

SPIRE participated in the conference EuroPACT 2017

The 4th European Conference on Process Analytics and Control Technology took place in Potsdam, Germany, on 10 to 12 of May 2017, and attracted over 220 experts in the field of PAT and control from research and industry.

SPIRE was impressively represented with its own booth, a plenary lecture, two regular scientific presentation, 10 scientific posters from different SPIRE projects (CONSENS, DISIRE, FUDIPO, IbD, ProPAT), and a live demonstration of an online NMR sensor. Participants visiting the booth were impressed by the SPIRE PPP approach, the broadness and excellence of the SPIRE projects and the progress achieved so far. Several participants expressed their interest in getting involved.



The SPIRE booth on the EuroPACT 2017 conference. From left to right: Andreas Scriba (IbD), Frans Muller (ProPAT), Aleksandra Lewandowska (DISIRE), and Manuel Pereira Remelhe (CONSENS)

The plenary lecture on “Integrated Process Control – SPIRE Projects with High Impact for Process Industry” was jointly presented by Frans Muller (ProPAT) and Manuel Pereira Remelhe (CONSENS). First, they introduced the main ideas of SPIRE to the audience. Then, they illustrated with case studies and intermediate results how the cooperation of industry from a wide range of sectors and academia leads to high impacts in the European process industries and potentially in sectors beyond that.



Frans Muller (right) and Manuel Pereira Remelhe (left)
presenting SPIRE and their two projects in a plenary lecture

The presentation of Nimet Kerimoglu on “Online Performance Monitoring of PAT-based Process and Control” showed how the company Clariant will employ a big data approach to assess online, if the process control solution is working optimally or not. Simon Kern presented the work of BAM on the “Design and Validation of a Compact NMR Analyser” which covers many different aspects starting from explosion protection and communication, to automated computation of concentrations from NMR spectra, to experimentation in the lab and the upcoming validation in the industrial pilot plant. All in all it’s a very challenging but also very a successful work.

The live demonstration of the online NMR developed within the CONSENS project by the Bundesanstalt für Materialforschung und Prüfung (BAM) was definitely a highlight. The participants could change the feed flows to the sensor and see via WLAN connection on their own mobile phones how the concentration measurement evolves over time.



Simon Kern (left) from BAM explaining the demo online NMR to participants.



Moreover posters of 5 SPIRE projects were displayed and discussed:

- **ProPAT: Robust and affordable process control technologies for improving standards and optimising industrial operations.** Y. Contreras¹; P. Puigdollers¹; F. Muller²; ¹ IRIS, Castelldefels/ES; ² University of Leeds, Leeds/UK
- **ProPAT: Validation of a fast and low-cost NIR spectroscopy platform for online monitoring and process control.** C. Avila¹, R.A. Bourne¹, F. Muller¹; ¹ University of Leeds/UK
- **ProPAT: Novel inline particle sizing sensor for process control.** T.A. Hazlehurst¹, F.M. Mahdi¹, T.N. Hunter¹, A. Hassanpour¹, F. Muller¹; ¹ University of Leeds/UK
- **CONSENS: On-line control of the rheological properties for a continuous production of a non-Newtonian fluid.** R. Mei; M. Grosso; R. Baratti; S. Tronci; University of Cagliari/IT
- **CONSENS: Online NMR spectroscopy for process monitoring in intensified continuous production plants.** S. Guhl; Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin/DE
- **DISIRE: A glimpse to the future of the process industry.** G. Nikolakopoulos¹; A. Lewandowska²; G. Georgoulas¹; T. Dauth²; ¹ LTU, Luleå/S; ² IMW, Leipzig/DE
- **lbD: Intensified by Design® for the intensification of processes involving solids handling.** A. Bruguera¹; F. Muller²; K. Boodhoo³; J. Paaso⁴; J. Ibarra¹; D. Reay⁵; ¹ IRIS, Castelldefels/ES; ² University of Leeds, Leeds/UK; ³ University of Newcastle upon Tyne, Newcastle upon Tyne/UK; ⁴ VTT Öy, Espoo/FI; ⁵ David Reay & Associates, Whitley Bay/UK
- **FUDIPO: Future Directions of Production Planning and Optimized Energy and Process Industries.** E. Dahlquist¹; K. Kyprianidis¹; M. Bohlin²; A. del Real³; M. González-Moya³; ¹ Mälardalen University, Västerås/SE; ² RISE SICS, Västerås/SE; ³ IDENER, Seville/ES (FUDIPO)
- **FUDIPO: Experiments in pilot and full-scale facilities.** E. Dahlquist¹; K. Kyprianidis¹; M. Bohlin²; A. del Real³; M. González-Moya³; ¹ Mälardalen University, Västerås/SE; ² RISE SICS, Västerås/SE; ³ IDENER, Seville/ES (FUDIPO)

- **FUDIPO: Modelling approach.** E. Dahlquist¹; K. Kyprianidis¹; M. Bohlin²; A. del Real³; M. González-Moya³; ¹ Mälardalen University, Västerås/SE; ² RISE SICS, Västerås/SE; ³ IDENER, Seville/ES

Special thanks go to Andreas Scriba from DECHEMA for managing the SPIRE booth, and to all participants who represented the SPIRE community in the conference.

Project details

 <p>www.pro-pat.eu</p>	 <p>www.consens-spire.eu</p>
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