



Institute for Complex  
Adaptive Matter

## ICAM Newsletter - January 2021

Welcome to the ICAM January Newsletter. Please share our news with your colleagues across your institution.

### ICAM: The Outlook for 2021

The arrival of 2021 brings the global community within sight of the end of the pandemic, and with the arrival of several vaccines, and production rapidly ramping up, safe travel is likely to resume this summer. With the end of the pandemic, we can perhaps hope and strive towards a new wave of creative scientific discoveries in the 2020s, especially in the area of emergent physics, soft, biological and quantum.

We have much to anticipate in ICAM in the coming year. 2021 will see the start of a new 1M QuantEmX grant for global scientific exchange in the ICAM-EPiQS network. There are already eight ICAM workshops and schools scheduled for the second half of 2021, not including the new batch of proposals at our upcoming SSC meeting on 2<sup>nd</sup> February (11am ET). We have submitted a proposal for a 2M Accelnet in Quantum Materials to the Office of International Science at the US National Science Foundation and we are in the process of organizing a research center network proposal in biological and soft matter physics. Finally, a year from now, we are planning an ICAM global summit in Singapore, tentatively 10-14<sup>th</sup> January.

This is a very exciting backdrop to the new year, and we look forward to working with you all to maximize scientific discovery across our network.

Sincerely,

*Piers and Rajiv*  
ICAM Co-directors.

### Upcoming SSC Meeting

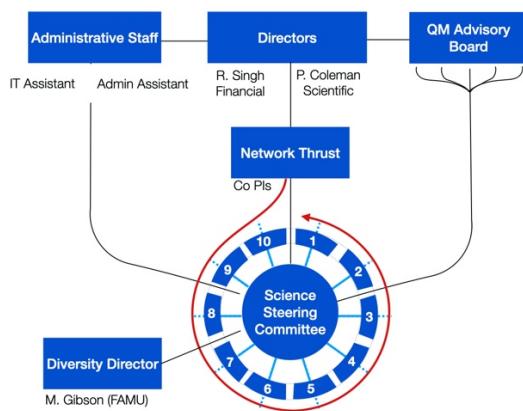
To kick-start our activities for 2021, we are holding an ICAM Science Steering Committee meeting on **Tuesday, 2nd February** at 11am Eastern Time. This meeting will discuss our workshop proposals for 2021 and our general strategy for going forward with networked research this year. We are hopeful to have a representation from each of our nodes, so please confirm participation from your node to Kimberly, if not already done so.

## QuantEmX

January 2021 marks the start of our new round of QuantEmX science exchanges. ICAM has received a four year, 1M US grant to support science exchange in the area of quantum materials for the next four years. Until March 31, 2021, we are inviting new proposals for science exchanges within the ICAM and EPiQS networks. We should also like to hear from each of our QuantEmX recipients who were obliged to postpone their exchanges due to the pandemic. Please let us know as soon as possible when you plan your rescheduled trips.

## AccelNet Proposal

ICAM has submitted a 2M network grant proposal, “AccelNet for Quantum Materials” to the Office of International Science at the National Science Foundation, to accelerate new networked research in quantum materials. If the grant is successful, it will link ICAM and nine other research networks into a “network of networks” with the goal of searching for new families of quantum materials. We will keep you informed as to the progress of this proposal.



## Workshops beginning in 2021

The second half of 2021 is shaping up to be a very active time for workshop activity! We anticipate the return to more-or-less normal workshop activity starting in the summer of 2021. ICAM has several workshops that have been postponed from last year, including:

- Topological Materials and Electron Correlations, 2021 (Rice University, Houston)
- Modern Aspects in Quantum Materials and Quantum Technology, 2021 (University of Greifswald, Germany)
- Conference on spin polarized scanning tunneling microscopy and nanoscale magnetic imaging, Summer 2021 (Ohio State University, Columbus OH)
- Condensed Matter Physics in the City, Summer 2021 (London and Skye)

- Autumn School on Correlated Electrons: Topology and Entanglement in Strongly-Correlated Materials, Fall 2021 (Forschungszentrum Jülich, Germany)
- Correlated phases and hydrodynamics in driven systems (Boston University)
- Topological Materials and Fundamental Physics (Santa Fe, NM)
- Signatures of Nonequilibrium Fluctuations in Life (ICTP - Trieste, Italy)

We look forward to hearing from our branches about the new schedules for these meetings as they become available. In addition, we will be adding meetings, pending approval from the upcoming SSC meeting.

### **ICAM Global: Singapore 2022**

Save the date! Initial plans, at the proposal level, are being made for a week of ICAM activities in Singapore in 2022, tentatively for 10<sup>th</sup>-14<sup>th</sup> January 2022, as part of our Annual meeting. The first half of the week will be devoted to the Global summit – featuring business meetings and talks across the full range of ICAM science thrusts in Soft, Biological and Quantum Matter. The second half of the week will be devoted to a Frontiers Workshop. We are looking forward to this opportunity for all of us to meet up face-to-face in the New Year 2022.

### **ICAM Launches a Colloquium Introductions Library**

ICAM is launching an online colloquium library, with the goal of providing materials that will help our field to convey the shared excitement of the emergent physics frontier, be it in soft, biological or quantum matter. Our goal here is to provide a resource of introductory slides that can be used for the initial introduction of colloquium talks. We hope to launch the website in the coming month, and would like to encourage our members to think of collections of slides that they would be willing to contribute. All material will acknowledge the original authors and will be copy-written under a creative commons license.