DAY 1 – Monday, October 22

7:30 – 8:15  Arrive/Check-in//Etc.

8:15 – 8:30  NIST welcome: Eric Lin, Director, Material Measurement Laboratory, NIST

8:30 – 9:00  Carlos Gonzalez/André Striegel

9:00 – 9:45  Keynote 1: "Machine learning for analysis and prediction of chaotic dynamics."  
Edward Ott, University of Maryland

9:45 – 10:30  Keynote 2: "Quantum information and quantum computing for complex chemical systems."  Sabre Kais, Purdue University

10:30 – 11:00  Break

11:00 – 12:00  Plenary 1: "Chemistry and the computational universe."  Stephen Wolfram, Wolfram Research.

12:00 – 1:00  Lunch (on own)

1:00 – 1:45  Keynote 3: “Towards predicting the combustion chemistry of real, multicomponent fuels: Simplicity amid complexity.”  Hai Wang, Stanford University

1:45 – 2:30  Keynote 4: “Emergent space, emergent time, emergent descriptions: Data and the computer-assisted modeling of complex systems.”  Yannis Kevrekidis, Johns Hopkins University

2:30 – 3:00  Break

3:00 – 3:45  Keynote 5: “Quantifying pancreatic islet network pattern emergence during development.”  Deborah Striegel, Henry Jackson Foundation

3:45 – 4:30  Keynote 6: “Synchronization measurements for decrypting the complex response of chemical reaction networks.”  Istvan Kiss, St. Louis University

4:30 – 5:00  NIST talk 1: “Uncertainty quantification in complex chemical systems.”  
David Sheen, NIST

5:15  Adjourn
**DAY 2**

8:15 – 8:30  Welcome Day 2: *Carlos Gonzalez/André Striegel*

8:30 – 9:30  Plenary 2: “Complexity as a self-generated property of multidimensional systems.”
*Antonio Politi, University of Aberdeen*

9:30 – 10:15  Keynote 7: “System inference with small sample size in stochastic systems.”
*Vipul Periwal, National Institute of Health (NIH)*

10:15 – 10:45  Break

10:45 – 11:30  Keynote 8: “Chemical selforganization: Macrosopic order from microscopic processes.”
*Oliver Steinbock, Florida State University*

*Irving Epstein, Brandeis University*

12:15 – 1:30  Lunch (on own)

*Ayusman Sen, Pennsylvania State University*

2:15 – 3:00  Keynote 11: “Chimera states in populations of coupled chemical oscillators.”
*Kenneth Showalter, West Virginia University*

3:00 – 3:30  Break

*John Pojman, Louisiana State University*

4:15 – 4:45  NIST talk 2: “Bayes Markov Monte Carlo applied to NIST chemical measurements.”
*Blaza Tolman, NIST*

5:00 PM  Adjourn

**DAY 3**

8:30 – 9:00  Statement of purpose: *Carlos Gonzalez/André Striegel*

9:00 – 10:00  Breakout group discussions

10:00 – 10:30  Break

10:30 – 11:30  Breakout group discussions/Assembling notes for presentations
11:30 – 12:30 Lunch (on own)

12:30 – 1:30 Presentations by groups

1:30 – 3:00 Discussion

3:00 – 3:15 Farewell/Adjourn