

# 1<sup>ST</sup> CONFERENCE ON FAST/SPS From Research to Industry

OCTOBER 25–26, 2021  
MONDAY, 09.00–22.00  
TUESDAY, 09.00–13.10

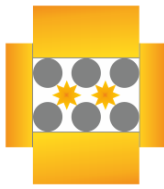
HP PARK HOTEL  
77 A. BARANIAKA ST., 61-131 POZNAN, POLAND  
AND REMOTELY (MS TEAMS)

## CONFERENCE PROGRAMME

### DAY 1

OCTOBER 25, 2021 (MONDAY)

- 09.00–09.30** Registration of Participants
- 09.30–09.45** Opening of the 1<sup>st</sup> day of the Conference
- 09.45–10.30** **KEYNOTE PRESENTATION**  
*Session chairman: Dariusz Garbiec*
- 09.45–10.30** Application of FAST/SPS for the processing of advanced materials (stationary)  
*Olivier Guillon, Institute of Energy and Climate Research: Materials Synthesis and Processing (IEK-1), Forschungszentrum Jülich GmbH, Jülich, Germany*
- 10.30–10.50** COFFEE BREAK
- 10.50–12.10** **SESSION I**  
*Session chairman: Alexander Laptev*
- 10.50–11.10** Structural changes and pseudo-piezoelectricity in FAST/SPS prepared calcium titanate – towards novel implant materials (stationary)  
*Abdullah Riaz, University of Rostock, Rostock, Germany*
- 11.10–11.30** Ceramic particulate reinforced aluminium alloys consolidated by spark plasma sintering for brake disc applications (stationary)  
*Johannes Trapp, Fraunhofer Institute for Manufacturing and Advanced Materials IFAM, Dresden, Germany*
- 11.30–11.50** Numerical determination of the effective thermal conductivity of porous material manufactured by FAST/SPS (stationary)  
*Jerzy Rojek, Institute of Fundamental Technological Research of the Polish Academy of Sciences, Warsaw, Poland*
- 11.50–12.10** Engemini: a digital asset paving the way towards SPS industrialization (stationary)  
*Antoine Van der Laan, Norimat, Labège, France*
- 12.10–12.30** COFFEE BREAK
- 12.30–13.50** **SESSION II**  
*Session chairman: Piotr Klimczyk*
- 12.30–12.50** Development of MMC, CMC and MAX-based composites by FAST/SPS (stationary)  
*Dariusz Garbiec, Łukasiewicz Research Network – Metal Forming Institute, Poznan, Poland*
- 12.50–13.10** Bimodal grain size structure formation by SPS and severe deformation (stationary)  
*Volf Leshchynsky, Łukasiewicz Research Network – Metal Forming Institute, Poznan, Poland*
- 13.10–13.30** Impact of CFRC plates on energy and temperature during spark plasma sintering (stationary)  
*Alexander Laptev, Łukasiewicz Research Network – Metal Forming Institute, Poznan, Poland*
- 13.30–13.50** Development of high entropy alloys by field assisted sintering using commodity powders (stationary)  
*Venkatesh Kumaran Sivagnana, IMDEA Materials Institute, Madrid, Spain*
- 13.50–15.00** LUNCH

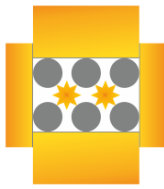


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- 15.00–16.40**      **SESSION III**  
*Session chairman: Abdullah Riaz*
- 15.00–15.20**      **Recycling of out of specification AM metal powders using FAST (remotely)**  
*Simon Graham, The University of Sheffield, Sheffield, UK*
- 15.20–15.40**      **FAST-AM: A novel technique for creating Ti site-specific properties via additive manufacturing (remotely)**  
*Cameron Barrie, The University of Sheffield, Sheffield, UK*
- 15.40–16.00**      **Deformation behaviour of a FAST diffusion bond processed from Ti-6Al-4V/Ti-6Al-2Sn-4Zr-2Mo powders (remotely)**  
*Oliver Levano Blanch, The University of Sheffield, Sheffield, UK*
- 16.00–16.20**      **Channeling current to create unique temperature profiles in titanium alloys during FAST processing (remotely)**  
*James Pepper, The University of Sheffield, Sheffield, UK*
- 16.20–16.40**      **Hall-Petch effect in binary and ternary alumina / zirconia / spinel composites (remotely)**  
*Olivia Graeve, University of California San Diego, La Jolla, USA*
- 16.40–17.00**      **COFFEE BREAK**
- 17.00–18.20**      **SESSION IV**  
*Session chairman: Olivier Guillon*
- 17.00–17.20**      **Deformation behaviour of a novel Ni-based superalloy processed via spark plasma sintering (remotely)**  
*Antonio Potenciano, Universidad Carlos III de Madrid, Madrid, Spain*
- 17.20–17.40**      **The influence of composition in the creep strength of a ferritic ODS steel consolidated by SPS (remotely)**  
*Alberto Meza, IMDEA Materials Institute, Madrid, Spain*
- 17.40–18.00**      **Spark plasma sintering consolidation of ceramics based on Portland clinker (remotely)**  
*Jose M. Torralba, IMDEA Materials Institute, Universidad Carlos III de Madrid, Madrid, Spain*
- 18.00–18.20**      **Heating pathways in spark plasma sintering (remotely)**  
*Eugene A. Olevsky, San Diego State University, San Diego, USA*
- 18.20–18.40**      **COFFEE BREAK**
- 18.40–19.00**      **SESSION V — POSTER SESSION (STATIONARY)**
- 20.00–22.00**      **CONFERENCE DINNER**

## DAY 2 OCTOBER 26, 2021 (TUESDAY)

- 09.00–09.10**      **Opening of the 2<sup>nd</sup> day of the Conference**
- 09.10–10.30**      **SESSION VI**  
*Session chairman: Johannes Trapp*
- 09.10–09.30**      **Ultrashort sintering of amorphous Zr-based AMZ4 bulk metallic glass and preparation of Cu-based AMC4 and diamond composite in GeniCore U-FAST machine (stationary)**  
*Maweja Kasonde, GeniCore Sp. z o.o., Warsaw, Poland*
- 09.30–09.50**      **FAST/SPS in industrial production (stationary)**  
*Jens Huber, Dr. Fritsch Sondermaschinen GmbH, Fellbach, Germany*



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- 09.50–10.10**    **GeniCore – Examples of PPC and SPS made materials in industrial applications (stationary)**  
*Damian Karpowicz, GeniCore Sp. z o.o., Warsaw, Poland*
- 10.10–10.30**    **Scaling up the production of short fiber reinforced – ultra high temperature composites by SPS (remotely)**  
*Miguel A. Lagos, Tecnlia, Donostia-San Sebastián, Spain*
- 10.30–10.50**    **COFFEE BREAK**
- 10.50–12.10**    **SESSION VII**  
*Session chairman: Jerzy Rojek*
- 10.50–11.10**    **Effect of spark plasma sintering on microstructure and properties of Alumix-based composites reinforced with B<sub>4</sub>C particles (remotely)**  
*Anna Wąsik, AGH University of Science and Technology, Krakow, Poland*
- 11.10–11.30**    **Characteristics of the surface layer of Ti-Mo/TiC nanocomposites obtained by field assisted sintering technique (stationary)**  
*Paweł Figiel, West Pomeranian University of Technology in Szczecin, Szczecin, Poland*
- 11.30–11.50**    **SHS synthesis of tellurides using SPS apparatus (stationary)**  
*Kamil Kaszyca, Łukasiewicz Research Network – Institute of Microelectronics and Photonics, Warsaw, Poland*
- 11.50–12.10**    **Properties of spark plasma sintered bulks and coatings made of tungsten diboride alloyed with Cr, Mo, Re and Zr (stationary)**  
*Rafał Psiuk, Institute of Fundamental Technological Research of the Polish Academy of Sciences, Warsaw, Poland*
- 12.10–13.10**    **CLOSING OF THE CONFERENCE / LUNCH**
- 13.10–14.00**    **Visiting Łukasiewicz Research Network – Metal Forming Institute**

## Organizers



## Co-organizers



## Partners



### The organizers provide:

- conference materials (book of abstracts),
- lunch on October 25<sup>th</sup> and 26<sup>th</sup>,
- conference dinner on October 25<sup>th</sup>,
- accommodation paid by the participants.

**Participation in the Conference is free of charge.**