



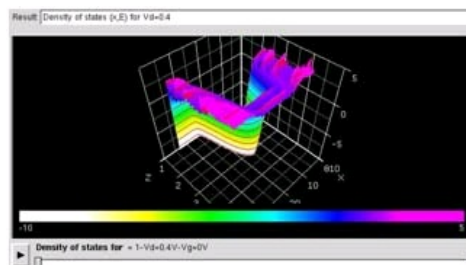
## Simulation software: FREE nanoHUB tools

nanoHUB currently hosts over 250 simulation tools, and more are added every day. nanoHUB tools:

- Are FREE to use. Just sign up for a FREE account using a very short form selecting a username and password and providing an email address.
- Run in the cloud. There's no need to install anything. Whenever an update is made to the code, you will always have the most up-to-date version available to you immediately through your web browser.
- Have an easy-to-use graphical user interface pre-populated with default values. With a few clicks, you can begin simulating in minutes and easily see the type of results the tool can produce.
- Allow computation to occur on clusters at Purdue and use grid computing resources. You don't need access to other high compute power resources.
- Give results you can easily download as soon as a simulation run is complete.

Several of the simulation tools are supported by NCN, with regular attention to questions or other issues. Some of the top tools are:

- [Omen Nanowire](#) - Even though the full quantum simulation of nanowire structures is still computationally very expensive, OMEN Nanowire, powered by the OMEN engine developed by the Klimeck group at Purdue, makes possible the simulation of nanowire structures at the atomistic level using reasonable computational resources.



<http://nanohub.org/resources/omenwire>

- [nanoMOS](#) - This tool, one of nanoHUB's top-cited in the research literature, is a 2-D simulator for thin body (less than 5 nm), fully depleted, double-gated n-MOSFETs. A choice of three transport models is currently available (drift-diffusion, classical ballistic, and quantum ballistic).



## ABOUT US

nanoHUB.org is free to use and provides access to research-based simulation tools running in the cloud. nanoHUB hosts over 250 tools and 3,000 other content items accessible through a web browser and now provides a signed applet to ensure users from a company network can connect despite firewalls. An NSF-funded project, nanoHUB has been managed out of Purdue University by the Network for Computational Nanotechnology (NCN) for over 10 years.

## RESPONSIVE SUPPORT WHEN HELP IS NEEDED

If you have any type of problem with the site, nanoHUB support staff are ready and happy to help. On any page of nanoHUB, you should see a button that says 'Need Help?' near the upper right of the page. Please use this button to submit a support ticket with the details of any issue, and a nanoHUB staff member will respond quickly and work with you to solve the problem.

## PUBLISH, SHARE AND SHOW IMPACT

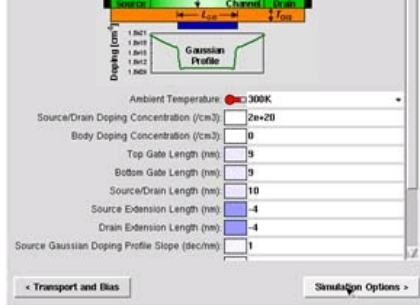
Have something you would like to share with our worldwide audience of 235,000? Add your material to nanoHUB. You will gain access to nanoHUB's established audience and have quick and easy access to the usage stats for your contributions - a great way to illustrate the impact of your work. To learn more about the deploying a tool or other material on nanoHUB, please visit: <https://nanohub.org/about/publish>

## SHARE



The Network for Computational Nanotechnology and nanoHUB.org are supported by the National Science Foundation.





<http://nanohub.org/resources/nanomos>

- [OCTAViEw](#) – This handy tool allows users who don't have access to MATLAB to quickly run or debug short Octave/MATLAB scripts in the tool window using the GNU (open source) Octave program.

<http://nanohub.org/resources/octaview>

Browse [nanoHUB's tools page](#) to explore many, many more!

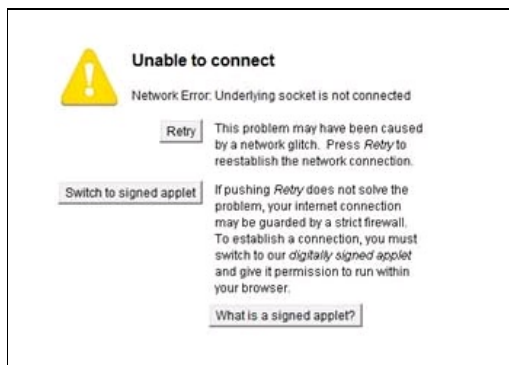
## Beyond tools: Lectures, courses, user guides

nanoHUB hosts nearly 3,000 items of content besides simulation tools, authored by some of the leading faculty and researchers in a variety of nano fields. On nanoHUB.org, you can find:

- Audio/video lectures of well-known speakers at various seminars and series, such as Purdue's annual [Philip F. Bagwell](#) lectures on various topics, including semiconductors, and several intensive summer programs from University of Illinois at Urbana-Champaign and Purdue. Browse for more: <https://nanohub.org/resources/series>
- Entire university courses including video lectures, class notes, and course materials from faculty such as Supriyo Datta and Mark Lundstrom.
  - [Nanoelectronic Devices, with an Introduction to Spintronics \(Datta\)](#)
  - [ECE 656: Electronic Transport in Semiconductors \(Lundstrom\)](#)
- Browse for more: <https://nanohub.org/resources/courses?view=tags>
- New [nanoHUB-U](#) short courses on a variety of topics, designed to be accessible to anyone with a bachelor's degree in engineering. Work at your own pace through 20-minute lectures, online quizzes, assignments, and tests at a reasonable cost with the option to earn CEUs upon successful completion. <
- Learning materials, such as first-time user guides supplied by tool developers, help you get started fast and understand some of the principles underlying the tool.

## Accessing nanoHUB with a signed applet

The nanoHUB team works hard to make sure you can successfully access and use the materials on nanoHUB. In the past, some users experienced problems connecting to the nanoHUB tools due to company firewalls. nanoHUB has introduced a "signed applet" to solve this problem. If you encounter the following screen:



Click the button iSwitch to signed applet to successfully proceed.

**[Visit nanoHUB today!](#)**