

# **Program for the 4th Annual Meeting of the SPP 2364**

## **Kick-off for the 2<sup>nd</sup> phase**

**24.-25.11.2025**

GenoHotel Karlsruhe  
Am Rüppurrer Schloss 40  
76199 Karlsruhe

5 minutes oral presentation as a short PowerPoint flash presentation with max. 3 slides on the topic, new results and outlook for the 2<sup>nd</sup> phase; discussion for each PhD project only at the poster; sequence of individual contributions within the project as desired; presentations can preferably be made by PhDs or PostDocs in English.

Please send each PowerPoint presentation until the 21<sup>st</sup> of November to [spp2364@mvm.kit.edu](mailto:spp2364@mvm.kit.edu)

### **Monday, 24.11.2025**

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|-------------|--|
| 12.00-13.00 | Check-in and lunch   |
| 13.00-13.30 | Introduction and short review of the third year<br>(Hermann Nirschl) |

### **Particle Handling:**

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|-------------|---|
| 13.30-13.40 | Adaptive optimal control of continuous aqueous two-phase flotation (ATPF)<br>(Katrín Baumgärtner, Florian Messerer, Kim Lohfink)                  |
| 13.40-13.50 | Model-based process control for dynamic and efficient operation of liquid/liquid mixer-settler systems<br>(Chrysoula Bliatsiou, Daniel Topalovic) |
| 13.50-14.05 | Autonomous structure formation processes in spray fluidized bed agglomeration<br>(Jialin Men, Eric Julian Otto, Aisel Ajalova)                    |
| 14.10-15.00 | Poster discussion   |
| 15.00-15.30 | Coffee break  |

## Particle Synthesis:

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|-------------|--|
| 15.30-15.45 | Autonomous control of a process chain for CO <sub>2</sub> carbonation by use of mine waste<br>(Mohammad Al Kathib, Volker Bächle, Chinmay Hegde)   |
| 15.45-15.55 | Model-based process control for transferred arc synthesis of nanoparticles<br>(Danijel Cuturic, Jonah Weidemann)   |
| 15.55-16.05 | Synthesis of highly functional nanoparticles via a sol-gel process using X-ray scattering methods: from process development to process control<br>(Guohui Yang, Marcel Kevin Jiokeng Dongmo) |
| 16.05-16.15 | Model-based control of the dynamics during fine grinding in wet-operated stirred media mills<br>(Michel Lahmann, Christoph Thon)   |
| 16.15-16.25 | ARCO-CRYSTAL: Adaptive robust predictive control of continuous slug flow cooling crystallization<br>(Collin Johnson, Maximilian Kattner, Marc Meier)   |
| 16.30-17.25 | Poster discussion  |
| 17.30-19.00 | Guest lecture with discussion: <b>Prof. Zoltan Nagy</b><br>Title: tbd  |
| 19.00       | Dinner   |

**Tuesday, 25.11.2025**

**Formulation:**

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|-------------|--|
| 09.00-09.10 | Autonomous and self-adapting, high-resolution 3D additive manufacturing by high energy impacts of fine particles<br>(Yannik Sinnwell, Anton Maksakov)  |
| 09.10-09.20 | Model-based quality control in continuous manufacturing of pharmaceutical granules (QC4CM)<br>(Stefan Tölle, Stefan Klinken-Uth)   |
| 09.20-09.35 | Formulation of dispersed systems via (melt) emulsification: Process design, in situ diagnostics and regulation<br>(Thorben Südhoff, Stefan Buchstaller, Leah Ebner)  |
| 09.35-09.45 | Model-based control of spray synthesis of structured granules with specified properties, using transfer functions derived by multivariate stochastic models and machine learning<br>(Rahul Mitra, Lukas Fuchs) |
| 09.50-10.45 | Poster discussion  |
| 10.45-11.15 | Coffee break   |
| 11.15-11.45 | Outlook for the second period  |
| 11.45-13.00 | Lunch  |
| 13.00       | Departure of the PIs   |