SPP 2122 Annual Meeting 2024

Date: March 11–12, 2024
Location: Evonik Headquarters, Rellinghauser Str. 1-11, 45128 Essen (Directions)

Monday, March 11, 2024

[10:45 – 11:45]	Meeting Program Committee and Industrial Advisory Board [internal]
[11:00 – 12:00]	Registration and Coffee
[12:00 – 12:10]	Welcome – On behalf of the program committee (Prof. Dr.-Ing. S. Barcikowski)
[12:10 – 13:50]	Presentation of each funded PI (DFG-Geschäftszeichen) – Part I (Presentations 1–10, 5 min. + 5 min. discussion each) (Prof. Dr.-Ing. S. Barcikowski)
[13:50 – 15:00]	Lunch Break
[15:00 – 16:30]	Presentation of each funded PI (DFG-Geschäftszeichen) – Part II (Presentations 11–19, 5 min. + 5 min. discussion each) (Prof. Dr. B. Gökce)
[16:30 – 17:00]	Coffee Break
[17:00 – 18:00]	Presentation of each funded PI (DFG-Geschäftszeichen) – Part III (Presentations 20–25, 5 min. + 5 min. discussion each) (Prof. Dr.-Ing. S. Barcikowski)
[18:00 – 19:00]	Hotel check-in and self-arranged arrival to Unperfekthaus
[19:00 – 22:00]	Dinner and MATframe-Party Unperfekthaus, Friedrich-Ebert-Str. 18-22, 45127 Essen (Directions)

Tuesday, March 12, 2024

[09:00 – 10:00]	Presentation of each funded PI (DFG-Geschäftszeichen) – Associated Projects (Presentations 26–30, 5 min. + 5 min. discussion each) (Prof. Dr. B. Gökce)
[10:00 – 10:15]	Coffee Break
[10:15 – 10:30]	SPP2122 Interlaboratory Study (ILS) Status (Dr. M. Kusoglu)
[10:30 – 10:40]	Special Issue (Prof. G. Luinstra)
[10:40 – 10:50]	Binational Activities (UK, SE) (Prof. Dr. B. Gökce)
[10:50 – 11:20]	Presentations of the Members of Industrial the Advisory Board
[11:20 – 11:30]	Closing Remarks (Prof. Dr.-Ing. S. Barcikowski)
[11:30 – 12:30]	Transfer Projects from SPP 2122 (Kathrin Spenna, DFG) [only for PIs who pre-submitted letter of interest in Transfer Projects]
[12:30 – 13:00]	Transportation of attendees of the SPP2122 Spring School to UDE Campus Essen

Presentations of PIs: Part I

01. Dr.-Ing. Nils Ellendt (Universität Bremen):
    Contamination tolerant hypo- and hypereutectic Al-Si-alloys for additive manufacturing

02. Dr.-Ing. Anastasiya Tönjes (Leibniz-Institut für Werkstofforientierte Technologien IWT):
    Contamination tolerant hypo- and hypereutectic Al-Si-alloys for additive manufacturing

03. Prof. Dr.-Ing. Christoph Broeckmann (RWTH Aachen University):
    Development of a method for carbide additivation on tool steel powders via a functional polymer binder to enhance the processability, microstructural isotropy, and strength of hard ferrous alloys

04. Prof. Dr. Andrij Pich (RWTH Aachen University):
    Development of a method for carbide additivation on tool steel powders via a functional polymer binder to enhance the processability, microstructural isotropy, and strength of hard ferrous alloys

05. Prof. Dr. Arno Kwade (TU Braunschweig):
    Development of surface tailored metal powders for increased production efficiency at the laser powder-bed fusion additive manufacturing process

06. Prof. Dr.-Ing. Jan T. Sehrt (Ruhr-Universität Bochum):
    Development of surface tailored metal powders for increased production efficiency at the laser powder-bed fusion additive manufacturing process

07. Prof. Dr. Stephan Barcikowski (Universität Duisburg-Essen):
    Dispersion effects of nanocomposites to improve melting and resolidification behavior during PBF-LB/P with near-infrared diode lasers

08. Simon Leupold (Friedrich-Alexander-Universität Erlangen-Nürnberg):
    Dispersion effects of nanocomposites to improve melting and resolidification behavior during PBF-LB/P with near-infrared diode lasers

09. Dr. Markus Apel (Access e. V.):
    Eutectic Al alloys with tailored solidification path to probe fundamental aspects of solidification in laser-based AM II

10. Markus Döring (Friedrich-Alexander-Universität Erlangen-Nürnberg):
    Eutectic Al alloys with tailored solidification path to probe fundamental aspects of solidification in laser-based AM II

Presentations of PIs: Part II

11. Prof. Dr. Gerrit Luinstra (Universität Hamburg):
    Generation of polyethylene powder for the fiber laser based Direct Energy Deposition process: Parametric studies, microstructure and mechanical properties

12. Prof. Dr. Andreas Ostendorf (Ruhr-Universität Bochum):
    Generation of polyethylene powder for the fiber laser based Direct Energy Deposition process: Parametric studies, microstructure and mechanical properties

13. Prof. Dr.-Ing. Christoph Broeckmann (RWTH Aachen University):
    Influence of Si3N4 powder additivation on PBF-LB processability of stainless steels and microstructural evolution during PBF-LB and a subsequent HIP-URQ densification process

14. Prof. Dr.-Ing. Sebastian Weber (Ruhr-Universität Bochum):
    Influence of Si3N4 powder additivation on PBF-LB processability of stainless steels and microstructural evolution during PBF-LB and a subsequent HIP-URQ densification process

15. Prof. Dr. Mirko Schaper (Universität Paderborn):
    Inoculation of Aluminium Powders for Additive Manufacturing guided by Differential Fast Scanning Calorimetry

16. Prof. Dr. Olaf Keßler (Universität Rostock):
    Inoculation of Aluminium Powders for Additive Manufacturing guided by Differential Fast Scanning Calorimetry

17. Dr. Evgeny Zhuravlev (Universität Rostock):
    Inoculation of Aluminium Powders for Additive Manufacturing guided by Differential Fast Scanning Calorimetry

18. Prof. Dr. Bilal Goekce (Bergische Universität Wuppertal):
    Nanoparticle additivation of powders for laser additive manufacturing of oxide-dispersion strengthened steels: a joint experimental and numerical study

19. Prof. Dr. Bai-Xiang Xu (Technische Universität Darmstadt):
    Nanoparticle additivation of powders for laser additive manufacturing of oxide-dispersion strengthened steels: a joint experimental and numerical study

Presentations of PIs: Part III

20. Dr. Stephanie Lippmann (Friedrich-Schiller-Universität Jena):
    New high stiffness materials for light weight constructions using ultrafast additive manufacturing

21. Prof. Dr. Stefan Nolte (Friedrich-Schiller-Universität Jena):
    New high stiffness materials for light weight constructions using ultrafast additive manufacturing

22. Dr. Johannes Rudloff (SKZ – Das Kunststoff-Zentrum):
    Numerical and experimental investigations of dimensionless material parameters in laser additive manufacturing of polymers for accelerated material development and process optimization – Phase 2: Expansion of the application field optimization

23. Dr. Claas Bierwisch (Fraunhofer-Institut für Werkstoffmechanik IWM):
    Numerical and experimental investigations of dimensionless material parameters in laser additive manufacturing of polymers for accelerated material development and process optimization – Phase 2: Expansion of the application field optimization

24. Elmar Breitbach (Leibniz Universität Hannover):
    Tailor made Magnesium Alloy for Selective Laser Melting: Material Development and Process Modelling

25. Prof. Dr.-Ing. Ludger Overmeyer (Laserzentrum Hannover):
    Tailor made Magnesium Alloy for Selective Laser Melting: Material Development and Process Modelling

Presentations of PIs: Associated Projects

26. Dr. Julia Grothe (TU Dresden):
    Development of a novel processing route for dispersoid/precipitation-strengthened high conductive copper alloys by using metallized nano ceramics in additive manufacturing

27. Dr.-Ing. Katrin Jahns (Hochschule Osnabrück):
    Development of a novel processing route for dispersoid/precipitation-strengthened high conductive copper alloys by using metallized nano ceramics in additive manufacturing

28. Prof. Dr.-Ing. Ulrich Krupp (RWTH Aachen University):
    Development of a novel processing route for dispersoid/precipitation-strengthened high conductive copper alloys by using metallized nano ceramics in additive manufacturing (associated project)

29. Prof. Dr.-Ing. Johannes Henrich Schleifenbaum (RWTH Aachen University):
    Investigation of the influence of powder blends on production and materials technology aspects in Laser Powder Bed Fusion

30. Prof. Dr.-Ing. Katrin Wudy (Technical University of Munich (TUM)):
    In-situ analysis of microstructure development and powder aging during powder bed fusion of plastics using dielectric relaxation spectroscopy