



AGENDA
NSF IUCRC Center for Solid-State Electric Power Storage (CEPS)
5th Industry Advisory Board Meeting
September 28th-29th, 2023
Syracuse University IUCRC Site
Room- Comstock AB
Sheraton Hotel and Conference Center, 801 University Ave
Syracuse, NY 13210, Marriott.com/SYRSI

Technical Point of Contact: Pascal Britton 605-430-4334,
Poojan Indrajeet Kaswekar, 315-385-9594
For virtual attendees- <https://syracuseuniversity.zoom.us/j/98322083186>

| DAY 1: Sept 28 th , 2023 (Eastern Daylight Time - EDT) | |
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| | PARTICIPANT REGISTRATION https://www.greenceps.com/register-for-iab-meeting |
| 8:00 am – 9:00 am EDT | Breakfast networking/posters |
| 9:00 am – 9:30 am EDT | WELCOME REMARKS Session Chair: CEPS Managing Director Dr. Serge Pann  SOUTH DAKOTA MINES <small>In engineering, science and technology university</small>  Syracuse University  Northeastern University <ul style="list-style-type: none"> • Syracuse University CEPS co-PI Dr. Weiwei Zheng • Syracuse University VPR Dr. Duncan Brown • Syracuse University College of Engineering and Computer Science ADR Dr. Dacheng Ren • IAB meeting goals; industry members overview (IAB Chair Dr. Mark Viste) - perspective from IAB and expectations |
| 9:30 am – 10:00 am EDT | NSF IUCRC Presentation - IUCRC Program Director Dr. Crystal Leach |
| 10:00 am – 10:30 am EDT | NSF IUCRC CEPS Center in Year II Report Structure, value proposition, research roadmap, memberships, budget, workforce development, and DEIA; Director Dr. Alla White Smirnova |
| 10:30 am – 11:10 am EDT | SESSION 1: PRESENTATIONS from CURRENT & PROSPECTIVE INDUSTRY PARTNERS Session Chair: CEPS Managing Director Dr. Serge Pann Mercedes-Benz, C4V, Daktronics, Honda, Medtronic, Nano-C, Carrier, ORNL |
| 11:10 am – 11:30 pm EDT | SESSION 2: INTRODUCTION by the CANDIDATE UNIVERSITY SITE - Michigan State University (Presenter – Dr. Lai Wei) Session Chair: CEPS Managing Director Dr. Serge Pann |
| 11:30 –12:30 pm EDT | Keynote Address: Dr. M. Stanley Whittingham , SUNY Distinguished Professor, 2019 Nobel Laureate, Member of National Academy of Engineering, Director of NECCES at Binghamton, Binghamton University (SUNY). |
| 12:30 –1:00 pm EDT | LUNCH |
| 1:00 –1:10 pm EDT | How to submit a L.I.F.E. form for each project or proposal – Pascal Britton <i>Each presentation is followed by the submission of the Level of Interest and Feedback Evaluation (L.I.F.E.) form through AirTable.</i> |



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| <p>1:10 pm –2:10 pm EDT (10 mins presentation, 5 min Q&A, L.I.F.E. forms)</p> | <p>SESSION 3: ANNUAL PROGRESS REPORTS</p> <p>Session Chair: CEPS Site Director at Northeastern University Dr. Sanjeev Mukerjee</p> <p>Project 1: Innovative Materials for Scalable Supersonic Cold Spray Technology and Battery Manufacturing, Dr. A. Smirnova and Ph.D. students Farzaneh Bahmani and Collin Rodmyre (SD Mines) <i>Q&A and DISCUSSION for Project 1. Fill out L.I.F.E. forms.</i></p> <p>Project 2: Interface engineering and solid-state battery prototyping for electric vehicles and off-grid applications, Dr. Q. Qiao and Ph.D. student Madan Saud, (Syracuse University) <i>Q&A and DISCUSSION for Project 2. Fill out L.I.F.E. forms.</i></p> <p>Project 3: Advancing the spatio-temporal evolution of structure, processes, and dynamics in solid-state electrolytes, nano-composites, and interface, Dr. S. Mukerjee, and Ph.D. Student Luisa Gomes (Northeastern University) <i>Q&A and DISCUSSION for Project 3. Fill out L.I.F.E. forms.</i></p> <p>Project 4: Li-ion batteries based on solid polymer electrolytes, Dr. D. Salem, Ph.D. student Zhengqiang (Jason) Li (SD Mines); Dr. S. Mukerjee and Ph.D. student Luisa Gomes (Northeastern University) <i>Q&A and DISCUSSION for Project 4, Fill out L.I.F.E. forms.</i></p> |
| <p>2:10 pm –2:20 pm EDT</p> | <p>Networking break/ poster</p> |
| <p>2:20 pm –3:50 pm EDT (10 mins presentation, 5 min Q&A, L.I.F.E. forms)</p> | <p>SESSION 4: New Proposed Projects for Year 3 (up for voting)</p> <p>Session Chair: Syracuse University Poojan Kaswekar</p> <p>Proposed project #1 (SU, SD Mines, and NU) Interface engineering and sulfide electrolytes for enhanced batteries in EV and off-grid applications, Ph.D. student Madan Saud, Dr. Q. Qiao (Syracuse University) Ph.D. student Misti Acevedo, B.S. student Pascal Britton (SD Mines), and Dr. Josh Gallaway (Northeastern University) <i>Q&A, Fill out L.I.F.E. forms.</i></p> <p>Proposed Project # 2 (SD Mines, NU, and SU) Optimization of chemical, electrochemical, and physical properties for sodium-ion batteries, Dr. A. Smirnova, Ph.D. student K. Ly, B.S. student K. Bryant, Dr. F. Zheng (SD Mines), Dr. S. Mukerjee (Northeastern University), and Dr. Q. Qiao (Syracuse University)</p> |



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| | <p><i>Q&A, Fill out L.I.F.E. forms.</i></p> <p>Proposed Project # 3 (NU, SU, SD Mines) Novel electrode structures for enhanced Li transport at solid-state electrolyte interface using line-of-sight engineering approaches and advanced <i>in situ</i> and <i>operando</i> techniques, Dr. S. Mukerjee, H. Dai, L. Gomez, F. Zheng, D. Maxwell and S. Pann (Northeastern University), D. Salem, F. Zheng, P. Hauck, J. Li, Q. Qiao (Syracuse University) <i>Q&A, Fill out L.I.F.E. forms.</i></p> <p>Proposed Project #4 (SU, NU, SD Mines) High-capacity manganese-rich oxide cathode for lithium-ion and lithium metal batteries, H. Li, Dr. Q. Qiao (Syracuse University), D. Maxwell, Dr. S. Mukerjee (Northeastern University), and C. Rodmyre, F. Zheng, A. Smirnova (SD Mines) <i>Q&A, Fill out L.I.F.E. forms.</i></p> <p>Proposed Project #5 (SD Mines, NU, SU) Interfacial lithium-ion transport in Li-ion solid-state battery design by additive manufacturing, C. Rodmyre, F. Zheng, D. Salem, A. Smirnova (SD Mines); D. Maxwell, S. Mukerjee, S. Pann (Northeastern University), Q. Qiao, Madan Saud, H. (Syracuse University). <i>Q&A, Fill out L.I.F.E. forms.</i></p> <p>Proposed Project #6 (NU, SD Mines, SU) Innovative approaches for battery recycling, Dr. S. Mukerjee (NU); Dr. B. Carlson, B. Watson, Dr. A. Smirnova (SD Mines), and Dr. Q. Qiao (SU) <i>Q&A, Fill out L.I.F.E. forms.</i></p> |
| 3:50 pm – 4:00 pm EDT | Networking break/ poster |
| 4:00 pm – 4:30 pm EDT | <p>SESSION 5: DISCUSSION of the CEPS PROGRESS and CANDIDATE UNIVERSITY SITE - MSU</p> <p>Session Chair: Dr. Mark Viste</p> <ul style="list-style-type: none"> CEPS Progress and Impressions from Day 1 IAB meeting Discussion regarding the center expansion and MSU |
| 4:30 pm – 5:30 pm EDT | <ul style="list-style-type: none"> Syracuse University Facilities and Lab tour |
| 5:30 pm | Networking Dinner |

DAY 2: Sept 29th, 2023 (Eastern Daylight Time - EDT)



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| 8:00 am – 9:00 am | Breakfast networking/posters |
| 9:00 am – 9:40 am | <p>SESSION 6: L.I.F.E. FORMS DISCUSSION for PROGRESS REPORTS Moderators: Syracuse University Poojan Indrajeet Kaswekar and SD Mines Pascal Britton</p> <ul style="list-style-type: none"> Panel discussions are based on the L.I.F.E. questions from industry partners and the answers provided by the faculty responsible for these projects. Faculty PIs respond to the comments. |
| 9:40 am – 10:40 am | <p>SESSION 7: L.I.F.E. FORMS DISCUSSION for proposed projects Moderators: IUCRC CEPS Chair Dr. Mark Viste and SD Mines student Pascal Britton</p> <ul style="list-style-type: none"> Faculty respond to the L.I.F.E. comments submitted by industry partners. Each teaser is discussed based on the answers to the questions in L.I.F.E. forms. MSU responses to IAB questions |
| 10:40 am – 10:50 am | Networking break/poster |
| 10:50 am – 11:50 am (1 hour) | <p>SESSION 8: IAB CLOSED-DOOR MEETING A signed membership agreement is required to attend this meeting. Participants: Chair Dr. Mark Viste, IUCRC Director Dr. Crystal Leach, CEPS Evaluator Dr. Victoria Hill, and CEPS Industry Members</p> <ul style="list-style-type: none"> Notes/minutes are required and will be taken by the Vice-chair Discussion regarding the new MSU Site and voting for a Planning grant proposal submission by MSU Overall evaluation and the feedback from progress reports and proposed project presentations, Project selections Election of IAB Chair and Vice Chair for next two years |
| 11:50 pm – 12:30 pm | <p>SESSION 9: NEXT ACTION STEPS and CLOSING REMARKS (open for all) Moderator: CEPS Managing Director Dr. Serge Pann</p> <ul style="list-style-type: none"> Discussion regarding a balanced research portfolio. Announcement of the next meeting: Spring meeting. <i>Closing remarks.</i> |
| 12:30 pm – 1:30 pm | Lunch break |
| 1:30 pm | Bus/cars to iM3NY/C4V |
| 3:00 pm onwards | iM3NY/C4V tour |



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| 4:00 pm EDT onwards | Bus/cars back to Syracuse or Syracuse Airport |
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