

SMART Center Usage Guidelines

The SMART Center is a user-supported shared use facility that aims to provide investigators with state-of-the-art instrumentation and expertise. We provide data acquisition support to users' investigations following three general scenarios:

- Staff provides training in the use of the instrumentation. After adequate training, the user is free to schedule and use the equipment at their convenience.
- Staff directly assists the user in acquisition of data from user-provided samples.
- Staff accepts samples from the user, and then independently acquires data which is later provided to the user.

The Center also provides support in experimental planning and data analysis. Please feel free to discuss your needs with Center staff.

Continued availability of the Center for our broad user base requires that users follow some standard procedures to help maintain the usability of the facility. Please read and follow the following guidelines. Additional instrument-specific guidelines may also apply.

1) INSTRUMENT RESERVATION

MiCORES is used to schedule instrument usage times (see https://umich.corefacilities.org/service_center/show_external/5762). If you do not have an MiCORES account, please follow the directions here to create one: <https://lsa.umich.edu/biophysics/resources/smart1/registering-for-micores.html>.

Please do not reserve instrument time more than two weeks in advance.

Be courteous to other users. During times of heavy usage, limit reservations to two days per week. If your experiments require long observations (e.g. >8 hours), please try to schedule after hours or on weekends when appropriate. *You may, however, reserve time in the coming seven days without restriction.*

If you are unable to use your slot, please promptly delete your reservation from the instrument calendar.

2) AFTER-HOURS USAGE

Staff assistance is generally available during normal business hours (i.e. 9am to 5:00pm). *We request that users schedule usage during staffed hours when possible* so that we can be there to provide assistance when necessary. While we wish for the Center to be as open, accessible, and beneficial to individual users as possible, we also need to preserve the facility for the usership as a whole. Experienced users who wish to use instruments outside of business hours should seek clearance from Center staff.

3) USER FEES

The Center is supported by user fees. Fees for all instruments assessed as follows:

User	Instrument Use	Staff Support*
U-M Internal	\$9.50 / hour	\$35.60 / hour
External Academic	\$23.75 / hour	\$89.00 / hour
External Private/Commercial	\$47.50 / hour	\$178.00 / hour

*Charged for direct support of individual users or projects. This includes training, acquiring data, data analysis, or instrument modifications specific to your project

Additionally, an at-cost fee will be charged for use of certain supplies if provided by the Center, including AFM probes, microinjection needles, glass-bottom culture dishes, etc.

4) DATA STORAGE

Hard drives on the SMART computers should not be used for data storage.

After acquiring data, please move it to the SMART data server (mapped as drive R: on SMART computers). You can then retrieve your data from the server at \\ls-rs-hoffj.locker.arc-ts.umich.edu\ls-rs-hoffj\users.

From a Mac, use smb://ls-rs-hoffj.locker.arc-ts.umich.edu/ls-rs-hoffj/users.

This server is NOT for long-term data storage or backup. At your earliest convenience, you should download the data to your own storage site (e.g. your personal computer and/or lab server) and delete your data from the SMART server. *Data more than six months old may be removed without notice!*

5) CENTER ACKNOWLEDGEMENT

Continued funding for the Center depends upon proper acknowledgement!

If you have used the Center for data acquisition, please include us in the acknowledgements of any publications, as described in the “Types of SMART Center Acknowledgement” document attached, and notify us when your manuscripts are accepted.

If you have received significant assistance in data acquisition, analysis, or interpretation, then shared authorship with the Center may be appropriate; please discuss these cases with Dr. Walter and/or Dr. Hoff before manuscript submission.

6) SAFETY TRAINING

Users are expected to complete appropriate safety training prior to instrument use, in addition to SMART instrument-specific training. All instruments require completion of the following courses (available online at <http://ehs.umich.edu/education/>):

- General Laboratory Safety Training (EHS_BLS005w)
- Laser Safety Basic Training (BLS025w)

Additionally, users of the Single Particle Nanomanipulator optical tweezers system are advised to take the Class 3B/4 Laser Safety Training offered by Steve Katnik (skatnik@umich.edu).

7) EQUIPMENT DAMAGE

Users are responsible for the cost of repair and/or replacement of equipment damaged by intentional or grossly negligent misuse. The instruments in SMART contain sensitive and expensive components that may be easily damaged by misuse. Safe usage of the instruments will be described during training, and reinforced by postings near the instruments. It is critical that users follow the guidelines for safe use of the instruments in order to ensure that these instruments remain functional and accessible for all users.

If you are ever unsure of whether an action is safe or unsure how to use an instrument, **ask Center staff first!**

Types of SMART Center Acknowledgements

Possibility 1:

- Applied in cases where the importance of the data for the story in the paper is relatively low (such as if they end up only in the supplement), time spent on the instrument was brief (a few hours), **and** the staff only helped tangentially (through training, for example).
- Use sentences such as these in the Acknowledgements section of the manuscript: "The authors also wish to thank the Single Molecule Analysis in Real-Time (SMART) Center of the University of Michigan, seeded by NSF MRI-R2-ID award DBI-0959823 to Nils G. Walter, as well as [personnel] for training, technical advice and use of [xyz equipment]."

Possibility 2:

- Applied in cases where the importance of the data for the story in the paper is reasonably high (such as 1-2 figures in the main text), time spent on the instrument was quite large, **but** the staff only helped tangentially (through training, for example).
- Co-authorship of Nils or the Steering Committee member who brought in and collaboratively supported the particular project. Also add the following sentence to the Acknowledgements: "We acknowledge NSF MRI-ID grant DBI-0959823 to N.G.W. for seeding the SMART Center."

Possibility 3:

- Applied in cases where the importance of the data for the story in the paper is high (such as at least 1-2 figures in the main text), time spent on the instrument was large, **and** the staff measured a significant fraction of the data.
- Co-authorship of Nils and the particular SMART staff who helped with the project. Also add the following sentence to the Acknowledgements: "We acknowledge NSF MRI-ID grant DBI-0959823 to N.G.W. for seeding the SMART Center."

New User Information

First Name:	Last Name:
E-mail:	UMID:
Department:	Status (grad student, post-doc, etc.):
PI:	PI e-mail:
Shortcode:	

User Section

Please confirm the statements below and sign to acknowledge SMART policies.

- I have read and understand the usage policies for the SMART Center.
- I affirm that I will acknowledge the SMART Center in any publications benefitting from the instrumentation and expertise in the SMART Center, as described in "Types of SMART Center Acknowledgement."
- I acknowledge that I am responsible for any equipment damaged by intentional or grossly negligent misuse.

I have completed the following Safety Training:

- OSEH General Laboratory Safety Training (EHS_BLS005w)
- OSEH Laser Safety Basic Training (BLS025w)
- Class 3b/4 Laser Safety Training (Tier 1) (*for optical tweezer users only*)

User signature: _____ Date: _____

PI section

Please confirm the statements below to authorize usage of SMART facilities.

- I acknowledge that my lab is responsible for fees assessed for use of SMART instrumentation and staff time.
- I acknowledge that my lab is responsible for the cost of repair or replacement of equipment damaged by intentional or grossly negligent misuse.

PI signature: _____ Date: _____

Please briefly describe your project, and how SMART instruments will aid your investigation (attach additional pages as necessary):