Annual State Conference Agenda
Wednesday, March 27, 2019, 7:30 a.m. to 4:30 p.m., FargoDome, Fargo, ND

7:30 Registration/poster setup (Lobby)

7:30 - 8:30 Continental breakfast (2nd Floor meeting room)

7:45 - 8:25 EMPOWERED-ND meeting breakfast meeting (2nd Floor meeting room, reserved table)

8:30 Welcome by **Kelly A. Rusch**, Executive Director, ND EPSCoR / NSF Track-1 Project Director
(All presentations in 2nd Floor meeting room)

8:30 Greetings and Logistics by MC **Joyce Eisenbraun**, ND EPSCoR Communication Manager

9:00 NSF Perspective with **Jose Colom-Ustariz**, NSF Program Officer for ND EPSCoR

9:45 - 11:15 Student/Faculty presentations from ND EPSCoR Center for Regional Climate Studies (CRCS) and ND EPSCoR Center for Sustainable Materials Science (CSMS)

- 9:45 - 9:55 CRCS Faculty Research Overview
  - **Aaron Kennedy**, CRCS co-Lead and Assistant Professor, Atmospheric Sciences, University of North Dakota (UND): *Advancing our Knowledge of Northern Great Plains Weather and Climate*
- 9:58 - 10:08 CSMS Faculty Research Overview
  - **Qianli "Rick" Chu**, Associate Professor, Chemistry, UND: *Synthesis of Cyclobutane-containing Building Blocks for Sustainable Materials Using Photoenergy*
- 10:11 - 10:14 CRCS Graduate Student 3-minute thesis
  - **Bayarbat Badarch**, Natural Resources Management, North Dakota State University (NDSU): *Analysis of Yield Potential for Five Crops in North Dakota Based on Soils and Climate*
    Advisor: David Roberts, CRCS co-Lead and Associate Professor, Agricultural Experiment Station Agribusiness and Applied Economics
- 10:17 - 10:27 CSMS Undergraduate Student presentation
  - **Tess Skinner**, Chemistry, Minot State University: *Novel Method for the Synthesis of Dibenzylmethylamines via the Leuckart Reaction*
    Advisor: Mikhail Bobylev, Professor, Chemistry
- 10:30 - 10:33 CSMS Graduate Student 3-minute thesis
  - **Raul Setien**, Coatings and Polymeric Materials, NDSU: *Epoxidation of Soybean Oil Utilizing Dioxirane Intermediates Generated from Oxone*
    Advisor: Dean Webster, CSMS Lead, Professor, and Chair, Coatings and Polymeric Materials
- 10:36 - 10:46 Collaborative Faculty Research: *Overview from a Tribal College, Primarily Undergraduate Institution and Research University*
  - **Mandy Guinn**, Chair/Instructor, Environmental Science and Research, United Tribes Technical College
  - **Paul Barnhart**, Assistant Professor, Biology, Dickinson State University
  - **Erin Gillam**, Associate Professor, Biological Sciences, NDSU

- 10:49 – 10:52 CRCS Graduate Student 3-minute thesis
  - **Aaron Scott**, Atmospheric Sciences, UND: *Cropland Change Impacts on Weather and Climate*
    Advisor: Aaron Kennedy, CRCS co-Lead and Assistant Professor, Atmospheric Sciences
- 10:55 - 11:15 Q & A for presenters

11:15 - 11:45 Poster Session (Lobby)

11:45 – 1:00 Luncheon and Keynote (2nd Floor meeting room)
  - **Dane Skow**, Executive Director, Center for Computationally Assisted Science and Technology, NDSU: *High Performance Computing: past, present, future or Surfing the Data Tsunami*

1:00 - 2:00 Poster Session (Lobby)

2:00 - 3:43 Student/Faculty presentations (2nd Floor meeting room)

- 2:00 – 2:10 CSMS Faculty Research Overview
  - **Ghasideh Pourhashem**, Assistant Professor, Coatings and Polymeric Materials, NDSU: *Commercializing Bio-based Products: Environmental and Techno-economic Cost Considerations*
- 2:13 – 2:23 CRCS Faculty Research Overview
  - **Joshua Steffan**, Assistant Professor of Agriculture and Assistant Professor of Biology, Dickinson State University: *The Effect of Agricultural Land-Use on Soil Microbial Populations in Eastern Montana*
- 2:26 – 2:29 CSMS Graduate Student 3-minute thesis
  - **Srikanth Vijjamarri**, Chemistry, UND: *Plastic from Plants*
    Advisor: Guodong Du, CSMS faculty researcher and Associate Professor, Chemistry
- 2:32 – 2:42 CRCS Faculty Research Overview
  - **Xuefeng "Michael" Chu**, Professor, Civil and Environmental Engineering, NDSU: *Integrated Hydrologic Modeling and Applications Across Scales*
- 2:45 – 2:55 CRCS/CSMS Faculty Emerging Seed Awardees' Research Overview: *Cellulose Nanocrystals – A Sustainable Material for Improving the Performance Characteristics of Poly (lactic Acid) based Composites*
  - **Dilpreet Bajwa**, Professor, Mechanical Engineering, NDSU
  - **Kerry Hartman**, Academic Dean and Environmental Sciences Instructor, Nueta Hidatsa Sahnish College
- 2:58 – 3:01 CRCS Graduate Student 3-minute thesis
  - **Jon Starr**, Atmospheric Sciences, UND: *Modeling Impacts of Market and Policy Changes on North Dakota's Agricultural Landscape*
    Advisor: JiangLong Zhang, Professor, Atmospheric Sciences
- 3:04 – 3:07 CSMS Graduate Student 3-minute thesis
  - **Catherine Sutton**, Chemistry, NDSU: *Expanding Synthetic Avenues to Biomass-derived Monomers*
    Advisor: Mukund Sibi, CSMS co-Lead & University Distinguished Professor, Chemistry/Biochemistry
- 3:10 – 3:20 Education and Workforce Development Faculty Research Overview: *Update on the EWD Project Elements*
  - **Rachel Navarro**, Associate Dean for Research and Faculty Development, Education and Human Development and Professor, Counseling Psychology, UND

- **Ryan Summers**, Assistant Professor and Middle and Secondary Program Area Coordinator, Teaching and Learning, UND

- 3:23 – 3:43 Q & A for researchers
  - (All posters on lobby level to be removed)

3:45 – 4:00 Center for Regional Climate Studies (CRCS) Wrap up: *Summary of Progress and Future Plans*
- **JiangLong Zhang**, CRCS co-Lead and Professor, Atmospheric Sciences, UND
- **David Roberts**, CRCS co-Lead and Associate Professor, Agricultural Experiment Station Agribusiness and Applied Economics, NDSU
- **Aaron Kennedy**, CRCS co-Lead and Assistant Professor, Atmospheric Sciences, UND

4:05 – 4:20 Center for Sustainable Materials Science (CSMS) Wrap up: *CSMS Accomplishments and Future Directions*
- **Dean Webster**, CSMS Lead, Professor, and Chair, Coatings and Polymeric Materials, NDSU
- **Mukund Sibi**, CSMS co-Lead and University Distinguished Professor, Chemistry and Biochemistry, NDSU

4:20 – 4:30 Wrap up and closing remarks by **Kelly A. Rusch**, Executive Director, ND EPSCoR / NSF Track-1 Project Director