

**FALL 2021
CHEMISTRY
SEMINAR SERIES**



**DR. PAVEL
KUCHERYAVY**

*Chemistry Department
Rutgers University – Newark*

**HOST:
DR. JAEKLE**

**ALL THOSE
INTERESTED ARE
WELCOME TO
ATTEND**

**“Recent Advances in NMR Spectroscopy Techniques
in the Context of Capabilities at Rutgers – Newark”**

**September 24, 2021, 11:30 AM
Life Science Center II, Room 130**

Abstract: NMR spectroscopy is an invaluable tool in chemistry, biology, and material science. While the majority of chemists are using routine 1D experiments for structure elucidation new methods have recently been developed which may provide additional insights into the molecular structure, reaction monitoring, dynamics, and binding. This seminar will summarize new methods and their implementation at the NMR facility at Rutgers – Newark. It will cover NOAH supersequences along with Non-Uniform Sampling (NUS) for structure elucidation, selective 1D experiments for faster data acquisition, application of NOESY for conformational analysis. No-D NMR and qNMR will be discussed from the point of reaction monitoring. Another part of the talk will be focused on dynamics in solution NMR methods: relaxation, diffusion and screening experiments for binding studies and determination of binding constants. The final part of the talk will cover the most recent advances in solid state NMR.

Biographical sketch: Pavel Kucheryavy graduated in 2010 from Bowling Green State University with PhD in Photochemical Sciences. Later that year he joined as a postdoc Dr. Kolesnichenko’s research group at Xavier University Louisiana where he got initial experience in maintenance of NMR spectrometers. His second postdoctoral he did in Dr. Jenny Lockard’s group between 2014 and 2018 at Rutgers Newark. After that Dr. Kucheryavy worked for one year as Visiting Professor in Chemistry at Oberlin College. In summer 2019 he started a NMR facility manager appointment at the University of Mississippi. In September 2021 Pavel Kucheryavy has joined Chemistry Department at Rutgers University – Newark as NMR Facility Director.

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