

**Control Systems (CS)**Track Manager: **Michael Forbes**, *Honeywell International*

Monday, April 16th

1:30 pm - 3:00 pm

**CS1 - Keynote & Asset Optimization**Session Chair: **Michael Forbes**, *Honeywell International*

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| CS1.1 Keynote  | <b>Eric E. Harper</b> , <i>ABB Corporate Research</i>            |
| CS1.2 Reducing Cost of Ownership and Improving Long Term Performance of QCS Controls | <b>Johan Backstrom</b> , <i>Honeywell International</i>          |
| CS1.3 On Optimization of Paper Machines using Economic Model Predictive Control      | <b>Olle Trollberg</b> , <i>KTH Royal Institute of Technology</i> |

3:30 pm - 5:00 pm

**CS2 - Measurement Technologies I**Session Chair: **Risto Ritala**, *Tampere University of Technology*

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| CS2.1 Enhanced-performance Online Infrared Measurement                                | <b>Keith Lantz</b> , <i>Honeywell International</i>      |
| CS2.2 Application of Near Infrared Sensors for Online Measurement of Paper Properties | <b>Sebastien Tixier</b> , <i>Honeywell International</i> |
| CS2.3 TBA   |  |

Tuesday, April 17th

8:00 am - 10:00 am

**CS3 - Measurement Technologies II**Session Chair: **Steven Keller**, *Miami University*

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| CS3.1 Towards Total Production Monitoring of Basis Weight and Moisture  | <b>Catherine Östlund</b> , <i>RISE Bioeconomy</i>            |
| CS3.2 Reliable On-line Paper Formation Measurement  | <b>Slawek Frackowiak</b> , <i>Industrial Video Solutions</i> |
| CS3.3 TBA   |  |
| CS3.4 New In-line Freeness Sensor for control of Refiners for better Drainage Management on the Paper Machine | <b>Markku Mustonen</b> , <i>Conmark Systems Inc</i>          |

1:30 pm - 3:00 pm

**CS4 - Imaging and Machine Vision Applications**Session Chair: **Brian Mock**, *ECS*

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| CS4.1 Evaluating the Contrast of Planar Periodic Patterns on Paper   | <b>Jukka-Pekka Raunio</b> , <i>Tampere University of Technology</i> |
| CS4.2 Understanding the Challenges of Transitioning from Service to Application Support for Defect Detection | <b>Wesley Sweeney</b> , <i>Procemex</i>                             |
| CS4.3 Integration of Machine Vision with Paper Machine Controls  | <b>Slawek Frackowiak</b> , <i>Industrial Video Solutions</i>        |

3:30 pm - 5:00 pm

**CS5 - Pulp Measurements and Controls**Session Chair: **Bruce Allison**, *FPInnovations*

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| CS5.1 Model-based Control and Diagnostics Strategies for a Continuous Pulp Digester    | <b>Moksadur Rahman</b> , <i>Mälardalen University</i> |
| CS5.2 Optimization of Brown Stock Washing Using Advanced Process Control               | <b>Abijit Badwe</b> , <i>ABB</i>                      |
| CS5.3 New Trends in Advanced Process Control and Applicability to Pulp Mill Operations | <b>Bill Poe</b> , <i>Schneider Electric</i>           |

Wednesday, April 18th

8:00 am - 10:00 am

**CS6 - Industry 4.0 for Process Control**Session Chair: **Shih-Chin Chen**, *ABB*

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| CS6.1 Innovative Infrastructure for Pulp and Paper Applications in Digital Age                       | <b>Shih-Chin Chen</b> , <i>ABB</i>                      |
| CS6.2 The Cloud Historian – An IIOT Cornerstone for the Process Industries                           | <b>Johan Backstrom</b> , <i>Honeywell International</i> |
| CS6.3 Digital Transformation and Change Agents   | <b>Mariana Sandin</b> , <i>OS/soft</i>                  |
| CS6.4 Collaborative Monitoring of Critical Equipment Availability in Next Generation Bioproduct Mill | <b>Juha Alamaki</b> , <i>Metsa</i>                      |

10:30 am - 12:00 pm

**CS7 - Process Data Analytics**Session Chair: **Ian Journeaux**, *Georgia-Pacific*

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| CS7.1 Turning Big Data into Value Increasing Asset and Organizational Performance                                    | <b>Tomas Jutbo</b> , <i>Voith Paper</i>                      |
| CS7.2 Cooperative Process Optimization Between Paper Machine and Stock Preparation Utilizing Plant Big Data Analysis | <b>Takashi Sasaki</b> , <i>Yokogawa Electric Corporation</i> |
| CS7.3 Quality Focused Big Data Analytics in Pulp and Paper Industry  | <b>Emil Ackerman</b> , <i>Quva Oy</i>                        |

1:30 pm - 3:00 pm

**CS8 - MD Controls**Session Chair: **Kerry Figiel**, *International Paper*

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| CS8.1 Fuzzy Control On A Fluff Pulp Machine to Reduce Moisture Variability | <b>Amanda Lucas</b> , <i>Global Process Automation, LLC</i> |
| CS8.2 Projective Grade Change  | <b>Patrick Lawless</b> , <i>ABB</i>                         |
| CS8.3 Have You Closed the Loop Around "Automatic" Grade Change Yet?        | <b>Seyhan Nuyan</b> , <i>Valmet</i>                         |

3:30 pm - 5:00 pm

**CS9 - CD Controls**Session Chair: **Ake Hansson**, *Handix*

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| CS9.1 Coordinating CD Actuators by Applying Actuator Deviation Penalty in Multivariable CD Control Optimization | <b>Calvin Fu</b> , <i>Valmet</i> |
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CS9.2 Cross Direction (CD) Mapping Performance Indices

**Kerry Figiel**, *International Paper*

CS9.3 A New CD Actuator Mapping Representation and its Benefits to CD Controls

**Shih-Chin Chen**, *ABB*