

**SMART-SOLID-Q-MAT Summer School 2023**  
**Sandbjerg Estate**  
**26<sup>th</sup> – 30<sup>th</sup> of June 2023**



**Program**

**Monday, June 26**

<b>10:00-12:00</b>	<b>Arrival at Sandbjerg Estate</b>
<b>12:00-13:00</b>	<b>Lunch</b>
<b>13:00-13:25</b>	<b><i>Welcome by lighthouse keepers &amp; Practical information</i></b>
<b>13:25-14:10</b>	<b>Kurt Clausen, Danish Technical University <i>The Road to ESS – a Danish perspective</i></b>
<b>14:10-14:55</b>	<b>Mads Ry Jørgensen, MAXIV &amp; Aarhus University <i>Introduction to synchrotron radiation and beamlines</i></b>
<b>14:55-15:15</b>	<b>Coffee break</b>
<b>15:15-16:00</b>	<b>Aymeric Robert, MAXIV <i>Science opportunities with MAX IV, a diffraction-limited storage ring</i></b>
<b>16:00-16:45</b>	<b>Henrik Birkedal, Aarhus University <i>Introduction to imaging</i></b>
<b>16:45-17:00</b>	<b>Coffee break</b>
<b>17:00-17:45</b>	<b>Masaki Takata, Tohoku University <i>Update on the Japanese synchrotron Nanoterasu</i></b>
<b>18:00-19:00</b>	<b>Dinner</b>
<b>19:30-20:15</b>	<b>Robert Feidenhans'l, European XFEL <i>Introduction to XFELs and overview of the European XFEL</i></b>

**Tuesday, June 27**

<b>08:00-08:45</b>	<b>Breakfast</b>
<b>08:45-09:30</b>	<b>Jonas Beyer, Aarhus University <i>Powder diffraction and total scattering</i></b>
<b>09:30-10:15</b>	<b>Mogens Christensen, Aarhus University <i>Magnetic structures obtained from neutron diffraction</i></b>
<b>10:15-10:30</b>	<b>Coffee break</b>
<b>10:30-11:15</b>	<b>Manuel Guizar-Sicairos, École polytechnique fédérale de Lausanne/ Paul Scherrer Institute <i>Ptychography</i></b>

11:15-12:00	Rasmus Toft-Petersen, Danish Technical University <i>Introduction to neutron spectroscopy</i>
12:00-14:30	Lunch break (Lunch 12:00-13:00)
14:30-15:15	Johanne Pontoppidan, Information <i>Communicating science to the public</i>
15:15-15:30	Coffee break
15:30-16:00	Introduction to group work (w. Dorthe Ravnsbæk, AU)
16:00-17:15	Group work
17:15-17:45	Rasmus Toft-Petersen, Danish Technical University <i>BIFROST – and indirect geometry ToF spectrometer for extreme environments</i>
18:00-19:00	Dinner
19:30-21:00	Poster session

### Wednesday, June 28

08:00-09:00	Breakfast
09:00-09:30	Mads Ry Jørgensen, MAXIV & Aarhus University <i>DanMAX - PXRD and full field imaging at MAX IV</i>
09:30-10:15	Bo Brummerstedt Iversen, Aarhus University <i>XFEL Crystallography</i>
10:15-10:45	Coffee break
10:45-11:15	Matilde Saura-Muzquiz, Universidad Complutense de Madrid <i>Texture analysis in polycrystalline materials</i>
11:15-12:00	Henning Friis Poulsen, Danish Technical University <i>Multimodal imaging using diffraction contrast</i>
12:00-14:30	Lunch break (Lunch 12:00-13:00)
14:30-17:00	Group work
17:00-17:45	Henrik Birkedal, Aarhus University <i>Multimodal and multilength scale imaging of nano-structured materials</i>
18:30 –	Conference dinner

### Thursday, June 29

8:00-09:00	Breakfast
09:30-10:15	Shuai Wei, Aarhus University <i>Beyond synchrotron X-rays: what can we gain from X-ray free electron lasers (XFEL)?</i>
10:15-10:30	Coffee break
10:30-11:15	Luise Theil Kuhn, Danish Technical University <i>Advanced neutron imaging methods for understanding energy materials in operation</i>
11:15-12:00	William Brant, Uppsala University <i>Evolution and aging in battery materials as studied using operando X-ray diffraction</i>
12:15-14:30	Lunch break (Lunch 12:00-13:00)

<b>14:30-17:00</b>	<b>Group work</b>
<b>17:00-17:45</b>	<b>Martin Bremholm, Aarhus University</b> <i>Extreme Conditions Sample Environments for X-ray and Neutron Scattering</i>
<b>18:00-19:00</b>	<b>Dinner</b>
<b>19:30-20:15</b>	<b>Hanna Leemreize, Technological Institute</b> <i>Industrial use of synchrotron and neutron facilities</i>

**Friday, June 30**

<b>08:00-09:00</b>	<b>Breakfast &amp; Check out (BEFORE 9 AM)</b>
<b>09:00-09:45</b>	<b>William Brant, Uppsala University &amp; Altris</b> <i>Academia to Industry and idea to implementation: The Altris journey towards commercial sodium-ion batteries</i>
<b>09:45-10:15</b>	<b>Jette Oddershede, Xnovo</b> <i>Taking advanced microstructural imaging techniques from large scale facilities to the users own home lab</i>
<b>10:15-10:30</b>	<b>Coffee break</b>
<b>10:30-11:45</b>	<b>Wrap-up on group work with presentations by all groups</b>
<b>11:45-12:00</b>	<b>How will the group work output be utilized (w. Dorthe Ravnsbæk)</b> <i>Final remarks</i>
<b>12:00-13:00</b>	<b>Lunch &amp; Departure from Sandbjerg Estate</b>