

Micro Nano Tech Conference 1



Educating and Preparing the Emerging Technology Workforce

May 9-11, 2011

University of New Mexico
Albuquerque, NM

This conference is presented by a consortium of
National Science Foundation Advanced Technological Education Centers



What We Do



SCME

Micro Nano Tech Conference 1



The logo for the Southwest Center for Microsystems Education (SCME), consisting of a glowing orange gear-like shape with the letters 'SCME' in white.

SCME

Southwest Center for Microsystems Education

NSFATE Regional Center of Excellence

What We Do

Matthias Pleil

Principal Investigator – SCME

Research Associate Professor – University of New Mexico, ME

Faculty – CNM School of Applied Technologies

Made possible through a grant from the National Science Foundation DUE 0902411

The Goals



SCME

America's Authority for Microsystems Education

- Support Growth and Enrichment of Technician Education Programs
- Provide Professional Development Opportunities
- Create and Disseminate Educational Materials and Models
- Identify Microsystems Technician Competencies





“Classic” Education Materials

SCME

We create Educational Materials in a modular format to facilitate scaling, loosely based on a SCORM concept.

- Learning Modules consist of Instructor and Student guides.
 - Primary Knowledge SCO's – “PK's”
 - Reading materials
 - Activity SCO's
 - Worksheets, homework, ...
 - Assessment SCO's
 - Quizzes.....

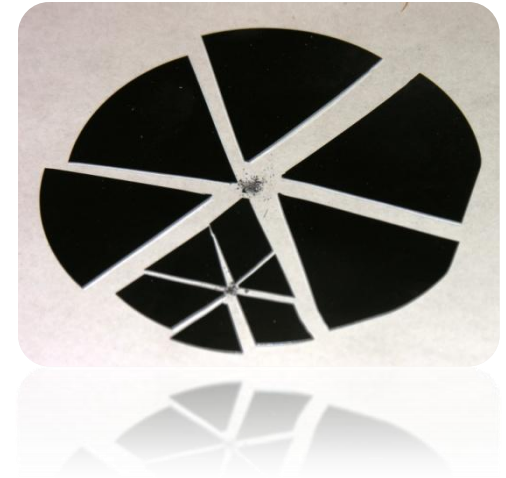




Topics?

SCME

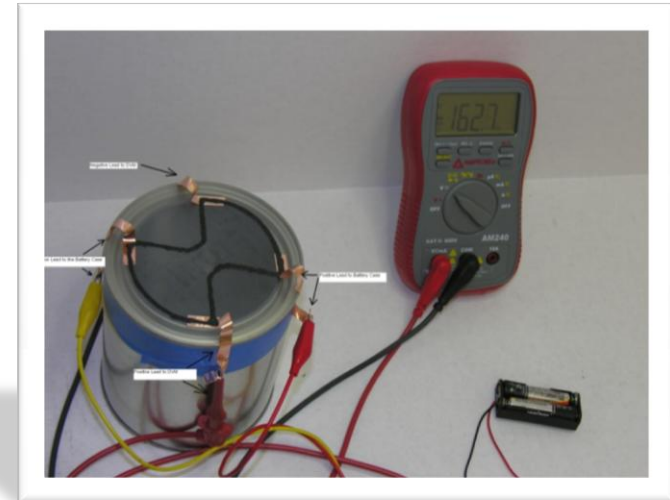
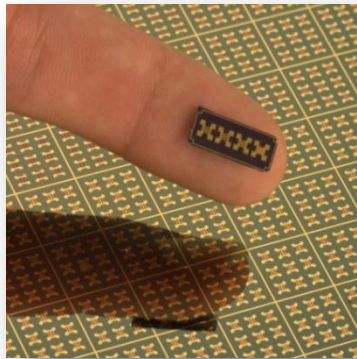
- MEMS/Microsystems, Applications, History...
- Fabrication methods
- Cleanroom Safety and Protocol
- Materials, scale
- BioMEMS, Medical Apps
- Wheatstone Bridge, Transducers



KITS

SCME

- Out of the Activities, we've created kits which you will be introduced to tomorrow. They're Awesome!
- The kits were developed initially to bring the cleanroom concepts into the classroom and give students as much "hands-on" experiences as possible.



Dissemination

The logo for SCME (Science, Curriculum, and Materials Education), featuring the letters 'SCME' in white on a red gear-like shape.

SCME

We bring our materials to educators through workshops.

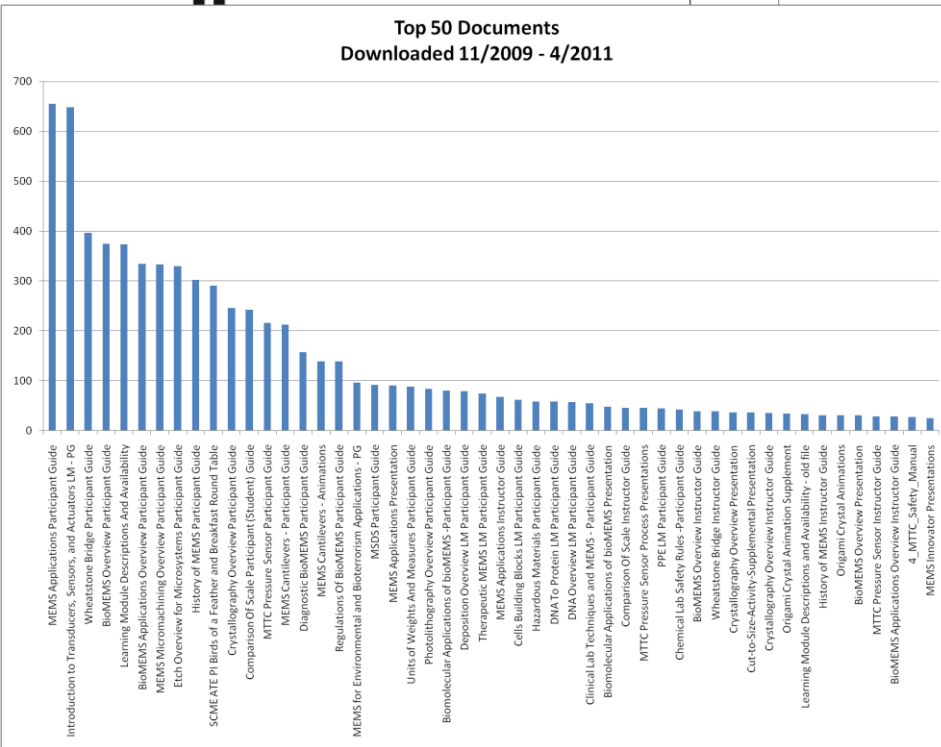
- ½ day and full-day Kit workshops
- 4-5 day Pressure Sensor Workshops
- Conference Presentations – SAME-TEC, HI TEC, STEM Tech, ATMAE, NAIT, ASEE, COMS....
- “Mini Micro Conference” – SCME’s
- And Now – MNT Conference

WEB Dissemination

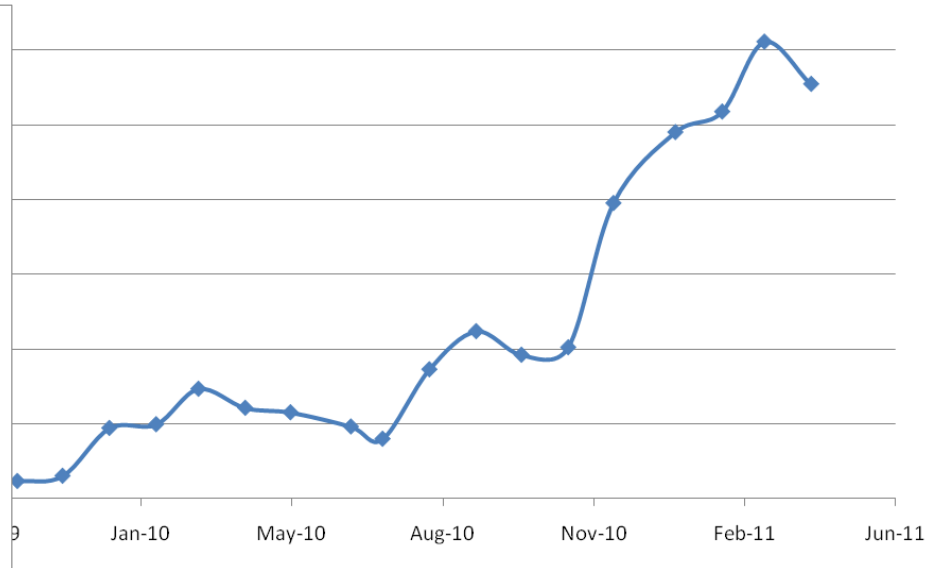


SCME

SCME Document Downloads by Month



1400



We believe in an Open Source Philosophy

Synergy

The logo for the Science and Community Engagement (SCME) program, featuring the letters 'SCME' in white on a golden gear-like background.

SCME

- We want folks to take our material and do their own workshops. (Scale)
- We want folks to modify and improve our material to meet their needs. (Shift)
- We ask for input, feedback and encourage collaboration (evolution)

We've done this to varying degrees, now it is becoming part of our DNA

Moving Forward

The logo for SCME (Science, Computing, and Mathematics Education), featuring the letters 'SCME' in a bold, sans-serif font inside a glowing orange gear-like shape.

SCME

- NDSCS – Pressure Sensor Workshop
 - Maybe others?
- Evolving to a Train the Trainer model
- Moodle – We'll create the course shell for you and your students.
- Streaming Lectures anyone?
 - Matt's lectures
 - SAME TEC presentations
- Interactive e-books anyone? Let's chat!



What can we do for you?



www.scme-nm.org

The screenshot shows the SCME-NM.ORG website homepage. At the top left, it says "SCME-NM.ORG NSF ATE Regional Center". Below this is a navigation menu with links: Home, SCO Feedback, Partner Links, User Forum, SCME Events, Job Links, About Us, and MTTC Safety. On the left side, there is a "Login Form" with fields for Username and Password, a "Remember Me" checkbox, and a "Login" button. Below the login form is a "Main Menu" with a list of links: Educational Materials, What's New on Site?, WEB Links, Matt's Corner, COMS Notes, SCME Calendar, MTTC Events, Jim's Corner, Industry Relations, and Synergy Project. The main content area features a "SCME Home" section with a "News Flash" about a "New Ultra-Sensitive Nanosensor Chip". Below the news flash is a "Welcome to the Southwest Center for Microsystems Education" section, which includes a photo of Matthias Pleil, the Principal Investigator, and a "Read more..." button. At the bottom of the main content area, there is a section for "Micro Nano Tech Conference 1" with the text "Written by Matthias Pleil".