

Nanotechnology simulation and more
Always on, around the globe



Issue 16

nanoHUB.org: A Career Investment Milestone



During our recent User Conference, we met a unique student, Frederico Severgnini, who travelled all the way from Brazil to learn more about nanoHUB and its applications/capabilities. Intrigued by his curiosity, we interviewed him to learn more about how he became a nanoHUB user.

Frederico is currently finishing his Bachelor's Degree in Electronic and Telecommunication Engineering at Pontifícia Universidade Católica de Minas Gerais. During his studies, Frederico grew interested in multiple nanotechnology fields such as nanophotonics and nanoelectronics. Since his university currently doesn't have a nanoscience program, Frederico started searching for online courses to expand his knowledge and came across Professor Datta's course on edX (Fundamentals of Nanoelectronics (FON): Basic Concepts).

"FON is definitely one of the best online courses that I took so far. Professor Datta developed a way of teaching FON to students that don't have a really big background on this field. Many students that only have basic knowledge of electronics, algebra, differential equations can take this course and understand what it's about and really learn a lot from it. This was exactly my experience, I do have a lot of knowledge about electronics, but didn't have enough about nanoelectronics and this is what he was teaching in the simplest way possible."

After taking the FON course on edX, Frederico was interested in finding more courses taught by Professor Datta. Through discussions within the edX course, he discovered nanoHUB.org, which opened numerous doors of opportunity for him to explore nanotechnology.

"It was the biggest milestone in my self-paced studies when it comes to learning and researching nanotechnology"

Ever since, Frederico has been an active user of nanoHUB with the goal of broadening his knowledge and understanding of nanotechnology. Currently he is taking a nanoHUB-U course (Fundamentals of Nanoelectronics: Quantum Transport), watching a lecture series (ECE694: How to PhD), and exploring simulation tools to prepare for graduate school.

He believes that attending the User Conference was an "investment" towards his future career and graduate studies. He was able to learn more about how nanoHUB is utilized, its potentials, and role in education/research. The conference, held at Purdue, provided him with an opportunity to tour the nanotechnology center at Purdue University, visit the clinical laboratories, and learn how research is performed in the field of nanotech. However, the highlight of his visit was networking with numerous professors and graduate students in the field of nanoscience as well as meeting Professor Datta in person.

Frederico is eager to continue his education through graduate school; he's looking to pursue a PhD degree in the field of nanotechnology and specifically nanoelectronic/nanophotonics. He's currently applying to PhD programs at Purdue University, UC Davis, University of Illinois Urbana-Champaign, and University of Colorado.

"One thing that I cannot emphasize enough is that nanoHUB is a very powerful tool for students that are interested in nanotechnology. If any student is interested in pursuing a degree in nanotechnology but doesn't have a good understanding of the field or doesn't know how to start researching it, or just like my situation, your university doesn't have a nanotech department, I think nanoHUB is the best introduction into the field. Not only do you have access to basic knowledge but you can also dive deep into simulating and working by yourself to produce something, which is really really good."

Announcements

New self-paced online courses are now available on nanoHUB-U

[Organic Electronic Devices](#)

By Dr. Bryan Boudouris

[Fundamentals of Nanoelectronics: Basic Concepts, 2nd Edition](#)

By Dr. Supriyo Datta

Upcoming Events

[2nd Next Generation Sequencing & Bioinformatics Conference](#)

When: October 5-7, 2015

[Nanotechnology for Site Remediation \(Webinar\)](#)

When: November 2, 2015

[Explore Events](#)

Trending Topics

Density States

Bandstructure Considerations

Newton's Law Basics

Classical Mechanics

Schottky Diodes



New Resources

[Introduction to Molecular Dynamics](#)

[Plastic Deformation at the Nanoscale](#)

[Introduction to Project Management](#)

[VALint: the NEEDS Verilog-A Checker \(BETA\)](#)

[A physics-based compact model for thermoelectric devices](#)

2015 nanoHUB User Conference Highlights



On behalf of the Network of Computational Nanotechnology, we would like to thank the nanoHUB User Conference attendees and the poster presenters for their time and effort in sharing their research/educational efforts with the nanoHUB community. We hope you enjoyed the program as well as the Hoosier hospitality.

The conference featured a variety of talks on how nanoHUB is utilized in research and education. The invited speakers, including our keynote speaker David Ferry, shared both their personal and academic nanoHUB experiences.

This year ten posters were accepted and presented at the conference along with 12 NCN SURF posters. Below are the top three winning posters:

- **Director's Choice Winner:** Kudzo Ahegbebu, Purdue University
- **People's Choice Winner:** Michael Sakano, University of North Carolina
- **Best Poster Winner:** Bara Saadah, Illinois University Urbana-Champaign



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