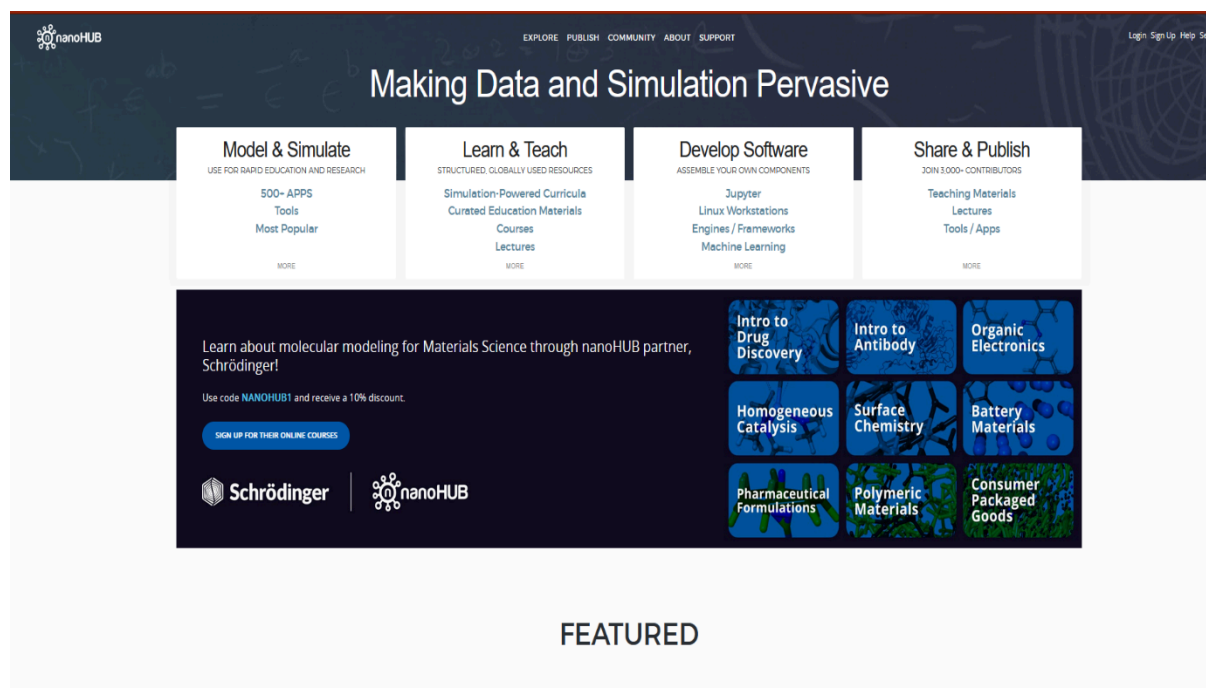


ACCESSING SPICE ON NANOHUB

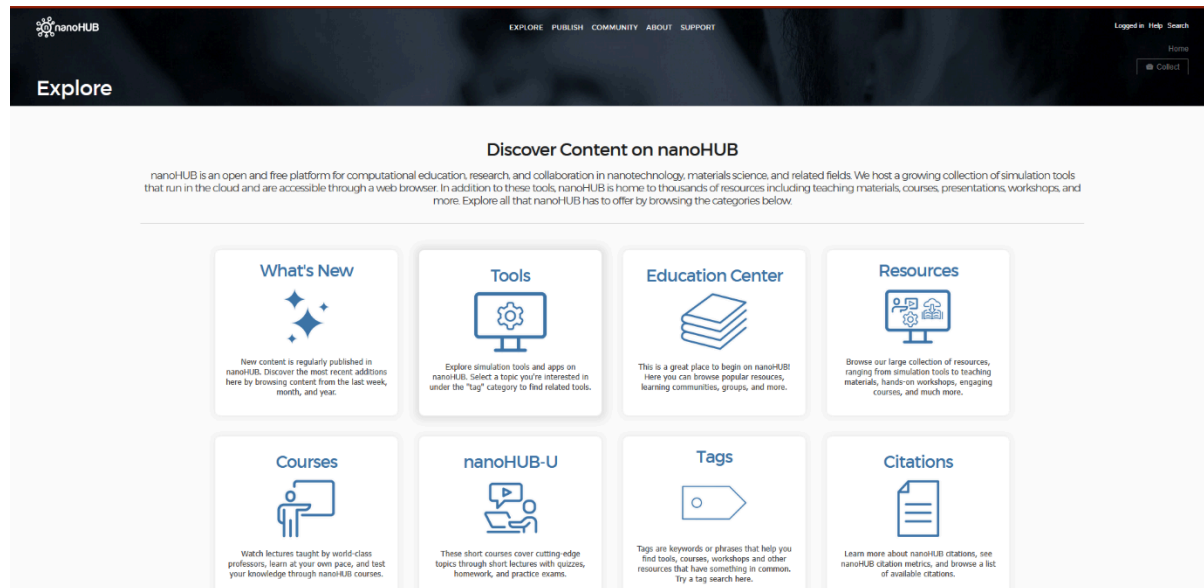
1. Click on sign up to create an account on nanohub.org



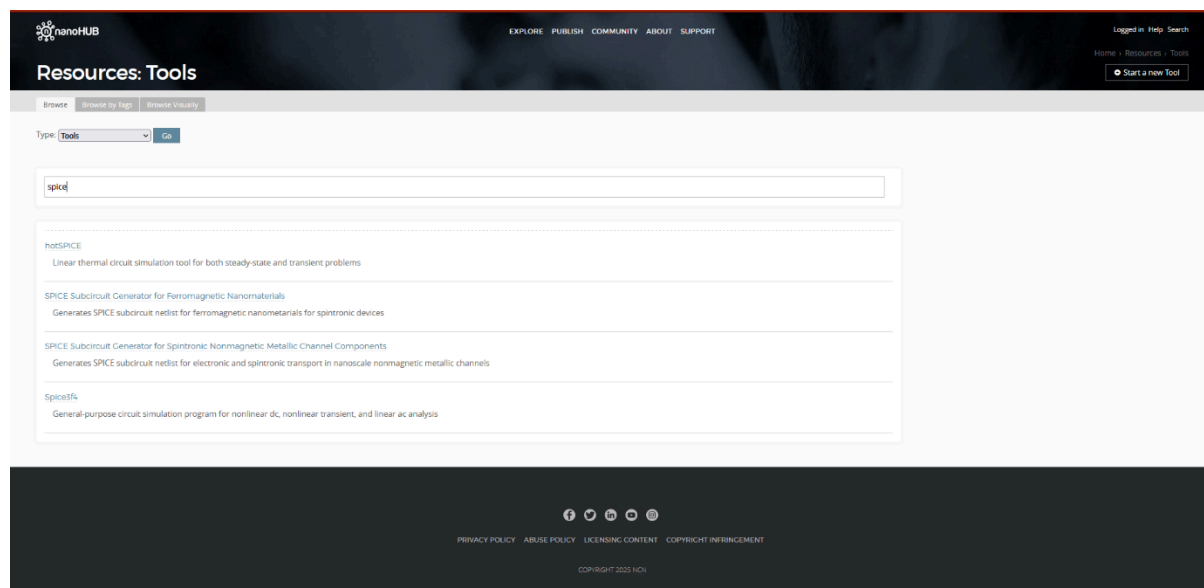
2. Search Arizona State University to sign up using ASU's institutional login

The screenshot shows the "Create New Account" page on nanohub.org. The header is identical to the homepage. The main heading is "Create New Account". Below this is a "CONNECT WITH" section featuring a search bar with "Arizona State University" entered. A dropdown menu shows "Arizona State University" and "The University of Arizona". A note states: "If your institution is not listed in the dropdown but a part of our community, ask us to add it; otherwise, use one of the other options below." Below the dropdown is a "OR" separator. To the right of the dropdown is a box with the text: "You can choose to log in via one of these services, and we'll help you fill in the info below!" and "Already have an account? Log in here." Below the "CONNECT WITH" section is a "CREATE A NANOHUB ACCOUNT" section. It includes a "Username" field with a red "required" label, a "Password" field with a red "required" label, and a "Confirm Password" field with a red "required" label. Below the password fields are several requirements: "Must contain at least 1 number or punctuation mark", "Must contain at least 1 letter", "Passwords must be at least 8 characters long", "Must contain more than 4 unique characters", "Must not contain easily guessed words", "Must not contain your name or parts of your name", and "New passwords must be different than the previous passwords used in the last 500 days". To the right of the "CREATE A NANOHUB ACCOUNT" section is a box with the text: "Usernames cannot be changed. If this poses a serious problem or raises concerns please contact our support." and "Password may be changed any time after account creation."

3. After logging in, under the explore tab click on tools. (Explore -> Tools)



4. Search spice and click on Spice3f4



5. Click on Launch Tool

The screenshot shows the nanoHUB website interface for the Spice3f4 tool. At the top, there's a navigation bar with links like EXPLORE, PUBLISH, COMMUNITY, ABOUT, and SUPPORT. The main header features the nanoHUB logo and the tool name 'Spice3f4'. Below this, the author 'By Michael McLennan, Purdue University' is listed, along with a brief description: 'General-purpose circuit simulation program for nonlinear dc, nonlinear transient, and linear ac analysis'. A 'Launch Tool' button is prominently displayed. To the right, there's a sidebar with statistics: 3507 users, 7 citations, 18 questions, 2 reviews, and 0 watchers. Below the main content area, there's a tabbed interface with 'About', 'Usage', 'Citations', 'Questions', 'Reviews', 'Watchers', and 'Versions'. The 'About' tab is active, showing the category 'Tools', the publication date '05 Nov 2014', and an abstract describing SPICE as a general-purpose circuit simulation program. It also includes links for 'Demo: Getting Started', 'FAQ', 'User's Manual (pdf)', and 'EECS University of Berkeley Spice3 Website'.

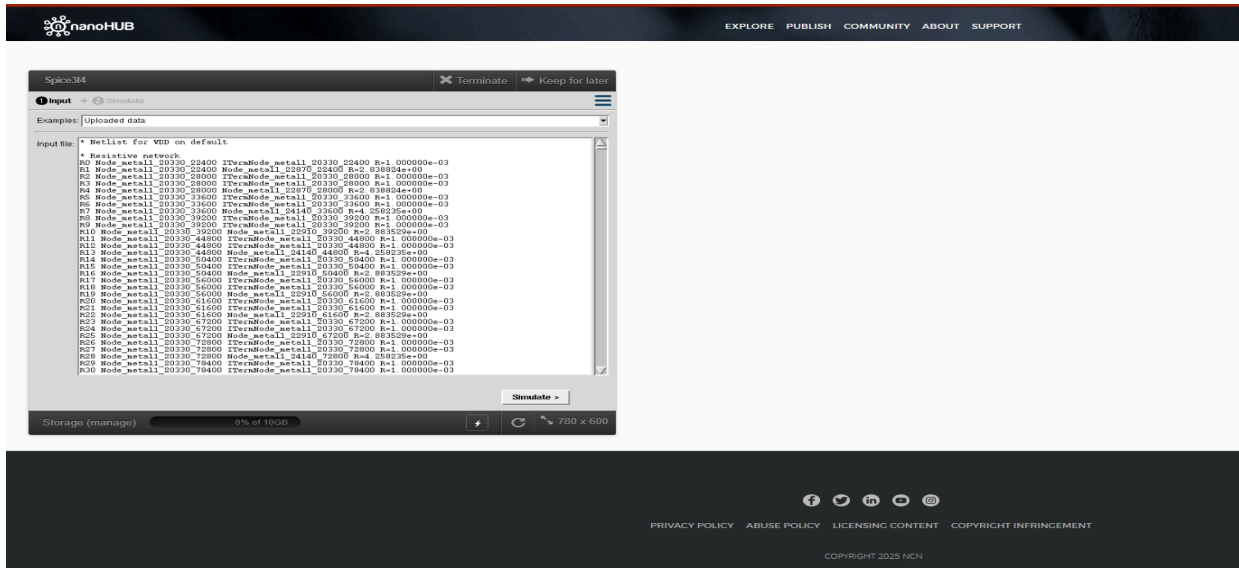
6. From the drop down menu click on upload

This screenshot shows the nanoHUB interface for the Spice3f4 tool. The 'Input' tab is selected, and a dropdown menu is open, displaying a list of example input files. The 'Upload...' option is highlighted at the top of the list. The list includes files like '3-stage Amplifier', 'Bipolar bias with 4 resistors', 'Common Collector Amplifier', 'Current mirror', 'Diode (AC/DC Analysis)', 'Diode (Hayt and Neudeck)', 'Diode (Neamen)', 'Half wave rectifier', 'Introduction to SPICE - Example 2', 'Introduction to SPICE - Figure 3', 'Introduction to SPICE - Figure 5', 'NMOS cascode amplifier like Fig. 6.49', 'NMOS IV Characteristic', and 'NMOS inverter with resistor load'. At the bottom of the interface, there's a 'Simulate' button and a storage indicator showing '0% of 10GB'.

7. Upload spice netlist

This screenshot shows the nanoHUB interface for the Spice3f4 tool with an 'Upload' dialog box open. The dialog box has a title bar 'nanoHUB.org' and a subtitle 'ON-LINE SIMULATION AND MORE FOR NANOTECHNOLOGY'. It contains the text: 'Use this form to upload data for Spice3f4. If you don't specify a file for a particular input, that input won't be modified by the Upload operation.' There are two input fields: 'Input file:' with a radio button for 'Upload a file' (selected) and a radio button for 'Copy/paste text'. Below the 'Input file:' field is a 'Browse' button. There is also an 'Upload' button and a 'Cancel' button. In the background, the Spice3f4 tool interface is visible, showing a list of input files and a 'Simulate' button.

8. Click on simulate to simulate the circuit



The screenshot shows the nanoHUB Spice34 interface. The 'Input' tab is active, displaying a list of circuit components. The components are listed in a table with columns for device name, model, resistance, and other parameters. The 'Simulate' button is visible at the bottom right of the input area.

Examples: [uploaded data](#)

Input file: [Netlist for VSD on default](#)

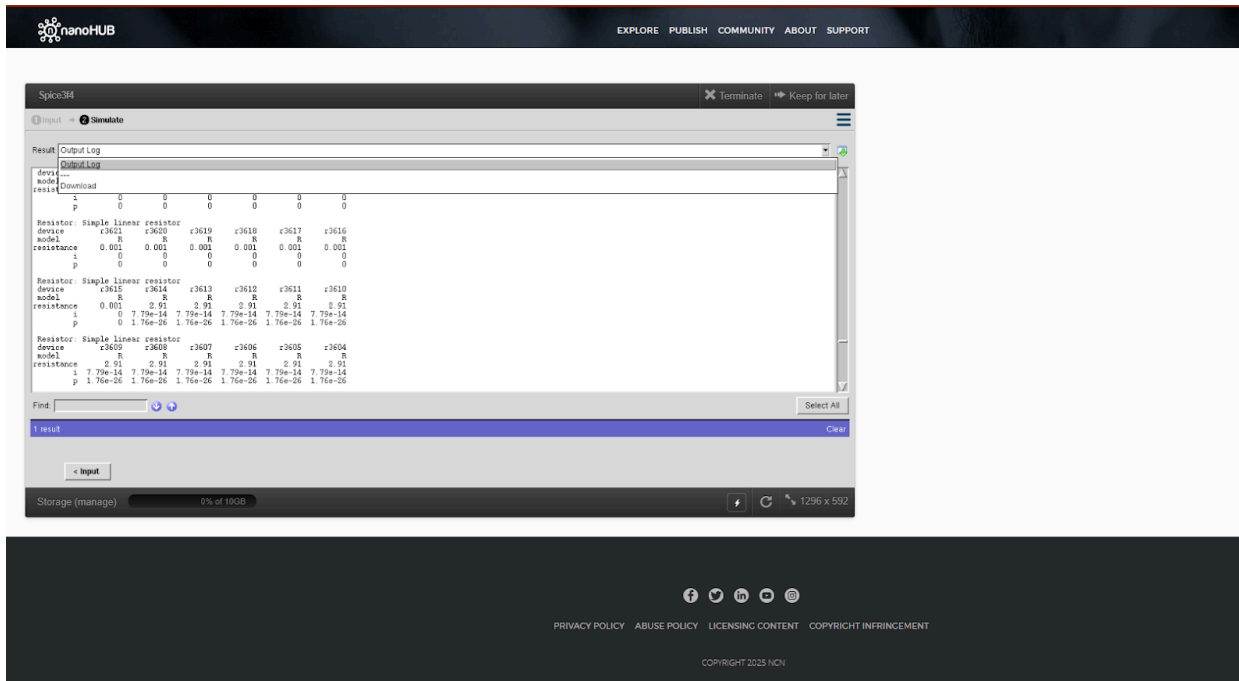
Resistive network

Device	Model	Resistance	Other Parameters
R0	Mode_metall	20330	25400 ITermNode_metall_00330_25400 R=1.000000e-03
R1	Mode_metall	20330	25800 ITermNode_metall_00330_25800 R=2.580000e-03
R2	Mode_metall	20330	28000 ITermNode_metall_00330_28000 R=1.000000e-03
R3	Mode_metall	20330	28000 ITermNode_metall_00330_28000 R=1.000000e-03
R4	Mode_metall	20330	28000 ITermNode_metall_00330_28000 R=2.580000e-03
R5	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R6	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R7	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=4.250000e-03
R8	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R9	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R10	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=2.580000e-03
R11	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R12	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R13	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=4.250000e-03
R14	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R15	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R16	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R17	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R18	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R19	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R20	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R21	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R22	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R23	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R24	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R25	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R26	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R27	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R28	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R29	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R30	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03

Storage (manage) 0% of 10GB

780 x 600

9. After the simulation ends, from the drop down click on download



The screenshot shows the nanoHUB Spice34 interface. The 'Result' tab is active, displaying a table of simulation results. The table has columns for device name, model, resistance, and other parameters. The 'Download' button is visible at the bottom right of the result area.

Result: [Output Log](#)

Download

Device	Model	Resistance	Other Parameters
R0	Mode_metall	20330	25400 ITermNode_metall_00330_25400 R=1.000000e-03
R1	Mode_metall	20330	25800 ITermNode_metall_00330_25800 R=2.580000e-03
R2	Mode_metall	20330	28000 ITermNode_metall_00330_28000 R=1.000000e-03
R3	Mode_metall	20330	28000 ITermNode_metall_00330_28000 R=1.000000e-03
R4	Mode_metall	20330	28000 ITermNode_metall_00330_28000 R=2.580000e-03
R5	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R6	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R7	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=4.250000e-03
R8	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R9	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R10	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=2.580000e-03
R11	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R12	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R13	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=4.250000e-03
R14	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R15	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R16	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R17	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R18	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R19	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R20	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R21	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R22	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R23	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R24	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R25	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R26	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R27	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R28	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R29	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03
R30	Mode_metall	20330	23600 ITermNode_metall_00330_23600 R=1.000000e-03

Storage (manage) 0% of 10GB

1296 x 592

10. Click on “save as” to download the output log

