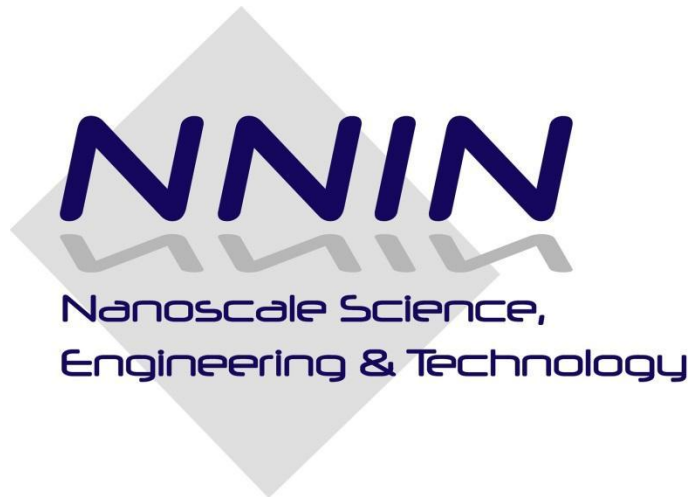
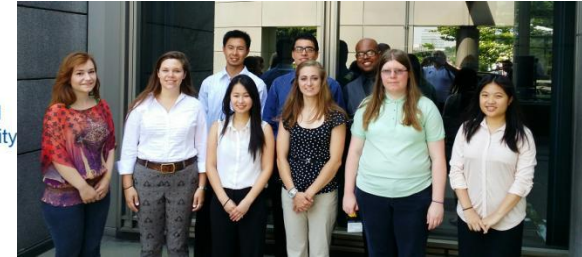
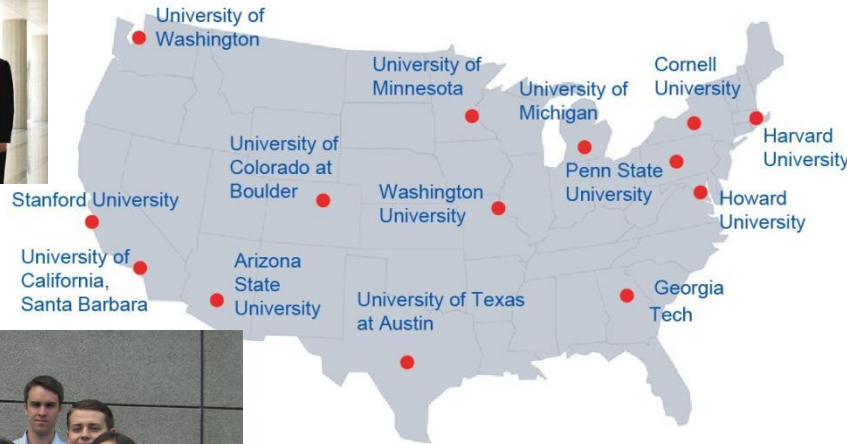


Seven Years of NNIN iREU at NIMS





A partnership bringing the best US undergraduates interested in Nanotechnology to NIMS/Japan for an advanced research experience to build both advanced technical skills and to increase ability to operate within Global Research Culture

NNIN iREU 2008—Year 1



5 Students 2 NSF Graduate Fellowships + 1 Honorable Mention

NNIN iREU 2008

Prof. Sakaki and Dr. Takeshi Noda



 **Honorable
Mention**

Brian Lambson

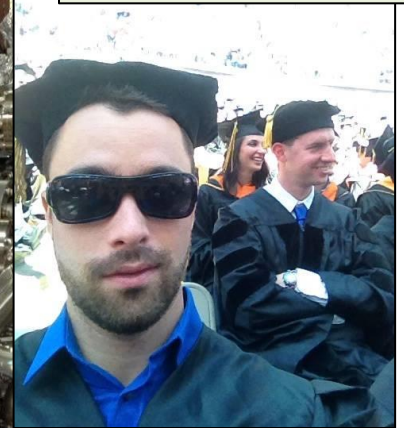
Graduated from Columbia in 2008

Completed Ph.D. in EE U.C Berkeley 2013

Registered Patent Agent at HaynesBoone



Dr. Daisuke Fujita



 **NSF Graduate
Fellowship**

Alex Luce

B.S. from U. Arizona

Graduated from UC Berkeley with Ph.D.

Worked at ARPA-E last summer

Works at a Silicon Valley Venture Capital Firm
(energy investments)

NNIN iREU 2008

Dr. Masayuki Takeuchi



Prof. Sakaki and Dr. Takeshi Noda



Ryan Harrison

Graduated from Johns Hopkins in 2009
In 2014 was finishing DPhil in Computational Biophysics at U.Oxford. Looking for non-academic position
Grew most of his own food last year

Brian McSkimming

Graduated from U. Buffalo in 2009
5^h year graduate student at UCSB; graduating by end of Summer 2015
Plasma Assisted Gas MBE of GaN
Getting married soon

NNIN iREU 2008

Dr. Naoki Ohashi



Courtney Bergstein Durante

Terminal B.S. from Carlow College 2009

MBA

Business Analyst at Alcoa; Evaluates R&D opportunities for Alcoa

Married, and Mom(x2)

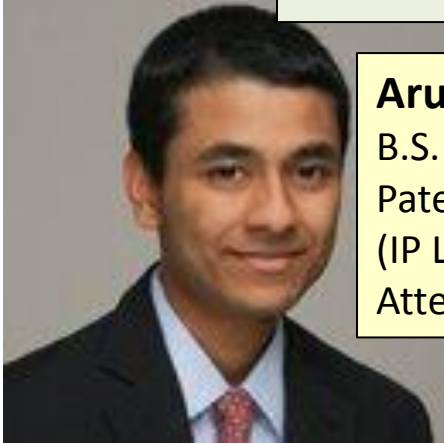
NNIN iREU 2009—Year 2



6 Students 2 NSF Graduate Fellowships

NNIN iREU 2009

Dr. Naoki Ohashi



Arun Swain

B.S. in ECE from Cornell 2011
Patent Agent in Washington, DC
(IP Law Firm)
Attending Fordam Law School Aug. 2015

“My NIMS experience has been quite useful as I currently have several Japanese clients (Japanese universities and corporations) for whom I procure patents. Working in a Japanese laboratory at NIMS has provided me with an insight into the Japanese scientific industry that I still draw upon for my daily patent related work. I will be starting law school in August 2015 at Fordham Law School in New York City.”

Dr. Yukio Nagasaki



Jilian Kiser

Terminal B.S. in Engineering from Olin College
Civilian Scientist at Naval Undersea Warfare Center

Part time Masters Student at Brown University

NNIN iREU 2009

Prof. Sakaki and Dr. Takeshi Noda



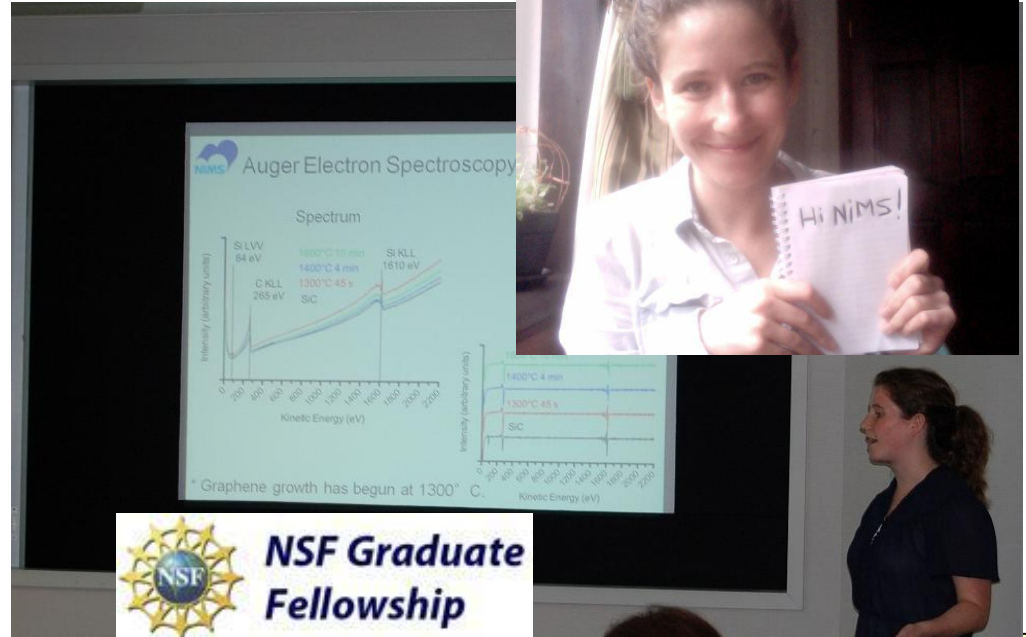
David Christle

B.S. U. Minnesota

Graduate Student at U. Chicago with
Prof. David Awschalom

*Exploring the physical properties of
nanoparticles in optical suspension*

Dr. Daisuke Fujita



Julie Stiver

B.S. U. Mass Amherst

Completed terminal Masters in Chemical Engineering
at U. Colorado May 2013

Engineer at Advance Concepts Engineering in Baltimore

NNIN iREU 2009

Dr. Yuji Miyahara

Dr. Guoping Chen



**NSF Graduate
Fellowship**

Justine Yoon

B.S. RPI

National Institute for Biomedical Imaging and
Bioengineering (NIBB, part of NIH)

Develops microfluidic devices for NIH collaborators

Sarah Grice

B.S. U. Maryland

Briefly attended Graduate School at Cornell

No longer in Science

NNIN iREU 2010 –Year 3



9 interns

4 NSF Graduate Fellows + 4 NSF GFP Honorable Mention

NNIN iREU 2010

Dr. Enrico Traversa



Isaac Markus

B.S. Cooper Union

4th year graduate student at UC Berkeley

Currently internship at IBM Almaden; and Fall internship in Europe

Recently Married

Recently saw Dr. Traversa at a conference in Europe !

“Japan continue to be one of my most memorable experiences both academically and personally, and have so many fond memories”

NNIN iREU 2010

Dr. Nobutaka Hanagata



“It's hard to believe that this time 5 years ago I was getting ready to head to Japan, I still think very fondly of my summer there and how my experience with NNIN, my cohort, and Dr. Hanagata-san's lab group have positively shaped my future as a scientist and broadened my global perspective on life.”

Sarah Connolly

B.S. U. Florida

Worked as Public Health Associate for Center for Disease Control (US Gov)

Currently in a Ph.D./MPH dual degree program in Immunology at Emory University in Atlanta

NNIN iREU 2010

Dr. Daisuke Fujita



"I remain very grateful for my NNIN REU and iREU experiences and still consider them to be some of the most influential times of my career thus far.

I'm currently a third-year Ph.D. student at Stanford University working in Prof. Reinhold Dauskardt's group in the Materials Science and Engineering department. I study the mechanical and fracture properties of polymers in confinement (that is, how large polymer chains behave when they're put into very small spaces)."

Scott Isaacson

B.S. U. Minnesota

Graduate Student in Materials Science at Stanford

3 year Kodak Fellowship

NNIN iREU 2010

Dr. Toyohiro Chikyow

Axel Palmstrom

I am a third year PhD candidate at Stanford University with Stacey Bent's group in the Department of Chemical Engineering. My research activities are focused on inorganic functionalization of colloidal quantum dot solar cells with atomic layer deposition. I have one recent publication titled "Improving Performance in Colloidal Quantum Dot Solar Cells by Tuning Band Alignment through Surface Dipole Moments in JPCC and I have a review paper that is about to be published in Nanoscale titled "Atomic Layer Deposition in Nanostructured Photovoltaics: Tuning Optical, Electronic and Surface Properties.



**Honorable
Mention**

NNIN iREU 2010



Dr. Kazutaka Mitsuishi



Claire McLellan

B.S. Wake Forest

3d year Graduate Student at UCSB

Studies Nitrogen-vacancy defects in Diamond

NNIN iREU 2010

Mark Borysiak

B.S. Ohio State

Ph.D. Student at U.Washington

Dr. Masayuki Takeuchi

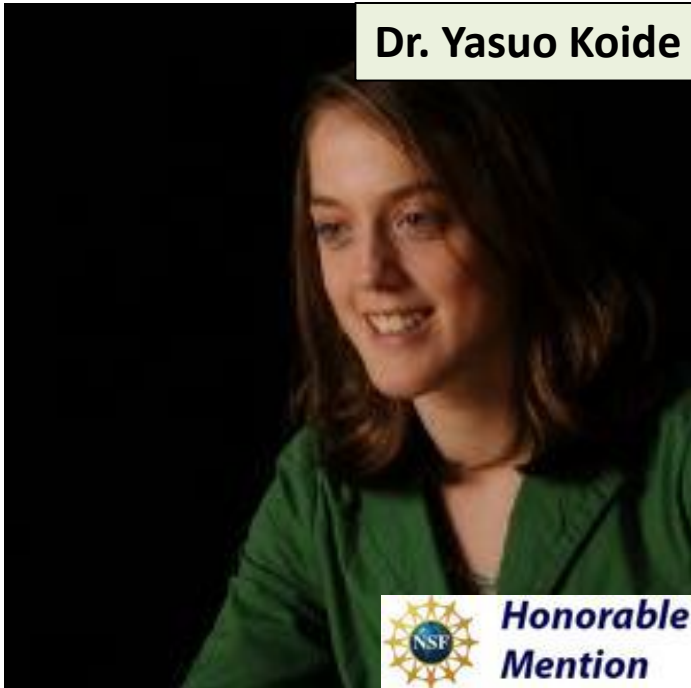


I'm currently living in Seattle, WA with my fiancée Kathy and dog Cody. I've been pursuing my PhD in Chemical Engineering at the University of Washington over the past ~4 years in Jonathan Posner's microfluidic lab. My research has focused on creating point-of-care nucleic acid diagnostics for infectious disease diagnosis in low-income settings and we are currently spinning out a start-up based on the technology (we recently won a \$25,000 grand prize at UW business plan competition.)

I wouldn't be where I am at today without my REU experience in Japan. The work of NNIN REU and Japan mentors is tremendous for career building and much appreciated!

NNIN iREU 2010

Dr. Yasuo Koide



Arolyn Conwill

B.S. Pomona College
4th year Graduate Student in Physics
at MIT (biophysics)

Dr. Naoki Ohashi



Denys Zhuo

B.S. MIT
Graduate Student in Materials Science at
Stanford

*High performance, thermo-mechanically
robust separators for Li-ion batteries*

NNIN iREU 2010

Dr. Kazuhito Tsukagoshi



**NSF Graduate
Fellowship**

Athena Pan

B.S. Brandeis

3d year Graduate Student at UC San Diego

Ultrafast and Nanoscale Optics

NNIN iREU 2012



8 interns

4 NSF Graduate Fellowships + 1 Honorable Mention

NNIN iREU 2012



Dr. Naoki Ohashi

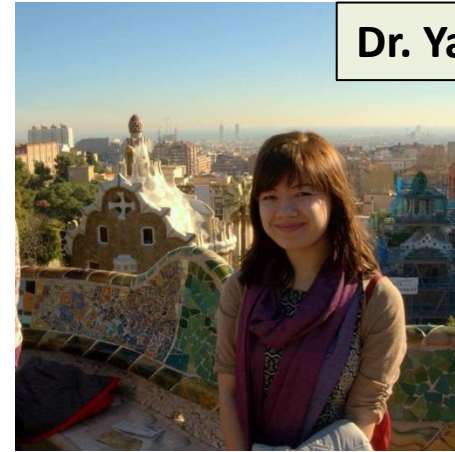


**NSF Graduate
Fellowship**

Alex Bryant

4th year graduate School in
Materials Science at Georgia Tech

phase transitions in a metallic glass of Ce-Al



Dr. Yasuo Koide



**NSF Graduate
Fellowship**

Also NDSEG Fellow

Daryl Vulis

B.S. SUNY Stony Brook
Graduate Student at Harvard

Integrated zero-index metamaterials

Much of my focus has been on the fabrication of these metamaterials in Harvard's CNS facilities - my internship as part of the Japan iREU in 2012 with Dr. Koide and Dr. Watanabe was a huge help in finding that direction!

NNIN iREU 2012

Dr. Kentaro Tashiro



Kelly Suralik

Graduated May 2013 Middlebury College
Entered Materials Chemistry Ph.D Program
at University of Wisconsin Fall 2014

*"we investigate the segmental mobility of
polymer glasses during deformation"*

Middlebury College #1

Prof. Sakaki and Dr. Takeshi Noda



Lauren Otto

B.S. Bethel University

3d year Graduate Student in Electrical
Engineering at University of Minnesota

Did internship at HGST and now will be doing
thesis research at Lawrence Berkeley



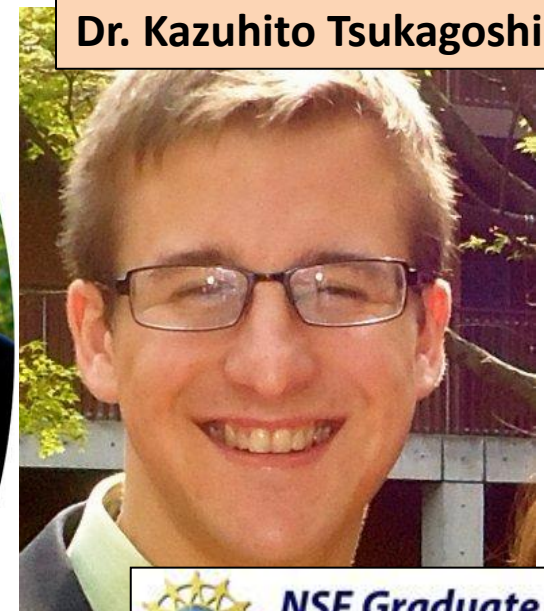
**NSF Graduate
Fellowship**

NNIN iREU 2012

Dr. Yukio Nagasaki
Dr. Nakanishi



Dr. Kazuhito Tsukagoshi



Olivia Lambdin **Olivia Scheideler**

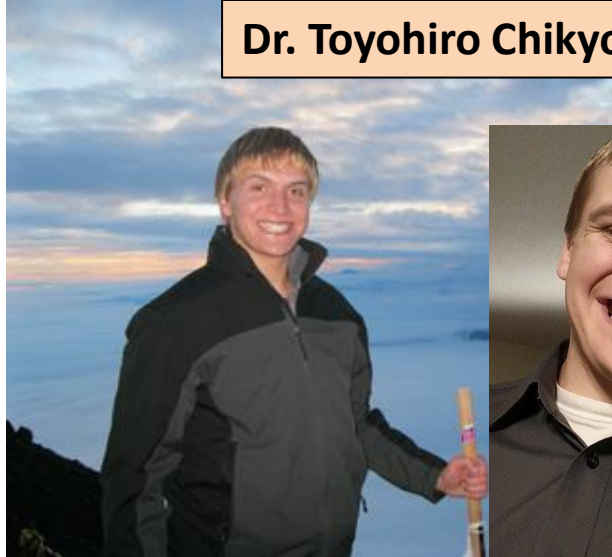
Graduated from U. Nebraska May 2013
Joint Bioengineering Ph.D. program at UC
Berkeley-UCSF

Will Scheideler

Graduated from Duke May 2013
Graduate School at UC Berkeley

NNIN iREU 2012

Dr. Toyohiro Chikyo



Boo Schliep

3d year in Materials Science
Ph.D. program at University of
Minnesota

*complex magnetic materials and
ultrafast electron microscopy.*



Dr Nobutaka Hanagata



Kendall Pletcher

B.S. Engineering May 2013
Olin College

Worked at Boston General Hospital on
BioMEMS devices
Currently Product Innovation Specialist
at Athena Health

NNIN iREU 2013



+Adam Overvig



Geofry Vrla

Steve Olson

Colin Burns-Heffner

Jacob Rothenberg

Radu Reit

Andrew Tam

Clay Long

Emily Ross

Melinda Jue

NNIN iREU 2013

Prof. Sakaki and Dr. Takeshi Noda



Adam Overvig

Graduate Student at Columbia University,
studying Applied Physics.

In Professor Nanfang Yu's group working on
Nanophotonics (current project is a graphene
reflector modulator for mid IR light).

NNIN iREU 2013

Dr. Kentaro Toshiro



Geoffrey Vrla

Graduated with degree in Chemistry from Middlebury College.

Graduate student at Princeton in the Molecular Biology PhD program.



Middlebury College #2

NNIN iREU 2013

Dr. Toyohiro Chikyow



Jacob Rothenberg

B.S. from University of Rochester

PhD student in EE at Columbia

Working in Dr. Osgood's Photonic Devices Lab.

.

NNIN iREU 2013

Dr. Masayuki Takeuchi



Melinda Jue

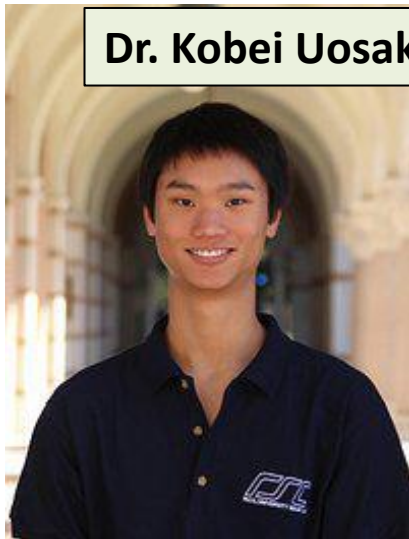
B.S. in Chemistry from U.Texas

Ph.D. Student at Georgia Institute of Technology in chemical engineering.

Presidential Fellowship at Georgia Tech

Hollow fiber membranes for organic separations.

Dr. Kobei Uosaki



Andrew Tam

Bachelor's of Science in Electrical Engineering from Rice (2014)

Inducted into the Theta Rho chapter of the Eta Kappa Nu honors society within IEEE

Ph.D. Graduate Student in Electrical Engineering at Georgia Tech

Awarded the President's Fellowship at GTech

NNIN iREU 2013

Dr. Naoki Ohashi



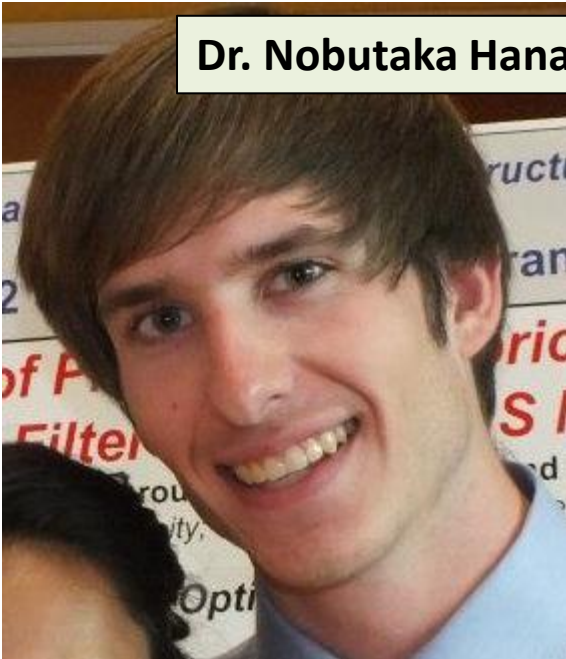
Emily Ross

Graduated from Harvey Mudd College with a Bachelor of Science in General Engineering in May 2014.

In July 2014, started working in the patent law group at Fenwick & West LLP, where she prosecutes patents in a variety of fields, including software, hardware, food science, and materials.

Likely continue in patent law and pursue a law degree in a couple of years.

NNIN iREU 2013



Dr. Nobutaka Hanagata

Colin Burns-Heffner

Graduated from Clemson University with a BS and MS degrees in Bioengineering

Currently a Quality Engineer at WL Gore Associates in Flagstaff, AZ

Working in new product development for cardiovascular devices.

NNIN iREU 2013

Dr. Yasuo Koide



Clay Long

Electrical and Computer Engineering Graduate Students at Carnegie Mellon University and just finished a Masters Degree on the way to a PhD.

General area of research is in nanofabrication and device physics.

Currently working on a novel BJT like transistor for high frequency analog applications.

NNIN iREU 2013

Dr. Daisuke Fujita



Steve Olson

I just finished a Master's of Science in Electrical Engineering from the University of Minnesota. Thesis was titled "Template-stripped plasmonic cup resonators for single-nanohole-based sensing and spectroscopy".

Last summer (2014) I had an internship with 3M Company. **I was given the internship directly because of my experience working with Daisuke Fujita's group at NIMS. The internship turned into a full-time job offer.** After much deliberation, I decided to take the job instead of continuing on for a PhD (for the time being). As such, in June 2015, I will be starting at 3M as an Advanced Process Development Engineer in the Vapor Coating and Surface Modification group which is part of the 3M Corporate Research Process Laboratories in Maplewood, MN.

NNIN iREU 2013

Dr. Yukio Nagasaki



Radu Reit

- PhD candidate in Bioengineering at the University of Texas at Dallas
- National Science Foundation Graduate Research Fellow
- Jonsson Family Graduate Fellowship in Bioengineering
- Working on shape memory polymer substrates for implantable biomedical devices
- Specializing in biodegradable shape memory polymers and their applications towards neural prosthetics

NNIN iREU 2014



NNIN iREU 2014

Dr. Daisuke Fujita



Jill Wenderott

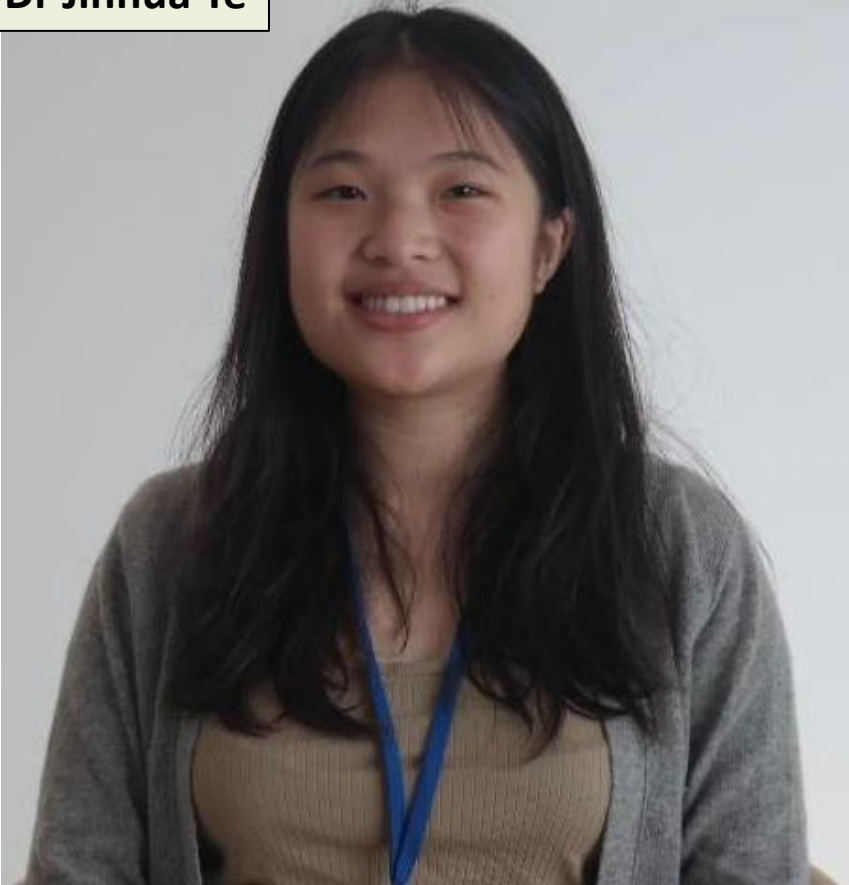
I'm currently up at the University of Michigan pursuing a PhD in Materials Science and Engineering.

My projects involve using AFM-based techniques to characterize polymeric and bio-materials.

I'm greatly enjoying Michigan, though I've yet to find sushi that compares to any I had while in Japan.

NNIN iREU 2014

Dr Jinhua Ye



Connie Wu

B.S. in Engineering AND Economics, U. Penn.

Pursuing a PhD in Electrical Engineering at Stanford University.

Researching haptic applications to virtual reality systems.

Will be interning at Facebook as a Technical Program Manager.

NNIN iREU 2014



Allison Wustrow

“Since coming back to America I have begun my graduate degree in chemistry at Northwestern University. Inspired to study solid state chemistry by Mori-san and Maruyama-san, I decided to work for Ken Poeppelmeier on the development of cathodes for multivalent batteries.”

NNIN iREU 2014

Prof. Sakaki and Dr. Takeshi Noda



Arthur Bowman

B.S. in Physics from Wayne State

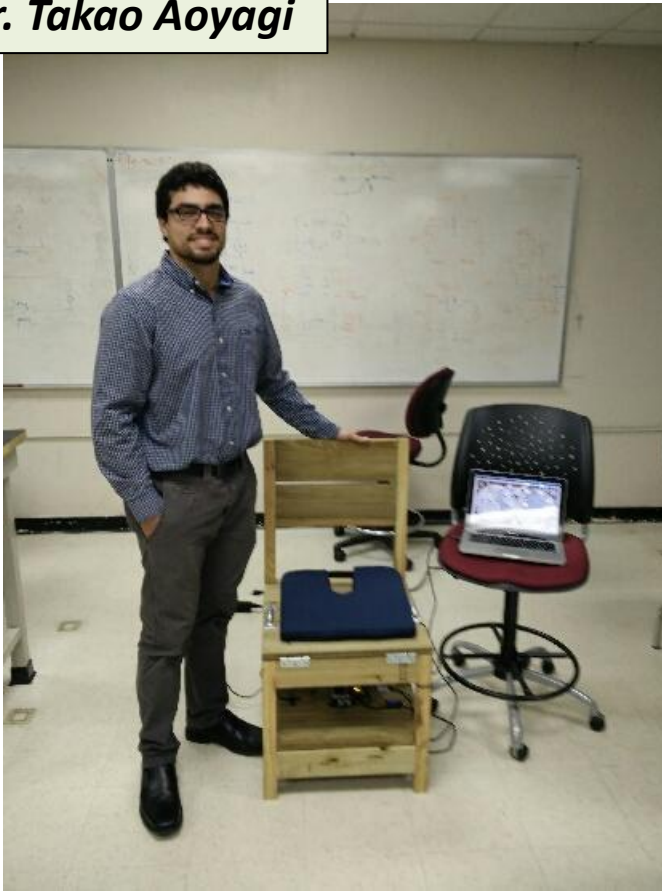
Graduate Student in Physics at Wayne State University (Detroit, Michigan).

Engaged to the woman in the picture

“I am eternally grateful to the NNIN and the wonderful people at NIMS for the introduction to the exciting field of nanoscale science and engineering, in which I plan to write my thesis. There is great work being done in this field, on both sides of the globe.”

NNIN iREU 2014

Dr. Takao Aoyagi



Gabriel Lopez

Still an undergraduate at University of Puerto Rico

Summer internship 2015 at MIT

NNIN iREU 2014

Dr. Yasuo Koide



Tiffany Huang

“I'm a first-year electrical engineering PhD student in the Hesselink Group at Stanford University. I'm working on a project fabricating plasmonic structures to optically transport particles. I miss Japan very much!”

NNIN iREU 2014

Dr. Jun Nakanishi



Meghan Kazanski

BS in MechE from U. Rochester

*“I hope all is well! I'm excited for the next round of students. I loved my experience so much last year, that I am actually spending the **next year completing a rigorous Japanese Language and culture curriculum at my university.** I wrote an essay detailing my experience from last summer to my university. They found my experience compelling and gave me an award **for a tuition-free year of Japanese study to follow the completion of my BME degree.** I'm looking forward to the next year. Who knows, I might be back in Japan doing research soon enough !”*

NNIN iREU 2014

Dr. Guoping Chen



Peter Su

Whitaker International Fellow in Professor Bernd Wollscheid's lab at ETH Zürich in Switzerland

Entering PhD in Chemical Engineering at Northwestern University Fall 2015

“Working and living abroad for almost a year since I graduated college has easily been the most transformative experience in my life from experiencing new cultures and really seeing how other nations function both in and outside of the laboratory, to really putting my life in perspective outside of the comfort zones I didn't even realize I had until I left them.”

NNIN iREU 2014

Dr. Nobutaka Hanagata



Samantha visiting Gabriel in Puerto Rico

Samantha Corber

Starting Ph.D in bioengineering at University of California Riverside in July

Will be working with Dr. Bahman Anvari on a nanotechnology project involving genome-depleted Brome Mosaic Virus shells that have been doped with near infrared imaging agents for cancer imaging and treatment.

NNIN iREU Japan

Participant Outcomes-2008-2014

NNIN Japan iREU

47 total participants
2008 - 2014

5 in 2008
6 in 2009
9 in 2010
0 in 2011
8 in 2012
10 in 2013
9 in 2014

Did not go to Graduate School

Employment

9

Completed Ph.D.

Currently in Graduate School

Graduated Ph.D. 2

Undergraduates

Graduate School
35

Still
Undergraduates

1



**Honorable
Mention**

7

**NSF Graduate
Fellowship**

17

Graduate Schools

- Berkeley (5)
- Stanford (4)
- UCSB (3)
- Minnesota (3)
- Georgia Tech (3)
- Northeastern (2)
- Columbia (2)
- Oxford
- MIT
- Princeton
- Harvard
- U. Chicago
- Carnegie Mellon
- U. Michigan
- U. Washington
- Wayne State University
- Emory U
- U.C. Riverside
- U.C. San Diego
- U. Wisconsin
- U. Texas Dallas

NNIN iREU 2015 !



Special Thanks to All the Project Leaders

- Prof. Sakaki and Dr. Takeshi Noda 7
- Dr. Daisuke Fujita 6
- Dr Nobutaka Hanagata 5
- Dr. Naoki Ohashi 5
- Dr. Yasuo Koide 5
- Dr. Masayuki Takeuchi 4
- Dr. Guoping Chen 3
- Dr. Jun Nakanishi 4
- Dr. Toyohiro Chikyow 3
- Dr. Yukio Nagasaki 3

- Dr Jinhua Ye 2
- Dr. Kentaro Tashiro 2
- Dr. Kobei Uosaki 2
- Dr. Takao Mori 2
- Dr. Enrico Traversa 1
- Dr. Kazuhito Tsukagoshi 1
- Dr. Kazutaka Mitsuishi 1
- Dr. Takao Aoyagi 1
- Dr. Yuji Miyahara 1

Special Thanks to Prof. Sakaki for his wonderful study trips to Nagoya



And More Special Thanks

- President Kishi and President Ushioda
- Tetsuji Noda
- Nanotechnology Platform Office
- Graduate Research Office

Program Supported by the
National Science Foundation via



- **NNIN Cooperative Agreement** as part of the NNIN Education Program
- **International Research Experience for Scientists Program** from NSF International Office (partial for 6 years)
- And thanks to the NSF Tokyo Office for their support

Thank You for Your Support