



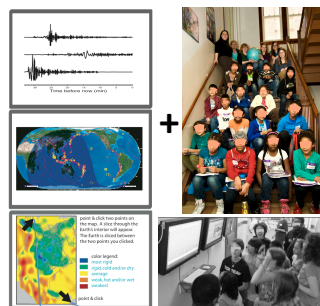
# Career in Feet-on Seismology

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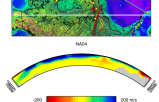
Department of Earth and Planetary Sciences; Northwestern University



- Education Plan:
- 1) Develop a new interactive Earth-Slicer;
  - 2) Build an interactive kiosk consisting of a live in-situ seismogram feed, the IRIS "Earthquake Channel" (AED) on a touch screen, and the new interactive Earth Slicer;
  - 3) Develop curricula and modules around this kiosk, and
  - 4) Invite diverse groups of children for a field trip to the kiosk.

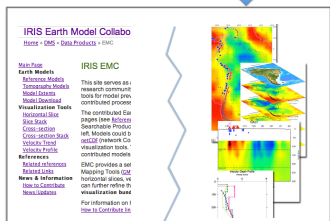


Prototype at [http://seis.northwestern.edu/map/map\\_code.php](http://seis.northwestern.edu/map/map_code.php)



Challenge:  
Find competent personnel.

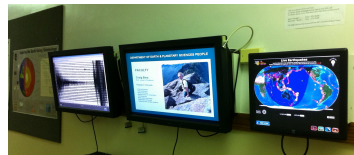
Solution:  
Work with IRIS EMC.



<http://www.iris.edu/dms/products/emc/>

IRIS Earth Model Collaboration

Interactive Kiosk



## Acknowledgements

Education Specialists: Jonathan Boxerman, Kourtnay Cockrell, Steven McGee, Kelly Rooney  
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Others: Patricia Beddows, Gary Pavlis, Brad Sageman, Chad Trabant

## Elementary School

- Visitors include
- 1) Project Excite! students
  - 2) Pritzker Elementary School Science Night



The Jump



Look!!

## Project Excite!



3rd graders study the Haiti Earthquake



4th graders locate a mystery earthquake

## Pritzker Elementary



Science Night with portable version of the kiosk on laptop, using SeisMac and a web browser.

## Middle and High School

- Visitors include
- 1) Students from 6th grade at Nichols Middle School
  - 2) Junior Science Café in Public Library
  - 3) NASA Capstone Summer Experience

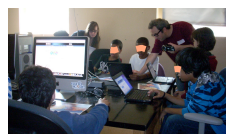


The Jump



Look!!

## Middle School Earth Science



- 6th graders split in three groups of 15 and follow 3-component curriculum:
- 1) Study seismicity on-line @ USGS, Google Earth, & IRIS Seismic Monitor
  - 2) Study seismic waves with slinkies and human waves,
  - 3) Jump, See, & Compare

## NASA Capstone



High school juniors locate a mystery earthquake



## Jr. Science Café



## University

- Development includes
- 1) Inclusion in outreach activities (see on left),
  - 2) New course on instrumentation, includes building one's own seismometer,
  - 3) USArray Data Processing Short Course for the Next Generation of Seismologists,
  - 4) Open-source, freeware-based new interactive delay-time tool

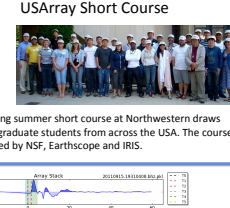
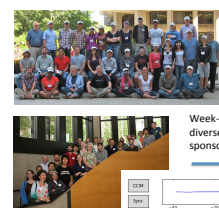
## EARTH 360



Under- and graduate students build their own seismometer in three steps: 1) mechanical, 2) mechanical → electrical, 3) analogue → digital.



## USArray Short Course



Week-long summer short course at Northwestern draws diverse graduate students from across the USA. The course is sponsored by NSF, Earthscope and IRIS.

New interactive delay-time tool is developed by CAREER-supported graduate student Xiaoting Lou. Its first "distributed" application is presented on a Monday poster. The tool semi-automates measurement of teleseismic arrival times through cross-correlation, without loss of user-controlled data quality judgement.

## New Analysis Tool

