SUMMER INSTITUTE AT UIUC

Hunerkada Session

LUMS School of Science and Engineering

Presentation by:
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August 13, 2010

Venue:
Conference Room
SSE Bld, 2nd Floor

BSBA summer institute

National Science Council (NSC) of Taiwan, together with U.S National Science Foundation (NSF), conducted a summer school from 12-23 July, 2010 at the University of Illinois at Urbana Champaign (UIUC), USA. The school was based on “Biosensing and Bioactuation”.

Inspiration of BSBA-SI

The inspiration behind summer institute is to develop new research frontiers that will profoundly impact both engineering and biological sciences in the areas of sensing and actuation.

It was a multidisciplinary institute which brought people from engineering, biology, chemistry, material science and others.

Participating research centers

- Micro and Nanotechnology Laboratory (MNTL),
- Center for Nanoscale Science and Technology (CNST),
- Center for Cellular Mechanics (CCM),
- Siteman Center for Cancer Nanotechnology Excellence,
- Department of Mechanical Science and Engineering (MechSE),
- Department of Agricultural Sciences.

Participants

- There were about 50 participants; most of them were graduate students and young faculty members from National Taiwan University and various US Universities.

- Most of them came from an engineering background (electrical and mechanical engineering), but there were also some from diverse fields cellular biology, biochemistry, and physical chemistry.

Lecture Program

- The Summer institute arranged a series of stunning lectures given by distinguished professors from around the US including UIUC, MIT, Berkeley, North Western, Purdue and UC Merced.
- Everyday, before lunch-time, three lectures were held on various topics of Biology and Engineering.

Laboratory Modules

- Cellular Biology lab module
- Agricultural Lab module
- Enabling Technologies lab
- Micro and Nano Fabrication lab module

Cellular Biology lab module

- Learned Aseptic techniques
- transfected the cells with green fluorescent proteins
- Pipettors, culture dishes, pipettes biosafety cabinets, incubators

Agricultural Lab module

- Measured chlorophyll in the field
- Fractal analysis to do corn root analysis
- Corn Stalk Counter

Enabling Technologies lab

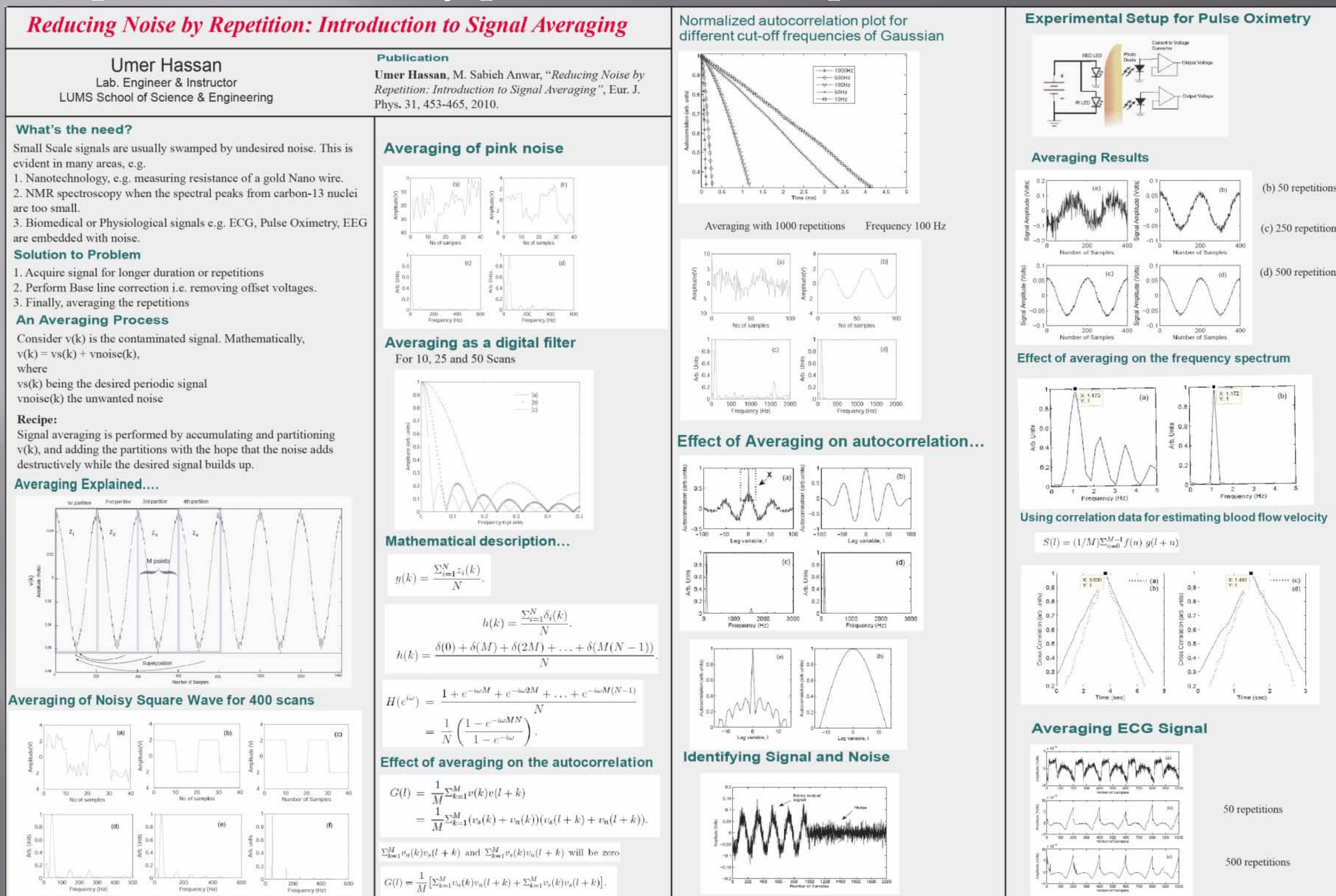
- Polydimethylsiloxane (PDMS) device fabrication. It is widely used silicon based organic polymer used in many applications ranging from medical devices to lubricating oils.
- We develop the PDMS devices

Micro and Nano Fabrication lab module

- Experiment 1: Lithography
- Experiment 2: Deposition
- Experiment 3: Dry Etching
- Experiment 4: Inspection

Poster session

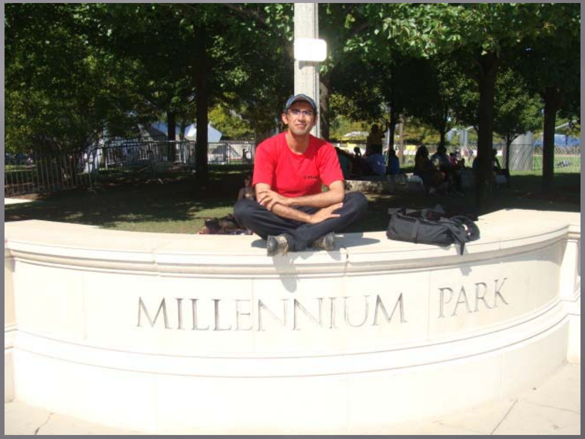
- All participants presented a **poster** of their work. I gave a short presentation of my poster before the poster session.



Excursion Trip to Chicago

- Field Museum
- Millennium Park
- John Hancock Observatory
- Navy Pier

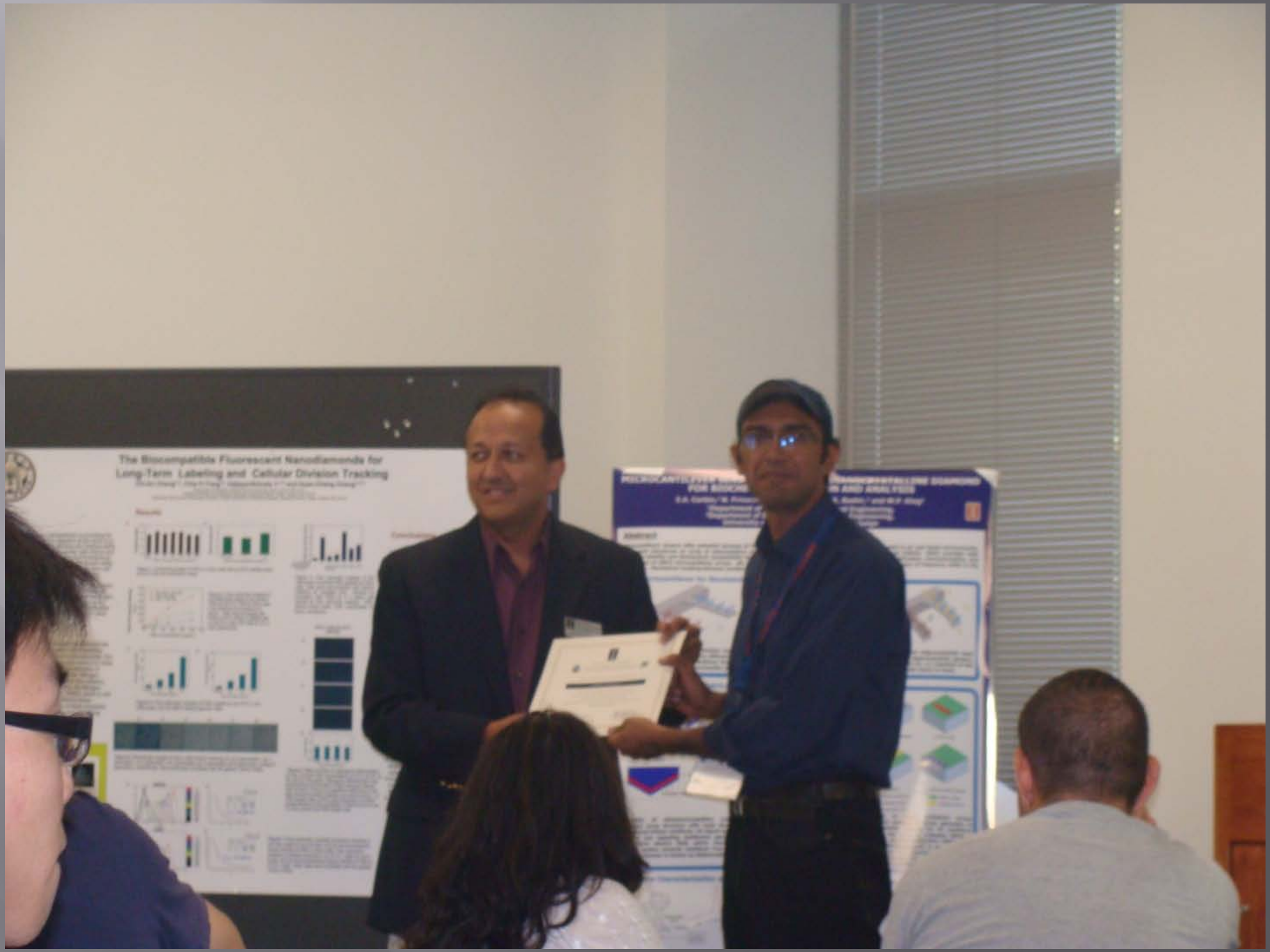
Some pictures



Group Presentation

I was selected as a leader of my group and gave a final presentation at graduation ceremony

Graduation Ceremony



It was a great trip

Thanks