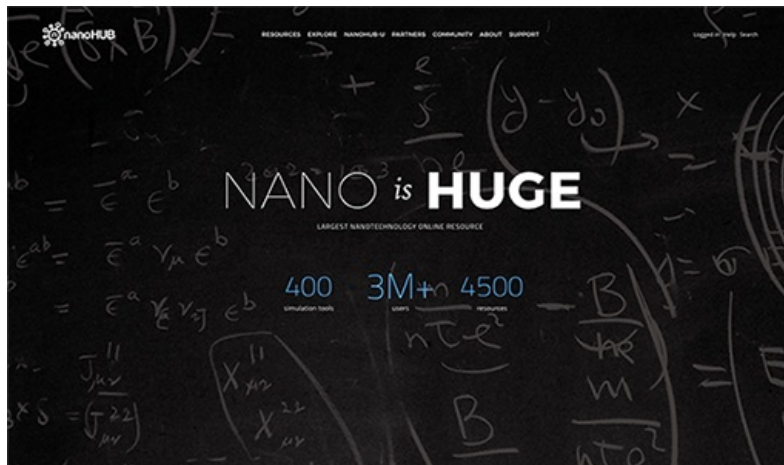


Nanotechnology simulation and more
Always on, around the globe



Issue 19

nanoHUB.org Launches Fully Redesigned Site



We are proud to announce the launch of our new user-friendly webpages. We have completely redesigned nanoHUB with our users' needs in mind. The new design is focused on making the site easier, more interactive and providing greater access to resources. Our new and improved navigation with quick links allows you to dive deep into the website from the homepage.

The launch of the new site is just the starting point. We are fully committed to continue to improve the content, features, and resources.

We hope you enjoy the new redesigned nanoHUB, and please feel free to send us some feedback via Twitter, Facebook, or support tickets.

nanoHUB-U's First Short-Short Course: SPOC Thermal Resistance in Electronic Devices

All nanoscale electronics -- such as transistors, interconnects, and memory -- heat up during operation and measurement. This short-short course gives you an introduction to the fundamentals of device heating, to simple methods for estimating the device temperature during operation, and to temperature measurement methods. The four short lectures are just 15-25 minutes each, can be taken together or independently, and are designed to bring students and engineers up to speed quickly. Further reading is provided with each lecture, and a set of practice exercises is suggested at the end.



[Go to Course Page](#)

Sugarcube-cad: CAD for MEMS via Systems of Compact Models

Upcoming Events

[CRISPR & Genome Engineering Conference](#)

When: May 26th, 2016

Where: Boston, MA

[Nanotech France 2016 Conference and Exhibition](#)

When: June 1st, 2016

Where: Paris, France

[2016 U.S. - EU: Bridging NanoEHS Research Efforts](#)

When: June 6th, 2016

Where: Arlington, Virginia

[International Conference on Nanotechnology For Renewable Energy](#)

When: June 13th, 2016

Where: Grenoble, France

[7th World Nano Conference](#)

When: June 20th, 2016

Where: Cape Town, South Africa

[Explore Events](#)

New Resources

[How to make nano ice-cream](#)

[Multi-Scale Modeling of Self-Heating Effects in Nano-Devices](#)

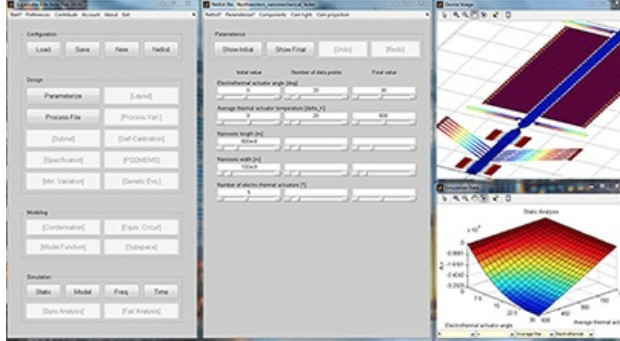
[Validating Simple Approaches for Quantum Cascade Laser Modeling](#)

[\[Illinois\] ECE 564: Modern Light Microscopy](#)

[Plasmonics and Its Applications Workshop 2016](#)

[Directional Thermal Emitter Simulation](#)

[Shape Generator for the](#)



A New CAD for MEMS tool for novices or experts

Sugarcube-CAD is a design and analysis tool based on parameterized compact models of MEMS, NEMS, electronics, fluidics, etc. It can be used by beginners or expert MEMS designers.

Beginners

Novice users are able to tweak the design parameters of ready-made MEMS by manipulating bounded sliders and simulate the new behavior. Sugarcube has a growing library of MEMS designs.

Experts

Experienced users are able to create new MEMS designs by assembling a system of 3D building blocks into the structure they imagine. Sugarcube has a growing library of compact models.

MEMS Community for models/designs

Users are able to contribute to the MEMS community by submitting their compact models, or MEMS designs, to the Sugarcube development team. The team will implement and update Sugarcube's shared library and wiki page on nanoHUB with user contributions. The hope is to facilitate the growth of a large online depot for MEMS designs, models, circuits, and analyses for the MEMS/NEMS community.

Updates will include

- Features requested by users
- Models submitted by users (mechanical, electro, fluidic, thermo, piezo, etc.)
- Designs submitted by users
- MEMS designs found in the literature
- Interface circuits submitted by users

How does Sugarcube-CAD work?

Sugarcube uses common SPICE-like netlists to assemble compact models into a system to analyze behavior (static, steady-state, modal, transient). The designs are parameterized, where the parameters of each device show up as sliders in the GUI, allowing the user to easily sweep and explore the design space. Many say it's productive and fun.

Subscription-based support

Research projects that led to Sugarcube were formerly supported by the National Science Foundation (NSF). The software's present development and growth are sustained by user subscriptions of \$10 per month.

A short video of Sugarcube in action can be viewed at <https://www.youtube.com/watch?v=4pr0NsiSfo>

The tool is available on nanoHUB <https://nanohub.org/tools/sugarcubecad/>

More details about the tool and how to subscribe can be found at <http://www.sugarcube-cad.com>

NOTICE - This is a commercial tool published by Sugarcube Systems, which requires a registration fee to use. nanoHUB does not receive any revenue from Sugarcube Systems and nanoHUB does not assume any liability for the use of this tool.

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