

# CPAC Summer Institute 23–25 July 2019

## Next Generation Processing Approaches to Enable Maximum Efficiency in the Production of Pharmaceuticals, Chemicals, and Biomaterials

Center for Process Analysis and Control (CPAC)  
University of Washington, Seattle, WA

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**To achieve that goal the meeting will explore the following:**

- New strategies to characterize, preprocess, and separate all components in complex raw materials to enable the extraction of maximum value to insure sustainable production.
- Next generation continuous manufacturing concepts for end-to-end fermentation, including the process analytical technology (PAT) required to characterize organism growth and product production as well as product separation and purification.
- Utilization of process intensification approaches, at all manufacturing scales, including the use of novel operating windows, maximizing catalyst efficiency, and optimizing heat and mass transfer for the cost effective introduction of new material including biomaterials.
- Recent advances in PAT for the real time characterization of raw materials, as well as complex biomass streams for process understanding. This data can be used for rapid process development and for feed forward and feedback control to enable high quality, cost effective processing.
- Utilization of new approaches in data handling including the use of big data – for end-to-end understanding and value extraction from chemical and biomass processing.

The three day schedule ends on Thursday evening with a BBQ dinner off-site event. The final afternoon will summarize the technical areas and meld the conclusions into a broader look at the future impact of process analytical technology (PAT) for achieving process optimization.

CPAC has an established track record in fostering academic/industrial/national laboratory interactions, which aims at bridging the gap between basic research and full-scale process/product development. CPAC's Summer Institute will provide continuing education opportunities in the areas of advances in measurement science linked to process control.

The CPAC Summer Institutes are held in an informal format, with technical presentations, and time allotted for open discussion and brainstorming on topics that arise from this interaction. The informal environment has created a successful format for bringing together chemists, biologists, measurement scientists, and process engineers from industry, government, and academic institutions drawn from both CPAC and non-CPAC members.

### **REGISTRATION**

Registration Fee: \$450.00 US. The fee covers all meeting materials, lunches, and a BBQ dinner on Thursday. Please complete the registration form at:

<http://mkcontrol.com/summer-institute-2019.html>

For more information contact:

Mel Koch, [kochm@uw.edu](mailto:kochm@uw.edu), (cell) +1 206 992 1001

or

Nan Holmes, [nsh@uw.edu](mailto:nsh@uw.edu), (cell) +1 206 484 4399