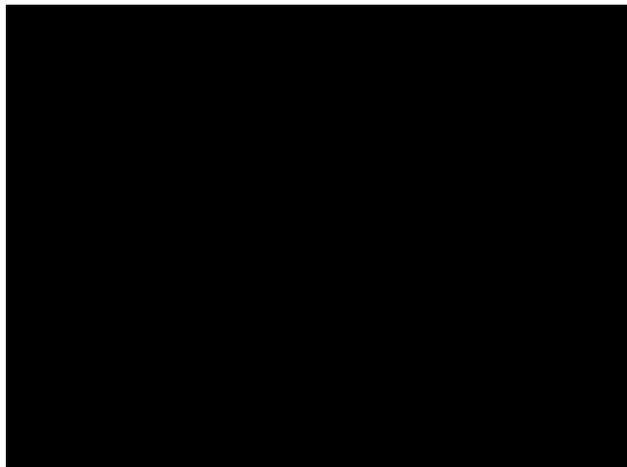
Force & Displacement

- The two most generic quantities in science and engineering
- Stress *and/or* Strain
 - Young's modulus
 - Yield strength
 - Tensile strength
 - Poisson's ratio
 - CTE
 - Creep
 - Stiffness



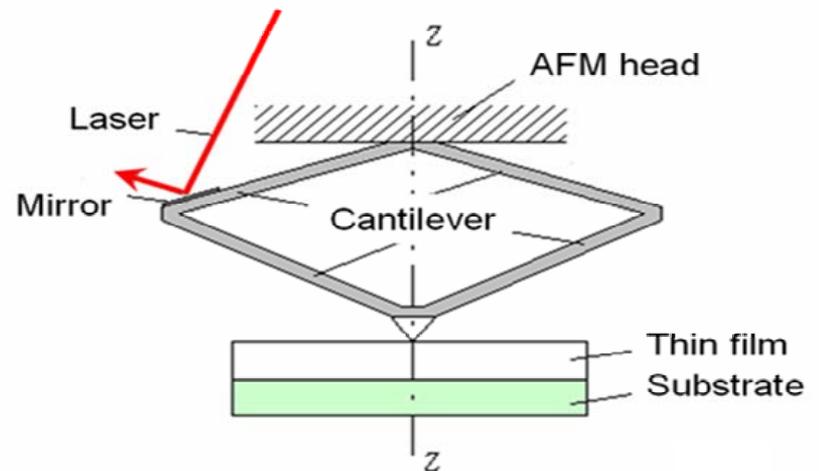
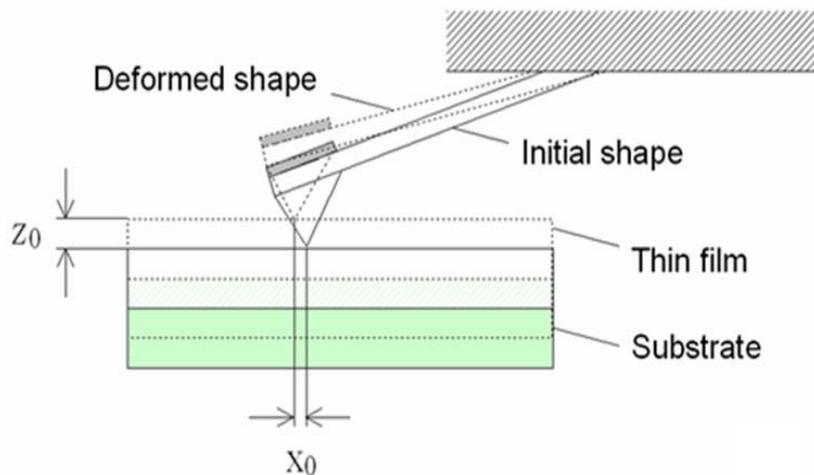
Force Measurement

■ SPM Cantilever Modification



Spatula

☞ [Source:PSIA]

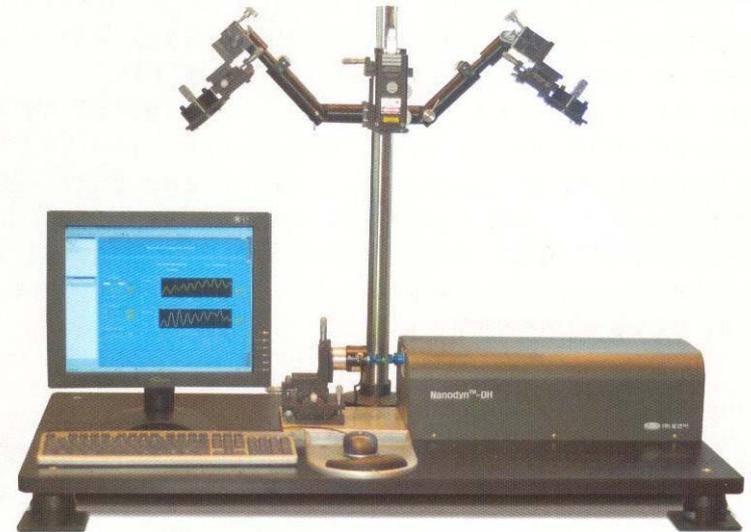


Displacement Measurement

- **Laser Interferometric Nano Extensometer (LINE)**
 - **Modification from ISDG (W. N. Sharpe, Jr./Johns Hopkins)**



☞ [Source:MTS]



☞ [Source:R&B]

Invitation

- **When?**
 - 5:00 ~ 6:00 pm, Today
- **Where?**
 - Grand ballroom
- **Who?**
 - All of you
- **Why?**
 - Some bits of advice to achieve further improvements
- **What?**
 - Bring a cup of tea and Enjoy

