A selection of poster titles in simulation and sensing:

- Physics-based digital twins for individualizing drug delivery
- Hygrothermal sensing to optimize plant-based food supply chains
- Simulation-based electrohydrodynamic drying of biological materials
- Spatially resolved mapping of graphene’s thermal conductivity by an opto-thermal method
- Colorimetric and fluorometric sensors for healthcare
- Digital twins in fresh-produce supply chains
- Simulating transport in calcium silicate hydrate
- Thermodynamic predictions on zeolite formation between cement/clay interfaces
- Textile-based sensors for vital parameters monitoring
- Electrohydrodynamic flow simulations for air propulsion
- Simulating the human-clothing-environment system for indoor environment, automotive cabins and urban climate

and many more…

General Information

Location Hybrid meeting @ Empa
Überlandstrasse 129, 8600 Dübendorf
and Virtual via Zoom
More information will follow.

Costs The event is sponsored by Empa
and free of charge for participants.

Registration www.empa-akademie.ch/simsense

Deadline December 9, 2020

Contact Empa
Thijs Defraeye
Phone +41 58 765 47 90
thijs.defraeye@empa.ch
www.empa.ch

How to get here Please do use public transport.
There is only very limited parking available.

Directions to Empa

Hybrid meeting @ Empa
Überlandstrasse 129, 8600 Dübendorf
and Virtual via Zoom
Wednesday, December 16, 2020
from 14:00 to 16:30

Online registration:
www.empa-akademie.ch/simsense
### Topic
Application of simulations or sensing in health-tech, energy science, nano-material research, atmospheric science and sustainable buildings.

- Physics-based and data-driven modeling and simulations. Examples include continuum hygro-thermo-mechanical FEM and environmental computational fluid dynamics, molecular dynamics, multiscale modeling, discrete element modeling, machine learning, AI, digital twins or biomedical image processing.
- Sensing for precision medicine, food technology, building technology, wearables for body monitoring, drug delivery or acoustics.

### Target audience
Scientists, PhDs, engineers or startups working with simulations and sensing.

### Objectives
Empa's Simulation and Sensing event has the following objectives:

- Showcase the state-of-the-art scientific and technological developments to colleagues at Empa as well as industry and other research institutes
- Bring the community at Empa together to cross-pollinate expertise to identify synergies
- A nucleus for future collaborations between industrial partners, startups and Empa
- Get you thinking on your future activities in simulation or sensing: Do you need to expand? Where can you go? Or are you fine as it is…

You can interactively discover how our researchers make an impact on society by simulations and sensing, via our Brainteaser poster session & pitches. We also challenge your vision on simulations and sensing so you can use these tools to force breakthroughs in your future projects. You will have to put in some thinking, but you are rewarded with a refreshing drink, excellent food and stimulating conversations.

### Program

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>14:00</td>
<td>Welcome Coffee</td>
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<tr>
<td>14:30</td>
<td>Opening remarks</td>
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<tr>
<td></td>
<td>Thijs Defraeye</td>
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<tr>
<td>14:40</td>
<td>Sensing and simulation –</td>
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<td>Key pillars of digital transformation</td>
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<td></td>
<td>Stuart Bashford, Digital Officer at Bühler Group</td>
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<tr>
<td>15:00</td>
<td>Simulations and Sensing Q&amp;A</td>
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<tr>
<td></td>
<td>Thijs Defraeye, Simon Annaheim</td>
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<tr>
<td>15:20</td>
<td>1-min poster pitches on Sensing @ Empa</td>
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<td></td>
<td>Empa staff</td>
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<tr>
<td>15:30</td>
<td>Brainteaser poster session</td>
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<tr>
<td>16:00</td>
<td>1-min Poster pitches on Simulations @ Empa</td>
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<tr>
<td></td>
<td>Empa staff</td>
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<tr>
<td>16:10</td>
<td>Brainteaser poster session and Christmas Apero</td>
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<tr>
<td></td>
<td>(Gluhwein and Food)</td>
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</tbody>
</table>

### Registration

**Simulation and Sensing @ Empa**

Hybrid meeting @ Empa
Überlandstrasse 129, 8600 Dübendorf
and Virtual via Zoom
**Wednesday, December 16, 2020**
from 14:00 to 16:30

Deadline: December 9, 2020

Please register online:

[www.empa-akademie.ch/simsense](http://www.empa-akademie.ch/simsense)

You will receive a confirmation by e-mail.