PANEL 3 - Commercial Buildings: Technologies, Design, Performance Analysis, Construction, and Building Industry Trends

PANEL LEADERS: **Srinivas Katipamula**, *Pacific Northwest National Laboratory* and **Clay Nesler**, *Johnson Controls*

SESSION TOPICS: Building science and engineering focusing on retrofitting existing buildings and new construction technologies; integrated design; pre-fabrication and modular construction techniques; energy-efficient and demand-responsive equipment, systems and controls for ventilating, space conditioning, lighting, daylighting, and water heating; innovative technologies; building systems integration; occupant comfort; performance analysis/modeling; smart, integrated control systems; energy information systems; performance monitoring; benchmarking; commissioning; fault detection and diagnostics; on-site use of renewables; distributed energy management; plug loads