

GCCM Business Meeting

2025 SCCM Meeting

June 25th, 2025



Topical Group on
Compression of
Condensed Matter

GCCM

The APS Topical Group on Compression of Condensed Matter (GCCM) was founded in 1984.

- Promotes fundamental and applied research in static and dynamic compression of condensed matter.
- Explores how extreme conditions drive behavior in superconductivity, plasticity, transitions, planetary science, chemical reactivity, and shock waves.
- Offers engagement opportunities for students and researchers for networking, career enhancement, and recognition.

Agenda

Welcome (Cooper)
Election and Membership Report (Cooper)
Financial Report (Polsin)
Award Announcements (Akin)
Meeting Reports (multiple)
Proceedings Report (Tracy)
GCCM Agreements and Expiring Contracts (Cooper)
Open Discussion

Notice: We do have online attendees via Zoom and Zoom audio transcription is active.



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2024 Election Report

147 ballots cast of 568 eligible (25.8% of membership voted)

Election was open Nov 15th through Dec 11th, 2024

Vice-Chair, (1 position)

Brittany Branch

Frank Cherne

Raymond Smith

Marius Millot

Executive Committee, Member-at-large (2 positions)

Sakun Duwal

Rachel Huber

Trevor Willey

Stefano Racioppi

Terry-Ann Suer

Secretary/Treasurer, (1 position)

Danae Polsin

Tom Lockard

Early Career/Student Member-at-Large (1 position)

Matthew Brennan

Kerry-Ann Stirrup

Xuchen Gong

Current GCCM Executive Committee

Chair: [Marcia Cooper](#) (01/25 - 12/25)
Texas A&M University

Chair Elect: [Chris Seagle](#) (01/25 - 12/25)
Sandia National Laboratories

Vice Chair: [Brittany Branch](#) (01/25 - 12/25)
Sandia National Laboratories

Sec./Treasurer: [Danae Polsin](#) (01/25 - 12/27)
Laboratory for Laser Energetics (LLE)

Past Chair: [Minta Akin](#)(01/25 - 12/25)
Lawrence Livermore National Laboratory

Assigned Council Rep: [Dragana Popović](#)
Div. Condensed Matter Physics

Members-at-Large:

[Matt Beason](#) (01/24 - 12/25)
Kansas City National Security Campus

[Patricia Kalita](#) (01/24 - 12/25)
Sandia National Laboratories

[Sakun Duwal](#) (01/25 - 12/26)
Sandia National Laboratories

[Rachel Huber](#) (01/25 - 12/26)
Los Alamos National laboratory

Early Career/Student Member-at-Large:

[Matthew Brennan](#) (01/25 - 12/26)
Los Alamos National laboratory

Thank you to our outgoing officers:

Peter Celliers
Chair sequence
01/2021 - 12/2024

J. Matt Lane
Secretary/Treasurer
01/2019 - 12/2024

Jessica Shang
Member-at-Large
01/2023 - 12/2024

Nenad Velisavljevic
Member-at-Large
01/2023 - 12/2024

Sakun Duwal
Early-Career Member-at-Large
01/2023 - 12/2024

2026 Executive Committee Nominations

We are seeking outstanding candidates to run for leadership positions in the GCCM Executive Committee.

Nominations are sought for the offices of:

Vice Chair (4-year term)

(2) **Members-at-Large** (2-year term)



Deadline:
July 15, 2025

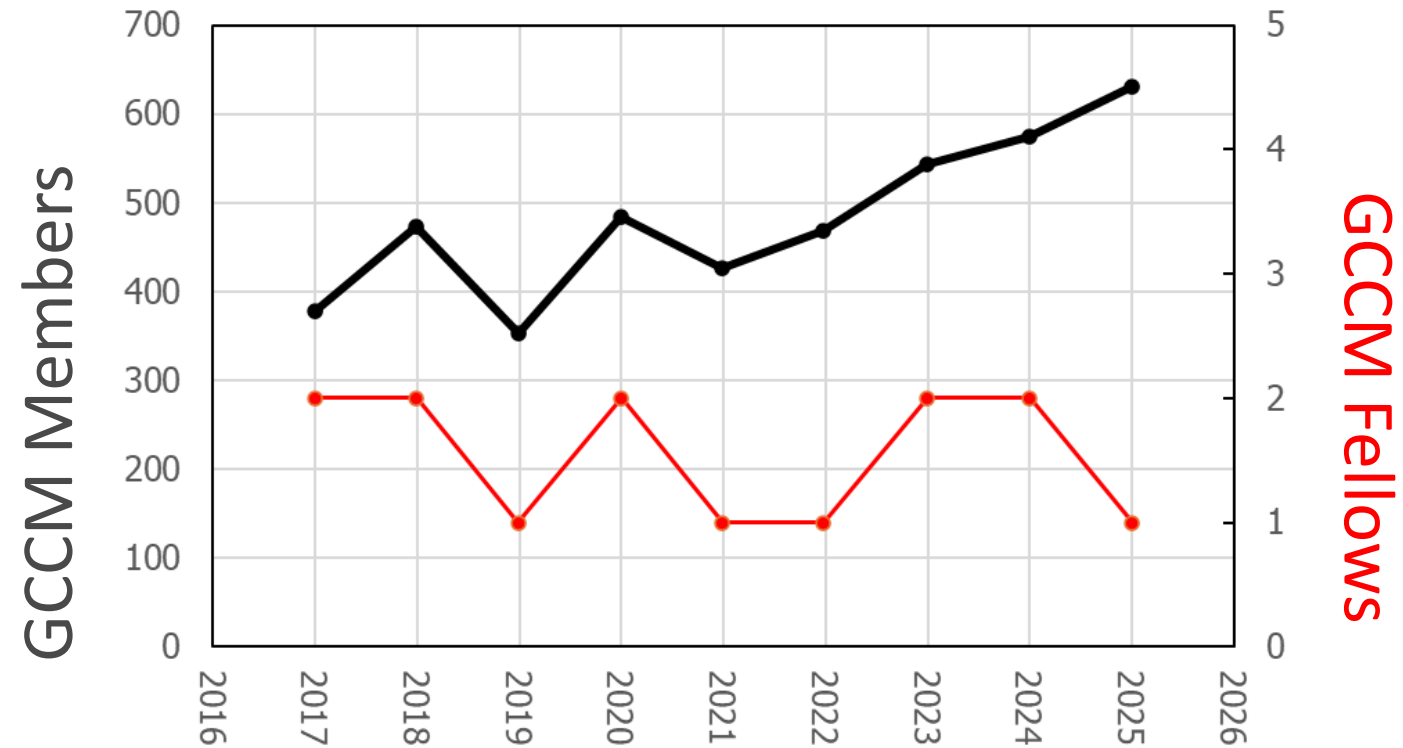
Selection Committee:

Minta Akin, Todd Hufnagel, Shanti Deemyad, Mike Winey, Sakun Duwal.

Membership trends

June 2025

Undergrad Student	29
Graduate Student	169
Early Career	69
Regular	300
Lifetime	21
Senior/Retired	39
Senior Lifetime	4
Total	631



2024 Year-end Financial Report

2024 income:

Member dues: \$ 3,684

Investment: \$ 11,534

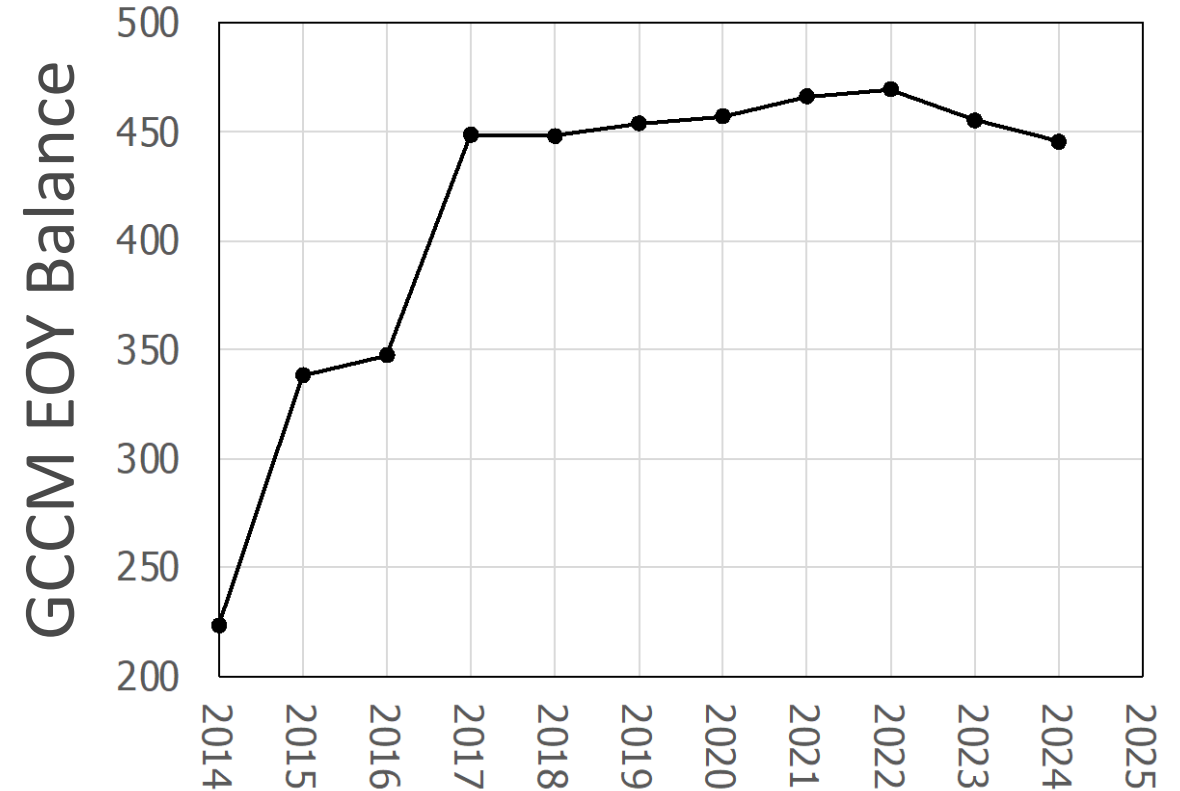
2024 expenses:

Miscellaneous \$ 1,644

Travel \$ 0

2024 Net: \$ 13,574

Duvall Endowment:\$102,463



2024 End-of-Year Balance \$445,595

2025 April Financial Report

2025 income: for the 4 months ending on 04/30/25 (04/30/24 values for comparison)

Member dues: \$ 2,694 (\$2,826)
Investment: \$5,265 (\$3,810)

2024 expenses:

Miscellaneous\$ 0 (0)
Travel \$ 0 (0)

2024 Net: \$7,958 (\$6,636)

Date: 06/03/25
Time: 06:47

YTD 04/30/25	YTD 04/30/24	\$ Change
\$839,092.80	\$454,997.07	\$384,095.73
-\$0.00	-\$0.00	\$0.00
\$839,092.80	\$454,997.07	\$384,095.73
\$2,700.00	\$2,875.00	-\$175.00
-\$6.52	-\$49.07	\$42.55
\$0.00	\$0.00	\$0.00
\$5,265.10	\$3,809.76	\$1,455.34
\$7,958.58	\$6,635.69	\$1,322.89
\$0.00	\$0.00	\$0.00
\$0.00	\$0.00	\$0.00
\$0.00	\$0.00	\$0.00
\$0.00	\$0.00	\$0.00
\$7,958.58	\$6,635.69	\$1,322.89

The American Physical Society
Summary Budget Report
For The 4 Months Ended 04/30/25

Account Description	
1605-0000	Funds Available from APS
1605-9920	Funds Available from APS
Funds Available from APS	
4230-3201	Dues-APS Divisions/Top Groups
4240-0000	Membership Write-offs-General
4472-0000	Unit Share of APS General Mtg-General
4890-0000	Allocated Investment Income-General
Revenue - Total	
5490-0000	Prizes & Awards-Stipends-General
5492-0000	Prizes & Awards-Certificates/P-General
5987-0000	Promotional Items-General
Expense - Total	
Net Income (Loss)	

Award Announcements

Mark your calendar:

X01: Plenary V

Fri. June 27

08:00a - 08:50a

Washington Hilton, Columbia 5 & 7



2025 George E. Duvall Shock Compression Science Award

Justin S. Wark

For the initial instigation and subsequent development of time-resolved X-ray diffraction from laser-shocked materials, leading to major advances in our understanding of shock-induced plasticity and phase transformations at the lattice level.



Professor of Physics
University of Oxford

2025 Neil Ashcroft Early Career Award for Studies of Matter at Extreme High Pressure Conditions

Rebecca K. Lindsey

For outstanding achievements in the creation of machine learning models of reactive materials, including energetic materials under detonation conditions, nano-carbon synthesis, and cluster condensation in molecular liquids under extreme conditions.



Assistant Professor
University of Michigan

2025 GCCM Student and Dissertation Research Award

Matthew Brennan

Static pressure equations of state of actinide-bearing compounds

Dissertation (2022): “Investigating Planetary Core Formation with Geophysical Modeling and High-Pressure Mineralogy”



Staff Scientist
Los Alamos National Laboratory

2024 APS GCCM Fellowship

Raymond F. Smith

For pioneering dynamic ramp-compression experiments on high-energy laser facilities, resulting in significant discoveries in high-pressure materials physics and planetary science.

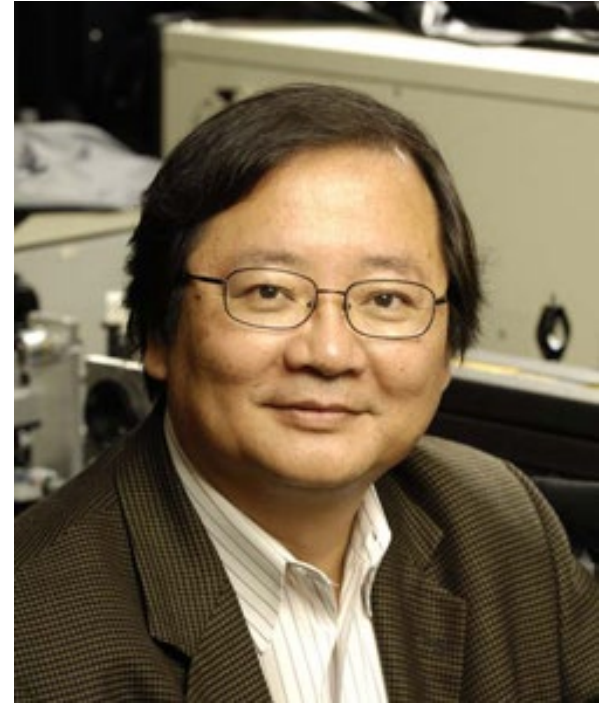


Staff Scientist
Lawrence Livermore National Laboratory

2024 APS GCCM Fellowship

Choong-Shik Yoo

For seminal contributions to understanding condensed matter response at extreme conditions through the development of innovative high-pressure capabilities, novel experiments employing optical and X-ray measurements, and mentoring the future generations of scientists.



Professor Institute for Shock Physics
Professor, Department of Chemistry
Washington State University

2023 APS GCCM Fellowship

Sarah T. Stewart

For the development and application of shock physics techniques to explain the origin and evolution of planetary systems.



Professor, School of Earth and Space
Exploration
Arizona State University
Formerly at U. California Davis

2023 APS GCCM Fellowship

Daniel Dolan

For scientific contributions to understanding phase transitions under dynamic compression, specifically, freezing in water, and for broadly impactful contributions to the field of dynamic compression science in the area of diagnostics and analysis tool development.



Professor, Institute for Shock Physics
Washington State University
Formerly Technical Staff at
Sandia National Laboratories

Award Nominations Closed 06/02/2025

2025 APS Fellowship

2026 Neil Ashcroft Early Career Award for Studies of Matter at Extreme High Pressure Conditions (APS Honors)

The award recognizes outstanding theoretical or experimental contributions by an early-career scientist to studies of matter at extreme high pressure conditions. The award is conferred annually and consists of a \$5000 stipend, a certificate, and a travel allowance.

2026 GCCM Student and Dissertation Research Award (Unit Award)

The award recognizes outstanding work by a researcher within two years of PhD completion. The award is conferred annually and consists of a \$2000 stipend and an invitation to deliver an invited talk at the SCCM conference.



Meeting Reports

2025 March Mtg (APS Global Summit)

2025 SCCM

2025 Early Career Student Symposium

2027 AIRAPT-SCCM

2025 March Mtg Summary

Matter at Extreme Conditions Focus Sessions co-sponsored (GCCCM, DCOMP, DMP). DCOMP was lead co-sponsor this year. GCCCM will lead in 2026.

GCCCM Invited Session (1)

“Compression of Condensed Matter”

GCCCM Contributed Sessions (3)

Number of contributed talks: 34

2026 March Mtg: March 15-20 in Denver, Colorado



#apsgccm



Topical Group on
Compression of
Condensed Matter
GCCCM

SCCM 2025

at-the-moment summary

S. Crockett, P. Kalita, W. Proud, D. Swift

&

T. Lockard

PEOPLE/SUPPORT

- 601 ON-SITE ATTENDEES (TUESDAY AFTERNOON)
- 62 Participation Grants (vast majority to students/ a few to people who made substantial conference effort)
- Student Volunteers assisted with registration booths (Sabrina Wahler, Willis Holle, Min Kim, Can Bakir, ANUKRITI GHIMIRE, Ian Szumila, Scott Crockett, Patricia Kalita, Bill Proud etc.)

TECHNICAL CONTENT

- Static – Dynamic integrated sessions
- Double-Act Plenaries
- 6 parallel sessions
- 685 active abstracts (58 withdrawals)
- 8 Masterclasses
- 125 posters
- 69 invited talks
- 430 contributed

MONEY (*selected* headline numbers)

• Registration	\$ 511K
• Sponsors	\$ 108K
• Exhibitors	\$ 34K
TOTAL	\$ 653 K

• Audio-Visual	\$ 188K
• Posters / Signage	\$ 37K
• Food and Beverage	\$ 235K
• Participation Grants	\$ 34K
TOTAL	\$ 589 K

NOTE: a detailed spreadsheet is available, these are selected headline numbers.

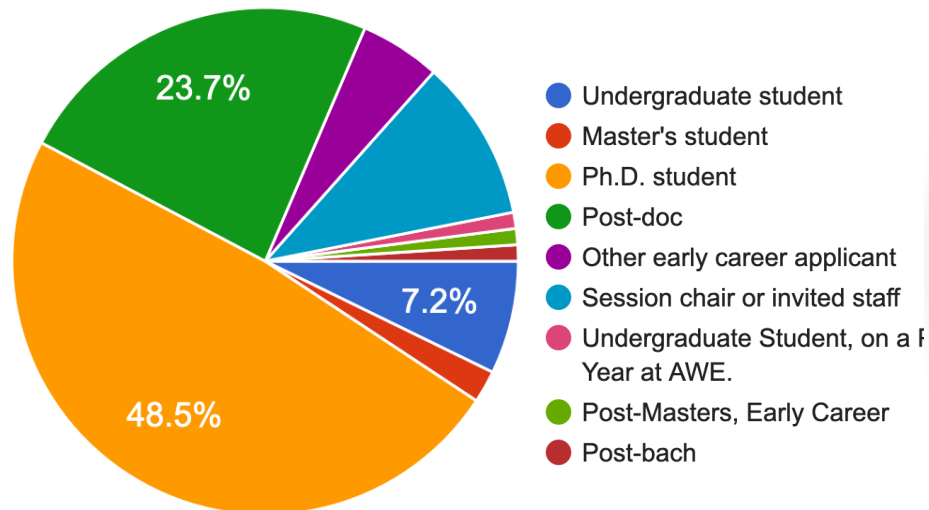
NOTE2: Some SCCM attendees booked via the Hotel Website and not the APS website, this will be reconciled POST-conference.

NOTE3: Some attendees registered on-site, they are not included here.

2025 Early Career Student Symposium

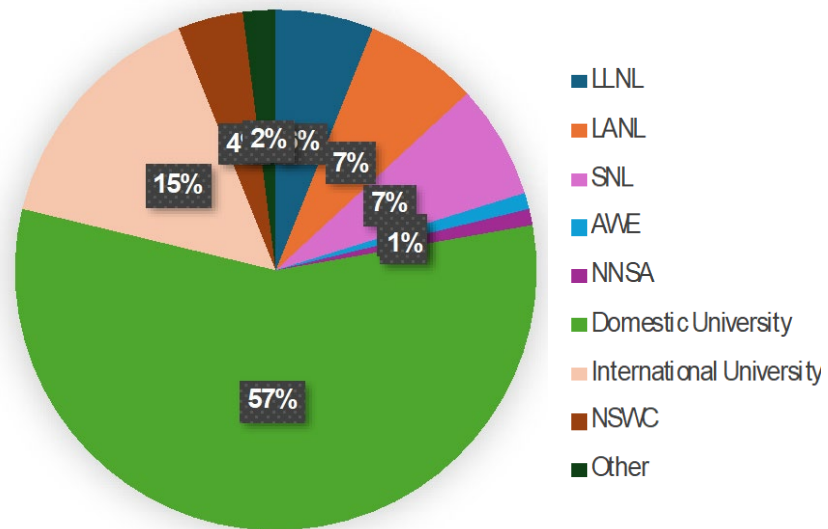
Chair: Sakun Duwal (SNL)
Co-chair: Matthew Brennan (LANL)

Total attendance: ~100



Attendance by Attendee Status

- ❖ 19 Oral Talks; 14 Elevator Pitch talks; 40 posters
- ❖ Talks and Poster Awards
- ❖ Session chairs and Poster judges



Attendance by Affiliation

- ❖ **Keynote: Mitchell Wood (SNL)**
- ❖ **Session I: Material Properties**
- ❖ **Networking and Career Advancement Workshop**
- ❖ **Elevator Pitch Competition**
- ❖ **Networking Lunch**
- ❖ **Session II: Experimental Advances**
- ❖ **Session III: Energetic Materials**
- ❖ **Session III: Computational Techniques**
- ❖ **Poster Session**



AIRAPT · SCCM · CHICAGO · 2027



Host institution: HPCAT, Advanced Photon Source

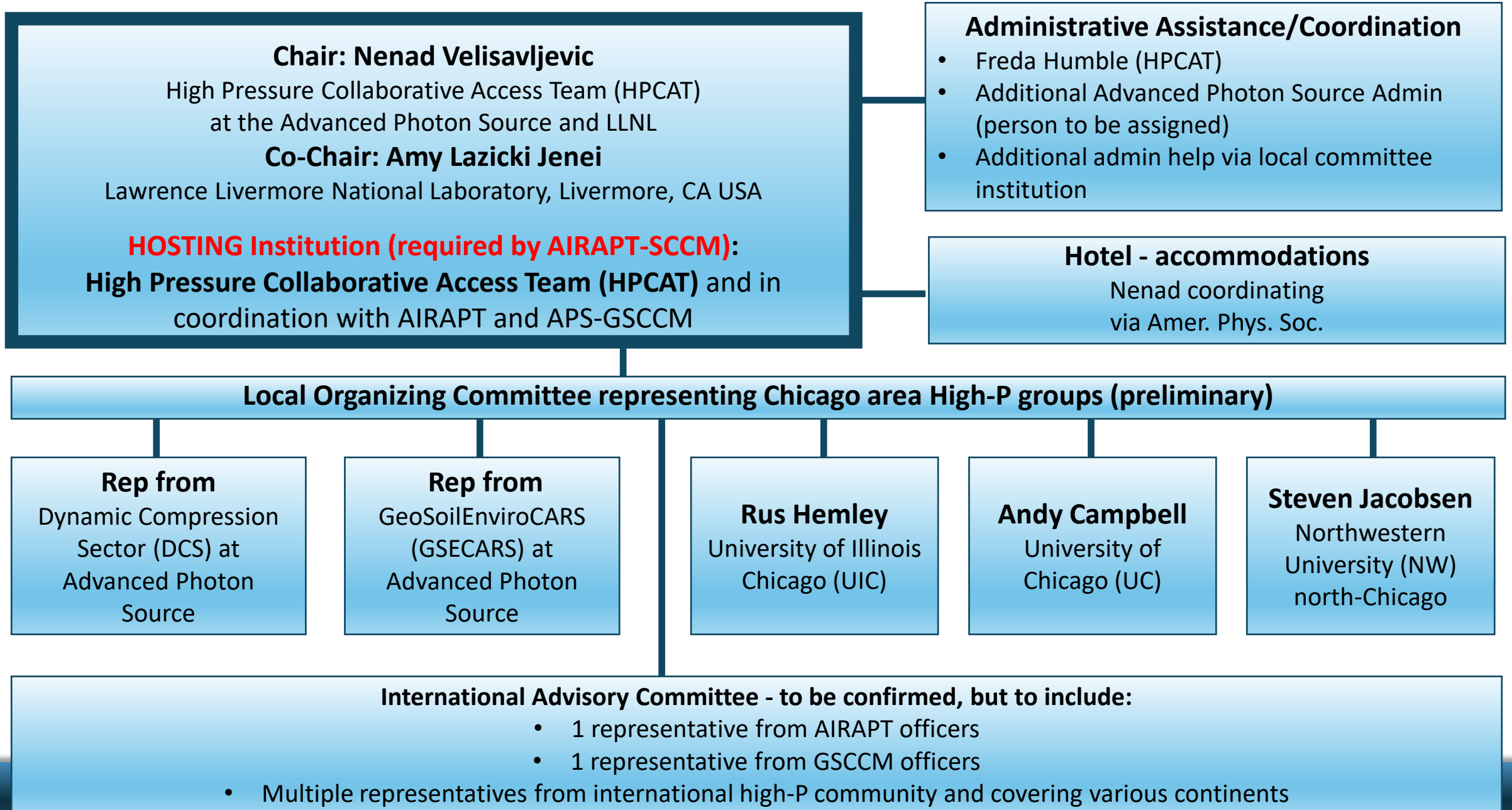
Organizers: Nenad Velisavljevic HPCAT/LLNL (GCCM former ExC member)
Amy Lazicki LLNL (AIRAPT secretary)

UPDATES:

- Dates: June 18-27, 2027, reservation confirmed by Sheraton Grand Hotel (entire 4th floor: up to 10 rooms, with larger rooms partitioned)
- Nenad and Amy meeting on regular basis to discuss general scientific agenda, educational classes, hotel prep, and other logistics, working on drafting a list of names to invite for International Advisory Committee, to be finalized by the 2025 AIRAPT meeting
- Major part of planning (especially regarding scientific agenda and classes) is being gleaned from the 2025 SCCM and AIRAPT conferences (held separately in 2025; both Amy & Nenad will attend)
- Questions or suggestions? SCCM2027@aps.org email is active for communication



2027 joint AIRAPT-SCCM conference Organizational Structure





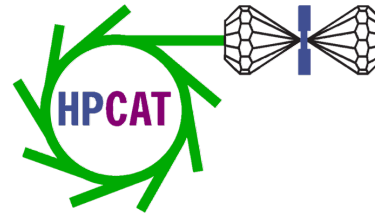
AIRAPT · SCCM · CHICAGO · 2027

Proximity to high pressure research centers

~35km southwest



- The Advanced photon Source upgrade to APS-U. Opportunity to showcase various static and dynamic pressure facilities and capabilities (DAC, Large volume press, gun, laser, etc.)
- Argonne National Laboratory has agreed to facilitate conference participants' visit for tours and hands-on training



GCCM hosts a Virtual Seminar Series

- Recent emphasis on static compression
- Volunteer opportunities!

October 17: Vitali Prakapenka, University of Chicago (73 registrants)

Polymorphism of Superionic Ice: Static vs Dynamic Compression

December 19: Shanti Deemyad, The University of Utah

Competitive Structural and Electronic States under Pressure

January 23: Jon Eggert, Lawrence Livermore National Laboratory (187 registrants)

Laser-driven dynamic compression of materials

March 6: Valery Levitas, Iowa State University (>144 registrants)

New Rules of Coupled Severe Plastic Deformations, Phase Transformations, and Microstructure Evolution under High Pressure

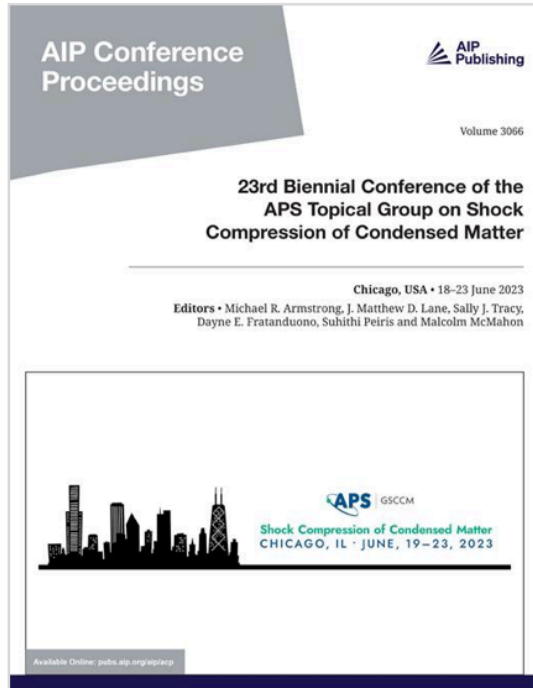
Contact: Any GCCM Exec Committee Member

SCCM Proceedings Report

Sally Tracy, 2025 Lead Editor

Volume 3066, Issue 1

9 December 2024



**23RD BIENNIAL
CONFERENCE OF THE APS
TOPICAL GROUP ON
SHOCK COMPRESSION OF
CONDENSED MATTER**

18–23 June 2023

Chicago, USA

2023 SCCM Proceedings are available online!

Fratanduono, Dayne, Suhithi Peiris, Malcolm McMahon, Mike Armstrong, Sally Tracy, and Matt Lane. "Preface: 23rd Biennial APS Conference on Shock Compression of Condensed Matter." In *AIP Conference Proceedings*, vol. 3066, no. 1, pp. 1-3. American Institute of Physics, 2024.



Content from 2025 March BM and email sent to GCCM Membership & SCCM Attendees on June 18, 2025.

24th Biennial APS Conference on the Science of Compression of Condensed Matter (SCCM25) published with AIP Publishing

The SCCM Proceedings is a **peer-reviewed, citable, and indexed** journal. All papers will be **published online**, available worldwide with **no access or download fees**.

2025 SCCM target publication date is within nine months of the meeting.

Submission site opens: July 14, 2025

Submission deadline: September 15, 2025

First-Round Reviews Returned to Authors: November 15, 2025

Second-Round Reviews (if needed): January 15, 2026

Target Publication Date: March 2026



Other GCCM business

Expiring and outdated contracts

APS-GCCM Meeting Management Services

Existing APS-GCCM Meeting Management Contract executed pre-COVID.

Provisions for in-person sorters meeting, printed bulletins, estimated per-attendee costs using historical numbers.

The Executive Committee is reviewing the need to update this agreement.

AIP Publishing Contract

Existing AIP Publishing Contract was signed in 2022 and set the fixed and per-paper costs through 2025 SCCM.

Included provisions for publishing SCCM 2022, 2023, 2025 using Peer Review Submission System (dedicated and unmodified PXP submission site) and required AIP formatting.

The Executive Committee with consultation from the Technical Proceedings Committee is preparing to negotiate a new publishing contract in advance of the 2027 conference.

GCCM Bylaws & APS Unit Task Force

APS has launched a **Units Task Force** to undertake a comprehensive review of current APS units and offer recommendations for improvement. One objective is to improve consistency, clarity, and alignment **across all unit bylaws**.

The Task Force aims to identify and recommend improvements to the APS unit structure, clarifying their role and identifying ways to address risk and achieve greater consistency of governance and operation.

Anticipated outcomes include:

- Recommendations on a set of standards for unit bylaws.
- Clearly defined roles, responsibilities, and limits of unit leadership.
- Guidance for unit operating procedures.

Questions? Contact Cortney Bougher (bougher@aps.org) Director of Membership



Open Discussion

Continue to grow membership

Grow and highlight volunteer opportunities

Other requests from community