

# 2024 APS/CNM Users Meeting Schedule at a Glance

## Monday, May 6, 2024

- 7:30 Registration Open (Atrium Lobby)
- 7:30 Welcome Coffee Event (Atrium)
- 8:00-5:00 Exhibits (Atrium & Lower Level Gallery)

## Combined APS & CNM Plenary Session

- 8:30-8:35 Mingda Li, Vice-chair, APS Users' Executive Committee (Massachusetts Institute of Technology) Welcome and Launch of the 2024 APS/CNM Users Meeting
- 8:35-8:45 Paul K. Kearns, Laboratory Director (Argonne National Laboratory) Welcome from the Laboratory
- 8:45-8:50 Laurent Chapon, Associate Laboratory Director, Photon Sciences (Advanced Photon Source, Argonne National Laboratory) Introduction of DOE Speaker Linda Horton
- 8:50-9:15 Linda Horton (Basic Energy Sciences, Department of Energy) The DOE Perspective
- 9:15-9:20 Ilke Arslan, Division Director (Center for Nanoscale Materials and the Nanoscience and Technology Division, Argonne National Laboratory) Introduction of Keynote Speaker Jessica Wade
- 9:20-10:10 Keynote Address: Jessica Wade (Imperial College London) Chiral Materials and Changing Research Culture
- 10:10-10:35 Break (Atrium)
- 10:35-10:55 Laurent Chapon, Associate Laboratory Director, Photon Sciences (Advanced Photon Source, Argonne National Laboratory) APS Update
- 10:55-11:15 Ilke Arslan, Division Director (Center for Nanoscale Materials and the Nanoscience and Technology Division, Argonne National Laboratory) CNM Update
- 11:30-1:30 Lunch at Argonne Guest House (Shuttle available)

## APS Plenary Session

- 1:15-1:20 Mingda Li, Vice-chair, APS Users' Executive Committee (Massachusetts Institute of Technology) Welcome and Announcement of the 2024 Gopal K. Shenoy Excellence in Beamline Science Award Winner: Denis T. Keane (DND-CAT, Northwestern University)
- 1:20-2:00 Yuting Luo (Johns Hopkins University) 2024 Rosalind Franklin Young Investigator Award Recipient Bridging Atomistic, Mesoscale, and System Perspectives in the Design of V2O5 Cathodes for Li-ion Batteries
- 2:00-2:40 Grigorii Skorupskii (Princeton University) Designing Complex Electronic and Magnetic Orders
- 2:40-3:20 Randall Meyer (ExxonMobil Research and Engineering Company) X-ray Absorption Spectroscopy Studies for Early-stage Industrial Catalysis Research
- 3:20-3:35 Break (Lower Level Gallery)
- 3:35-4:15 Vasilije Dobrosavljevic (Carnegie Institution for Science) Probing Melting in Deep Planetary Interiors with Multi-technique Synchrotron Methods
- 4:15-5:00 Jim Kerby and Jonathan Lang (Argonne National Laboratory) APS Upgrade Q&A
- 5:30 Banquet bus transportation loads in front of APS and Guest House
- 6:00 Banquet Dinner (Monte Bello Estate)

**Tuesday, May 7, 2024** Shuttle available for Lunch and WK#3

8:00	Registration (Atrium lobby)
7:30	Coffee/Tea (Lower Level Gallery)
8:00-5:00	Exhibits (Atrium & Lower Level Gallery)
5:30-8:00	Poster Session (Bldg. 201, shuttle available)

**CNM Plenary Session**

10:00-10:10	Nihar Pradhan, CNM User Executive Committee Vice-Chair (Jackson State University) Welcome Remarks and UEC Update
10:10-11:00	E. Charles H. Sykes (Tufts University) CNM Keynote Address
11:00-11:30	Teri Odom (Northwestern University) Exciton-polariton Dynamics in Strongly Coupled Plasmonic Lattices
11:30-12:00	Danielle Chamberlin (NanoPattern Technologies) Thin Film Photo-patternable Quantum Dot Downconverters

Joint APS/CNM WK 1: Advancing Data Analysis for XRD/XCT in Post-APS-U: FAIR, Automated Analysis Pipelines and Graph Deep Learning		APS WK 8: Quantum Solids under a Dark-field X-ray Microscope: A Journey from Imagination to Discovery at APS-U	
1:30-1:40	Donald Brown	8:00-8:05	Introduction and welcome
1:40-2:00	Daniela Ushizima	8:05-8:10	Introduction by Chair
2:00-2:20	Roger French	8:10-8:40	Zhan Zhang
2:20-2:40	Pawan Tripathi	8:40-9:10	Peter Kenesei
2:40-3:00	Hemant Sharma	9:10-9:40	Daniel Gianola
3:00-3:10	Break (Atrium)	9:40-9:55	Break (Lower Level Gallery)
3:10-3:30	Reeju Pokharel	Session II: Quantum Solids under a Dark-field X-ray Microscope	
3:30-3:50	Rafael Vescovi		
3:50-4:10	Brian Toby	9:55-10:00	Introduction by Chair
4:10-4:30	Dan Savage	10:00-10:30	Jayden Plumb
4:30-4:50	Jana B. Thayer	10:30-11:00	Kaan Alp Yay
4:50-5:00	Conclusion and Closing Remarks	Session III: Discussion	
APS WK 3: Operando Synchrotron Experiments on Advanced Manufacturing Processes		11:00-11:30	Discussion: Potential First Experiments
		11:30-1:30	Lunch (Argonne Guest House)
8:00-8:30	Organizers Introduction	Session IV: Functional Devices	
8:30-9:00	Steven Van Petegem	1:30-1:35	Introduction by Chair
9:00-9:30	Nicholas Calta	1:35-2:05	Elliot Kisiel
9:30-10:00	Break (Bldg. 446)	2:05-2:35	Pavel Salev
10:00-10:30	Anthony Rollett	2:35-2:50	Break (Atrium)
10:30-11:00	Amy Clarke	Session V: Novel Development and Directions	
11:00-11:30	Xuan Zhang	2:50-2:55	Introduction by Chair
11:30-1:30	Lunch (Argonne Guest House)	2:55-3:25	Mads Carlsen
1:30-2:00	Ho Yeung	3:25-3:55	Doga gursoy
2:00-2:30	Lianyi Chen	3:55-4:25	Takashi Kimura
2:30-3:00	Nathan Crane	Session VI: Discussion and Wrap-up	
3:00-3:15	Break (Bldg. 446)	4:25-5:00	Discussion: Potential First Experiments
3:15-3:45	Atieh Moridi		
3:45-4:15	Xun Liu		
4:15-4:45	Frank Pfefferkorn		
4:45-5:00	Group Discussion		

**Wednesday, May 8, 2024** Shuttle available for Lunch and WK#2

8:00-2:00 Registration (Atrium lobby)  
 7:30 Coffee/Tea (Atrium)  
 8:00-1:30 Exhibits (Atrium & Lower Level Gallery)

Joint APS/CNM WK 2: Advanced Characterizations for Critical Materials Innovation and Sustainability		APS WK 7: Ultra-small, Ultra-powerful: APS-U-USAXS' Role in Advancing Materials and Manufacturing	
1:30-1:40	Opening Remarks	8:00-8:05	Opening Remarks
1:40-2:10	Peter Sushko	8:05-8:30	Jan Ilavsky
2:10-2:40	Linsey Seitz	8:30-8:55	Andrew Allen
2:40-3:10	Pietro Papa Lopes	8:55-9:20	Trevor Willey
3:10-3:30	Break (Bldg. 446)	9:20-9:45	Lilo Pozzo
3:30-4:00	Mark Schlossman	9:45-9:55	Break (Atrium)
4:00-4:30	Benjamin Doughty	9:55-10:20	Lawrence Anovitz
4:30-5:00	Michael Servis	10:20-10:45	Greg Beaucage
		10:45-11:30	Panel Discussion

APS WK 6: Elucidating 3D Microstructures through Diffraction-based Imaging and Simulations		APS WK 9: Using Synchrotron Light to Probe Earth and Environmental Systems (EES)	
8:15-8:30	Jun-Sang Park	8:00-8:05	Opening Remarks
8:30-9:00	Hemant Sharma	Session I: Instrumental/eBERlight/FICUS	
9:00-9:30	Weijan Zheng	8:05-8:20	Zou Finfrock
9:30-9:50	Break (Atrium)	8:20-8:50	Tamas Varga
9:50-10:20	Stephan Hruszkewycz	8:50-9:10	Joanne Stubbs
10:20-10:50	Laura Vietz	9:10-9:30	Andrei Smertenko
10:50-11:20	Wenxi Li	9:30-10:00	Break (Atrium)
11:20-1:30	Lunch (Argonne Guest House)	Session II: Earth and Environmental Science (Soil, Biogeochemistry, Atmospheric)	
1:30-2:00	Darren Pagan	10:00-10:30	Alexandra Kravchenko
2:00-3:00	Matthew Kasemer	10:30-10:50	Sharon Bone
3:00-3:20	Break (Atrium)	10:50-11:10	Viktor Nikitin
3:20-4:20	Michael Sangid, Krzysztof Stopka, and Kyle Jung	11:10-11:30	Lucie Stetten
4:20-4:50	Ryan Hurley	11:30-1:30	Lunch (Argonne Guest House)
4:50-5:20	Marm Dixit	Session III: Plant and Rhizosphere Science	
5:20-5:30	Break	1:30-2:00	Joseph Jakes
5:30-6:00	Darren Pagan	2:00-2:20	Gyorgy Babnigg
		2:20-2:40	Gosia Korbas
		2:40-3:00	Tom Regier
		3:00-3:30	Break (Atrium)
		Session IV: Data Processing, Integration, and Automation	
		3:30-3:50	Arthur Glowacki
		3:50-4:10	Neil Getty
		4:10-4:30	Maksim Yakovlev
		4:30-5:00	Round Table Discussion

**Thursday, May 9, 2024** Shuttle available for Lunch

8:00-2:00 Registration (Atrium lobby)

7:30 Coffee/Tea (Atrium)

Joint APS/CNM WK 2: Advanced Characterizations for Critical Materials Innovation and Sustainability		APS WK 10: Advanced X-ray Capabilities for High-pressure Research	
1:30-2:00	Chong Liu	1:30-1:35	Opening Remarks
2:00-2:30	Xiao Su	1:35-2:05	Guoyin Shen
2:30-3:00	Albert Lipson	2:05-2:35	Maddury Somayazulu
3:00-3:20	Break (Bldg. 446)	2:35-2:50	Break (Atrium)
3:20-3:50	Eva Allen	2:50-3:20	Vitali Prakapenka
3:50-4:20	Linqin Mu	3:20-3:50	Paulo Rigg
4:20-4:30	Closing Remarks	3:50-4:20	Jiyong Zhao
		4:20-4:40	Open Discussion

APS WK 5: Integrating Nanofabrication with Next Generation X-ray Techniques to Probe and Control Novel Phenomena		APS WK 11: APS-U-enabled Advanced Tools for Structural Biology: Advancing Enzymatic Catalysis and Drug Discovery through Synchrotron Serial Crystallography	
8:30-8:40	Gilberto Fabbris	8:30-8:40	Opening Remarks
8:40-9:05	David Czaplewski	8:40-9:15	Alke Meents
9:05-9:30	Alexander High	9:15-9:50	Simon Vecchioni
9:30-9:55	Stephan Hruszkewycz	9:50-10:40	Break (Atrium) & Beamline Posters
9:55-10:10	Preetha Sarkar	10:40-11:15	John Rose
10:10-10:30	Break (Atrium)	11:15-11:50	Zhong Ren
10:30-10:55	Claire Zurkowski	11:50-1:30	Lunch (Argonne Guest House)
10:55-11:20	Pedro Lozano	1:30-2:05	Vadim Cherezov
11:20-11:45	James Walsh	2:05-2:40	Kara Zeilinski
11:45-12:00	Eduardo Poldi	2:40-3:10	Break (Atrium) & Beamline Posters
		3:10-3:45	Marius Schmidt
		3:45-4:20	Meng Yuan
		4:20-4:55	Rebecca Jernigan
		4:55-5:00	Final Remarks

## Friday, May 10, 2024

8:30-12:00 Workshops

7:30 Coffee/Tea (Atrium)

APS WK 4: The Future of Full-field 3D Imaging at APS-U: A Multiscale and Multimodal Approach		APS WK 10: Advanced X-ray Capabilities for High-pressure Research	
8:30-8:50	Alberto Mittone	8:55-9:00	Opening Remarks
8:50-9:10	Viktor Nikitin	9:00-9:30	Wonsuk cha
9:10-9:35	Aaron Kuan	9:30-10:00	Felix Lehmkuhler
9:35-10:00	Nathan Bechle	10:00-10:30	Hemant Sharma
10:00-10:20	Break (Atrium)	10:30-10:45	Break (Atrium)
10:20-10:45	Jake Socha	10:45-11:15	Daniel Haskel
10:45-11:10	Tim Fister	11:15-11:45	Naoki Ishimatsu
11:10-11:35	Nikhilesh Chawla	11:45-12:15	Xiaoyi Zhang
11:35-12:00	Christopher Powell	12:15-12:30	Open Discussion and Conclusion

### APS WK 5: Integrating Nanofabrication with Next Generation X-ray Techniques to Probe and Control Novel Phenomena

8:30-8:55 Zachary Geballe

8:55-9:20 Luiz Pimenta Martins

9:20-9:45 Jeffrey Pigott

9:45-10:00 Zackary Rehfuss

10:00-10:30 Break (Atrium)

10:30-10:55 Shua Sanchez

10:55-11:20 Cliff Hicks

11:20-11:45 Jiarui Li

11:45-12:00 Discussion and Closeout