

# **Powder Flow 2021**

**Online Workshop and Conference: 9 -11 March 2021**

**From fundamentals of powder flow to state-of-the-art theories  
and measurements for practical applications**

# Powder Flow 2021

## Online Workshop and Conference: 9 -11 March 2021

### Meeting Objectives

This online event will start with a 1-day workshop covering the fundamentals of powder flow followed by a 2-day technical meeting focused around the latest science underpinning powder flow and handling. It will look at progress in state-of-the-art theories and measurements in the context of practical applications and case studies. The programme will draw from invited presentations from the best academic and industrial speakers in the field and will cover:

- State-of-the-art flow measurement techniques for various applications (Dr Diego Barletta, University of Salerno, Italy)
- Flow behaviour of formulated powders (Dr Mehrdad Pasha, UCB)
- A novel approach to predict the powder flowability from milligramme samples (Dr Vivek Garg, University of Greenwich)
- Cohesive-particle flows: Getting out of a sticky situation, (Professor Christine Hrenya, University of Colorado Boulder)
- Application of powder flow measurements - some case studies (Dr Vincenzino Vivacqua, Johnson Matthey)
- Manipulating powder flow via surface chemistry (Dr Jerry Heng, Imperial College)
- Polymer powders for additive manufacturing: challenges and opportunities (Dr Enrico Gallino, RICOH UK Products Ltd.)

### Who Should Attend

This event is aimed at students, academic and industrial scientists and engineers active in various areas of powder manufacturing, processing and characterisation, particularly powder flow and its industrial applications.

### Scientific and Organising Committee

Dr Ali Hassanpour (University of Leeds)  
Dr Colin Hare (University of Surrey)  
Dr Tim Freeman (Freeman Technology)  
Prof. Raffaella Ocone (Heriot-Watt University)  
Prof. Mike Bradley (University of Greenwich)  
Dr Mehrdad Pasha (UCB)

### Call for Abstract

Participants are welcome to submit an abstract for the poster presentation session (best poster prize awarded).

A limited number of openings are available for oral presentations; abstracts covering work of outstanding significance are urgently invited.

Deadline for abstract submission for both oral presentation and the poster session is **31<sup>st</sup> January 2021**.

### Registration

Registration is open via our website

<http://www.constableandsmith.com/events/powder-flow-2021>

Pre-registration is essential for this event. Places are limited, therefore please register early via our website to confirm your place.

The meeting is promoted by IChemE, APS, RSC and their members will receive a discount for registration.

Email (technical enquiries): [info@powder-flow.com](mailto:info@powder-flow.com)

Email (admin and registration enquiries):  
[deborah@constableandsmith.com](mailto:deborah@constableandsmith.com)

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### Workshop programme, provisional (9 March 2021, GMT)

|               |  |
|---------------|--|
| 12:00 – 13:00 | Online registration  |
| 13:00 – 13:10 | Welcome, introduction to programme, how sessions will run                                  |
| 13:10 – 13:55 | Fundamentals of powder flow – the onset of flow and measurement principles (Dr Colin Hare) |
| 13:55 – 14:40 | Workshop 1 (demonstration – measurements using uniaxial compression, shear cell and FT4)   |
| 14:40 – 15:00 | <b>Break</b>   |
| 15:00 – 15:45 | Fundamentals of powder flow – stress in containers and dynamic effects (Dr Ali Hassanpour) |
| 15:45 – 16:25 | Workshop 2 (hands on experience – analysis of results)                                     |
| 16:25 – 17:15 | Open Discussion/Forum  |
| 17:15 -       | Close of day 1   |



# Powder Flow 2021

## Online Workshop and Conference: 9 -11 March 2021

### Meeting programme, provisional (10 March 2021, GMT)

|               |   |
|---------------|---|
| 12:00 – 13:00 | Online registration   |
| 13:00 – 13:10 | Welcome, introduction to programme, how sessions will run   |
| 13:10 – 13:40 | State-of-the-art flow measurement techniques for various applications (Dr Diego Barletta, University of Salerno, Italy) |
| 13:40 – 14:10 | A novel approach to predict the powder flowability from milligramme samples (Dr Vivek Garg, University of Greenwich)    |
| 14:10 – 14:30 | <b>Break</b>  |
| 14:30 – 14:50 | Selected talk 1   |
| 14:50 – 15:20 | Cohesive-particle flows: Getting out of a sticky situation (Prof. Christine Hrenya, University of Colorado Boulder)     |
| 15:20 – 16:30 | <b>Poster session 1 and Virtual Exhibition</b>  |
| 16:30 -       | Close of day 1  |

### Meeting programme, provisional (11 March 2021, GMT)

|               |  |
|---------------|--|
| 12:50 – 13:00 | Introduction to how sessions will run  |
| 13:00 – 13:30 | Flow behaviour of formulated powders (Dr Mehrdad Pasha, UCB)   |
| 13:30 – 14:00 | Manipulating powder flow via surface chemistry (Dr Jerry Heng, Imperial College)                                     |
| 14:00 – 14:20 | Selected talk 2  |
| 14:20 – 14:35 | <b>Break</b>   |
| 14:35 – 15:05 | Application of powder flow measurements - case studies (Dr Vincenzino Vivacqua, Johnson Matthey)                     |
| 15:05 – 15:35 | Polymer powders for additive manufacturing: challenges and opportunities (Dr Enrico Gallino, RICOH UK Products Ltd.) |
| 15:35 – 16:20 | <b>Poster session 2 and Virtual Exhibition</b>   |
| 16:20 – 17:00 | Open Discussion/Forum  |
| 17:00         | Poster Award and close of meeting  |