

UC SANTA BARBARA

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Shared Instrumentation

When UC Santa Barbara alumna Samantha Levinson was a graduate student conducting research in the Department of Ecology, Evolution and Marine Biology, her microscope's fiber optic cable broke. She called a friend who worked in the Materials Research Lab (MRL). Amorette Getty happened to know about another microscope in engineering that used a similar cable so Levinson was able to borrow it and finish her work without prolonged interruption.

Now those without a knowledgeable friend to turn to for advice have a new resource. The new [Shared Instrumentation website](#) lists more than 300 instruments in 45 facilities across campus willing to share their research equipment. Created in collaboration with the Office of Research and the campus Sustainability Office — with additional support from the MRL — the website is intended to bridge all departments on campus and provide resources for interdisciplinary collaboration both on- and off-campus.

“Part of the push for making an index of all of UCSB's shared research equipment is to let people know what pieces of equipment on campus are available to whom,” said Leslie Edwards, director of corporate business development for the College of Engineering who was the driving force behind the creation of the new website. A color-coded system — green is available; orange means on a case-by-case basis and red is not available — indicates who can use the equipment: qualified campus users, off-campus academics and national labs or industry.

“All of our major facilities do a great job presenting their own equipment but there was no one place that combined all of them, which is important because there are instruments used across many different disciplines,” said Meredith Murr, director of research development in the Office of Research. “Researchers trying to decide if they need to go to another institution or send out their samples can now check the Shared Instrumentation website to see if the equipment or services they need to run their experiment are here. Previously they might not have even known that the instrument they were seeking was available on campus.”

UC Santa Barbara has a number of rare instruments, including the [Bruker 300MHz SWB MRI/Diffusion Spectrometer](#) in MRL’s spectroscopy facility. This piece of equipment features a super-wide bore magnetic resonance imaging (MRI)/diffusion spectrometer with multiple capabilities. An imaging technique used to produce high-quality images of objects such as human bodies, small animals and materials, MRI uses nuclear magnetic resonance (NMR) signals. This particular spectrometer includes an upgrade to MRI. Its Rheo-NMR capability measures properties of materials at microscopic molecular levels. Rheology is the study of the mechanical properties of condensed matter and in particular complex fluids, which makes this instrument particularly useful for biological applications.

“Biologists don’t necessarily always think of coming to materials or engineering for instrumentation to conduct their experiments and so the Shared Instrumentation website provides an opportunity for researchers to get information that allows for interdisciplinary interaction between different fields,” said Getty, MRL’s external user liaison and co-director of the LabRATS laboratory sustainability program.

“The Shared Instrumentation website allows users in one department who may be missing a part to look up where a similar microscope resides elsewhere on campus so that they can either borrow a spare part or use that microscope,” she added. “The website also lets the external user population gain an awareness of all of the things that we have on campus so UCSB resources can be better utilized.”

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society.

All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.