

# IAC Shutdown in Response to COVID-19

(03.22.2020)

Dear IAC users,

According to the latest University guidelines regarding COVID-19, the time has come to close IAC effective 10:00 AM, Monday, March 23, 2020 until further instruction. No users (including experienced users) will be allowed to come into IAC or use the equipment for the duration of this emergency. We appreciate your commitment to shifting towards virtual scholarship and your dedication to the well-being of IAC community. Please contact IAC staff if there is anything we can do to help you remotely.

Best wishes,

Nan Yao, Director of IAC

## P.S.: IAC contact information

- **Nan Yao:** Office (609) 258-6394; Cell (908) 922-2236 Email: [nyao@princeton.edu](mailto:nyao@princeton.edu)
- **Daniel Gregory:** Office (609) 258-7956; Cell (302) 542-3182 Email: [dg32@princeton.edu](mailto:dg32@princeton.edu)
  - **Instruments:** Rheometers, TGA-GC/MS, UV-Vis, DSC-DMA, XRD, XPS, FTIR, PL, Xradia Microscope
- **Paul Shao:** Office (609) 258-3851; Cell (847) 721-086 Email: [pshao@princeton.edu](mailto:pshao@princeton.edu)
  - **Instruments:** TEM, Cryo-TEM, EDS, Raman, Ellipsometry, XRD
- **John Schreiber:** Office (609) 258-0034; Cell (215) 431-4670 Email: [js51@princeton.edu](mailto:js51@princeton.edu)
  - **Instruments:** TEM, SEM, FIB, Cryo-TEM, EDS, XRD, XPS
- **Denis Potapenko:** Office (609) 258-7955; Cell (718) 551-6810 Email: [denisp@princeton.edu](mailto:denisp@princeton.edu)
  - **Instruments:** XPS, Xradia Microscope, AFM, TGA-GC/MS, UV-Vis, DSC-DMA, XRD, Raman, FTIR, PL
- **Dan McNesby:** Office (609) 258-7052; Email: [dmcnesb@Princeton.EDU](mailto:dmcnesb@Princeton.EDU)
  - **Responsibility:** IT, IAC Website, computer related issues
- **Wendy Fang:** Office (609) 258-2350; Email: [wengang@Princeton.EDU](mailto:wengang@Princeton.EDU)
  - **Responsibility:** User account, IAC usage billing

## Updated IAC Guidelines in Response to COVID-19

(03.17.2020)

Dear IAC users,

Beginning on Thursday, March 19th, 2020 the IAC will only allow instrument access to current experienced IAC users as we will. There will be two IAC staff member, on a rotation basis, in the IAC to continue to provide support and assistance in imaging and analysis during University regular operation hours while the other staff members will be providing support remotely.

This temporary limitation restricts usage to allow only those Princeton-based users who possess after-hours instrument access (24/7 access). Inexperienced users and researchers from outside institutions (this includes corporate users and users from external academic institutions) should plan to temporarily refrain from visiting the IAC as of March 19th. In the event you that have an urgent analytical research need and would like to arrange an assisted use analysis session by the IAC's research staff, please contact the IAC's director: Dr. Nan Yao (Email: nyao@princeton.edu, Phone: 609-258-6394) and we will treat each request on a case by case basis.

This new policy will remain in place until further notice, but the situation remains fluid and we will continue to monitor and adjust as needed.

Additionally, for those experienced Princeton-based IAC users we remind you to continue following the IAC's updated social distancing policies as outlined in the "Updated IAC Guidelines" document and posted on the IAC webpage (See attached document). To help reduce foot traffic within the IAC and potential contact, we ask that you limit your visits to one researcher per instrument, and restrict lab use to allow only one researcher in each lab at a time. The staff will be monitoring the situation to ensure that all social distancing requirements are maintained in our facility.

Should you require additional instrument help or troubleshooting, please feel free to contact the IAC's staff via email, phone, or FaceTime. Please see below instrument list to contact the appropriate staff member. Also, if you have to cancel your reservation, please kindly remove your scheduled time slot(s) on the IAC reservation calendar.

We are sorry for any disruption this may cause, and we thank you for your patience during this unprecedented time as we work to ensure the safety and health of all of our users. The IAC will quickly update you with any policy changes that arise as we closely monitor the latest developments.

Sincerely,

Nan Yao, Director of IAC

The Imaging and Analysis Center (IAC) has updated its user guidelines in accordance with CDC recommendations to limit the potential spread of COVID-19. IAC users are instructed to review the guidelines listed below and to immediately begin following these procedures. These proactive measures include social distancing, increased sanitation efforts, and guidelines on instrument use.

**COVID-19 Symptoms:** Coughing, sneezing, fever, chills, fatigue, muscle aches, difficulty breathing etc.

- **Note:** IAC users should notify Dr. Nan Yao ([nyao@princeton.edu](mailto:nyao@princeton.edu)) via email IAC if they, or a member of their immediate family, or a person in their same dwelling has symptoms consistent with the Coronavirus. These users should not visit the IAC.
- Any users showing COVID-19 symptoms will be instructed to leave the facility and contact medical professionals immediately.

### **IAC Guidelines:**

- The IAC has restricted user access to include only those Princeton-based users who have extensive instrument experience and possess “after-hours instrument access”.
- The IAC has temporarily suspended all instrument training sessions for new users until April.
- The IAC is now requiring each research group to send one experienced researcher at a time to conduct research within the IAC – avoid sending larger research groups to the IAC.
- The IAC is encouraging users drop off samples for direct analysis by the IAC’s experienced staff.
- Outside users (corporate and outside schools) are currently restricted from IAC use as of 3/19/2020.
- Only one user is allowed in a lab at a given time. Users are encouraged to contact IAC staff via phone, email, FaceTime.
- There will be two IAC staff member, on a rotation basis, in the IAC to continue to provide support and assistance in imaging and analysis during University regular operation hours.
- IAC users must avoid person-to-person contact, including handshakes.
- IAC users must remain at least six feet from other users at all times.
- IAC users must thoroughly wash their hands for +20 seconds before and after instrument use.
- All IAC users should wear clean gloves within IAC labs while running instrumentation.
- All IAC users should dispose of gloves after completing an experiment.
- IAC users are encouraged to bring their own hand sanitizer and to use it frequently.
- The IAC will provide users with disinfecting Lysol wipes to sanitize keyboards and surfaces.
- The IAC is performing increased sanitation measures to clean high-touch surfaces (keyboards etc.).
- The IAC Krios users will receive additional instructions per an email notice.

### **IAC Sanitation Efforts:**

- The IAC has increased sanitation efforts including disinfecting login terminals, door knobs, keyboards, high-contact surfaces etc.
- Handwashing guidelines have been posted throughout the IAC – please follow these guidelines.
- The university is in the process of installing hand sanitizing stations throughout the IAC.

### **Continuity of IAC Operation:**

- The IAC will attempt to accommodate its users as best as possible during this time. However, due to the rapidly changing status, please feel free to contact the IAC with any questions you have.

- Where applicable, the IAC recommends users utilize the IAC's assisted use program in order to reduce person-to-person contact within the facility.
- The IAC is preparing online training materials (videos and additional training documents) to facilitate education via the internet.

### **Campus Resources:**

- **Princeton University Coronavirus FAQs:**  
Link: <https://emergency.princeton.edu/coronavirus-faq-faculty-staff>
- **University Health Services:**  
Email: [communityhealth@princeton.edu](mailto:communityhealth@princeton.edu)
- **Teladoc Web Link:**  
Link: <https://member.teladoc.com/princeton>
- **Princeton university Emergency Management Website:**  
Link: <https://emergency.princeton.edu/>
- **Center for Disease Control:**  
Link: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>

### **IAC Emergency First Contact Information:**

- **Nan Yao:** Office (609) 258-6394; Cell (908) 922-2236 Email: [nyao@princeton.edu](mailto:nyao@princeton.edu)
- **Daniel Gregory:** Office (609) 258-7956; Cell (302) 542-3182 Email: [dg32@princeton.edu](mailto:dg32@princeton.edu)
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## Updated IAC Guidelines in Response to COVID-19

Thursday, March 12, 2020

Monday, March 16, 2020 (update)

Dear IAC users,

Please read all the updates regarding COVID-19 on the University website at <https://www.princeton.edu/content/covid-19-coronavirus-information> and follow the instructions carefully.

If you have any symptoms of a fever, cough and difficulty breathing, seek medical attention and please do not come to the IAC.

Non-Princeton University users please note: As per University policy, all buildings are locked and require keycard access to open. Please plan ahead and contact IAC staff if you need assistance.

Please refer to *the IAC Guidelines in Response to COVID-19* that we posted in all IAC labs on March 10, 2020.

We are informing you of the updated issues related to the COVID-19 virus and the use of the IAC's facilities. In keeping with University guidelines and social distancing protocol – and in efforts to help with minimizing the potential of spreading the virus – we have decided that it would be best to put on hold, training classes for IAC instrumentation starting from March 13, 2020 through the rest of March. Please let us know if you have a special need. We will continue to monitor updates and recommendations provided by University, State, and Federal Authorities; the IAC will make policy modifications as the need arises. The latest University updates related to COVID-19 are available on the [University's coronavirus website](#).

As of now, access to the IAC is still open for regular use but we will inform users of any status changes. Please be alert.

We ask that users are prudent in minimizing their contact with other users in the IAC. We have positioned tables by the login PC's with boxes of gloves. We ask that you put these gloves on before you login and go to the lab. We have enacted increased sanitation efforts to clean the login keyboard, computer keyboard, and lab door handles twice a day using disinfectant wipes.

For those rooms that house multiple instruments, please check the calendar(s) for those tools to limit the amount of users in each room during your session (**recommend: 1 user per room**).

Instruments that share a room (ACEE\*\*\*):

- **027B:**
  - Anton Paar MCR501 Rheometer
  - Anton Paar MCR702 Rheometer

- Multiprep Polisher
- PE DSC-DMA
- PE TGA-GC/MS
- UV/VIS Cary 5000
- **031:**
  - Carbon Coater
  - Ion Beam Sputterer
  - Leica Sputter Coater
  - Vitrobot IAC
- **035:**
  - AFM DM
  - AFM Nanoman
  - Bruker ICON3 AFM
  - Leica DCM3D Confocal
  - Zeiss Axioscope A1
- **037:**
  - Keyence VK-X1000 Confocal Microscope
  - Thermo Scientific K-Alpha XPS-UPS System
- **041:**
  - Rigaku XRD
  - Bruker XRD
- **045:**
  - Horiba Raman
  - M-2000 Ellipsometer
- **047B:**
  - FTIR Nicolet iN10 MX Infrared Microscope
  - Phosphorescence Fluorescence Spectrometer
  - RAME HART

And please, if you are not feeling well, stay home. Any questions or concerns, please reach out to the IAC staff,

Best wishes and stay safe!

IAC operation team

PS:

**Campus Resources:**

- **Princeton University Coronavirus FAQs:**  
Link: <https://emergency.princeton.edu/coronavirus-faq-faculty-staff>
- **University Health Services:**  
Email: [communityhealth@princeton.edu](mailto:communityhealth@princeton.edu)

- **Teladoc Web Link:**  
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- **Princeton university Emergency Management Website:**  
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## Updated IAC Guidelines in Response to COVID-19

(03.10.2020)

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### **IAC Guidelines:**

- IAC users must thoroughly wash their hands for +30 seconds before and after instrument use.
- Avoid person-to-person contact, including handshakes.
- Keep at least six feet between yourself and others at all times.
- All IAC users should wear clean gloves within IAC labs while running instrumentation.
- All IAC users should dispose of gloves after completing an experiment.
- IAC users are encouraged to bring their own hand sanitizer and to use it frequently.
- The IAC will provide users with disinfecting Lysol wipes to sanitize keyboards and surfaces.
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### **Continuity of IAC Operation:**

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- Where applicable, the IAC recommends users utilize the IAC's assisted use program in order to reduce person-to-person contact within the facility.
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## **IAC COVID-19 Preparedness Plan**

– In Accordance with CDC recommendations (03.09.2020)

The IAC has begun implementation of a tiered action plan in preparation for COVID-19. These preparations are being implemented in order to limit the potential for community spread of the coronavirus on campus. This plan includes increased sanitary efforts, social distancing, and continuity of operations for the IAC in the event of widespread utility disruptions.

### **Level 1 – Increased Sanitation and Social Distancing Measures**

- The IAC has identified surfaces which are areas of high contact (login terminals, door handles, instrument keyboards etc.) and have begun sanitary efforts to clean these surfaces twice per day (in addition to standard janitorial services).
- IAC staff will sterilize instrument keyboards and high touch instrument surfaces before and after each training session. Additionally, sanitary wipes will be provided to users.
- IAC staff will wash hands before and after each training session and will instruct students to do the same.
- Hand washing instructions will be posted near sinks in the facility which instruct users to thoroughly wash hands for at least 30 seconds.
- The IAC will postpone / reschedule training or access to equipment for any users showing signs of illness (i.e. coughing, sneezing, or exhibiting fatigue).

### **Level 2 – Continuity of Research with Advanced Social Distancing Measures**

- Tier 1 measures will continue to be implemented.
- IAC staff will run increased assisted use experiments for research groups in order to limit person-to-person contact within the IAC - while maintaining a continuity of research.
- Research groups will be encouraged to elect a member from their group to collect data in the IAC in efforts to limit person-to-person contact and walk-through traffic in the IAC.
- Sanitary instructions will be placed near instruments, each user must follow the instructions, sanitary wipes will be provided for users after each instrument use.
- Staff and users are to remain 6 feet away from each other, in order to minimize the transmission of the virus. All IAC users will be required to use disposable gloves when operating instruments.

- IAC users / staff will notify Dr. Yao via email if they, or a member of their immediate family, or person in their same dwelling has symptoms consistent with the virus. Any IAC staff or users exhibiting flu-like symptoms must remain at home for 21 days.

### **Level 3 – Continuity of Operation and preparation for a potential University Shutdown**

- The IAC will prepare online training materials (videos and additional training documents) to facilitate the education of IAC users and students via internet.
- The IAC will continue to run assisted use projects to facilitate University-wide research.
- In the event of a University closure, the IAC will power down all instruments and will implement necessary maintenance procedures to enable rapid restart of instrumentation.
  - This includes preparation of vacuum instrumentation, cryogenic instruments, and instruments utilizing house gases (N<sub>2</sub> and Air) or cooling water as discussed by IAC staff.
- IAC staff have identified essential services and maintenance procedures that must be periodically performed in the event of a University shut-down or widespread utility disruption. These procedures will be conducted to ensure equipment remains functional and ready for eventual return to operation. See “Continuity of Operations Plan (COOP)”.
- IAC staff will identify potential projects they conduct off-site (at home) if necessary.
- The IAC will rapidly bring instrumentation online when operations begin to normalize.

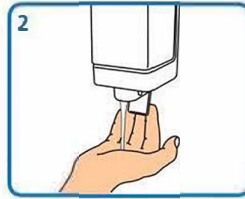
### **Campus Wide Resources:**

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- **Teladoc Web Link:**  
Link: <https://member.teladoc.com/princeton>
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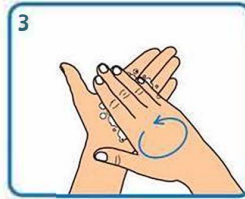
# Hand-washing technique with soap and water



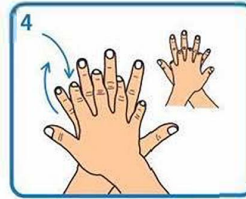
1 Wet hands with water



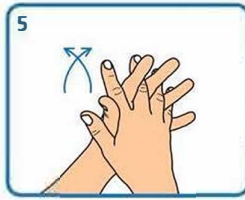
2 Apply enough soap to cover all hand surfaces



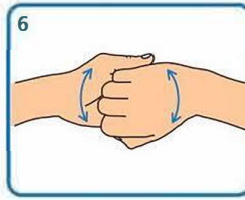
3 Rub hands palm to palm



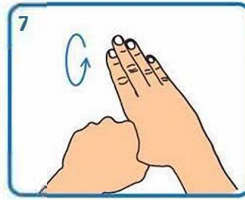
4 Rub back of each hand with palm of other hand with fingers interlaced



5 Rub palm to palm with fingers interlaced



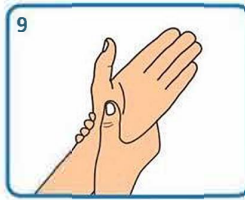
6 Rub with back of fingers to opposing palms with fingers interlocked



7 Rub each thumb clasped in opposite hand using a rotational movement



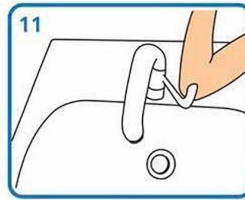
8 Rub tips of fingers in opposite palm in a circular motion



9 Rub each wrist with opposite hand



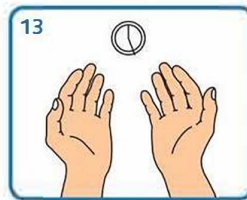
10 Rinse hands with water



11 Use elbow to turn off tap



12 Dry thoroughly with a single-use towel



13 Hand washing should take 15–30 seconds