

# NPC–NAS 2025 Programme

| Day 1 – Monday 20 October     |                                                                                                                                                                                                                                                         |     |
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|                               | NPC                                                                                                                                                                                                                                                     | NAS |
| Day 1 20/10<br>Session 1: NPC | Structure and function of photosynthetic complexes                                                                                                                                                                                                      |     |
| 13:00–13:15                   | Welcome Address                                                                                                                                                                                                                                         |     |
| 13:15–14:00                   | Invited international<br><b>Roberta Croce, Vrije Universiteit Amsterdam, The Netherlands:</b><br>Photosynthesis in the far-red: from cyanobacteria to plants                                                                                            |     |
| 14:00–14:30                   | Nordic invited<br><b>Wolfgang Schröder, Umeaa University, Sweden:</b><br>Arabidopsis PSII as seen by Cryo-EM                                                                                                                                            |     |
| 14:30–15:00                   | Nordic invited<br><b>Alexey Amunts, The Max Planck Institute of Molecular Physiology, Dortmund, and Univ. of Münster, Germany (EMBO Young Investigator Lecture):</b><br>Integrated structural biology reveals unprecedented plasticity in Photosystem I |     |
| 15:00–15:30                   | Coffee                                                                                                                                                                                                                                                  |     |
| 15:30–15:55                   | Selected from abstract                                                                                                                                                                                                                                  |     |
| 15:55–16:20                   | Selected from abstract                                                                                                                                                                                                                                  |     |
| 16:20–16:45                   | Selected from abstract                                                                                                                                                                                                                                  |     |
| 16:45–17:10                   | Selected from abstract                                                                                                                                                                                                                                  |     |
| 17:15–18:30                   | Posters – NPC                                                                                                                                                                                                                                           |     |
| 19:00                         | Dinner                                                                                                                                                                                                                                                  |     |

# NPC–NAS 2025 Programme

| Day 2 – Tuesday 21 October |                                                                                                                                                                                                          |                                                           |
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|                            | NPC                                                                                                                                                                                                      | NAS                                                       |
| Day 2 21/10<br>Session 2   |                                                                                                                                                                                                          |                                                           |
| 8:30–9:25                  | Invited international<br><b>Jonathan Zehr, University of California, Santa Cruz, USA:</b><br>The marine algal nitroplast UCYN-A: ecology, evolution and implications for the future                      |                                                           |
| 9:25–9:55                  | Nordic invited<br><b>Susan Løvstad Holdt, DTU, Technical University of Denmark:</b><br>Challenges and opportunities in advancing seaweed as a compliant, nutritious, and scalable food source for Europe |                                                           |
| 9:55–10:15                 | TBA                                                                                                                                                                                                      |                                                           |
| 10:15–10:45                | Coffee                                                                                                                                                                                                   |                                                           |
| Session 2 –<br>NPC – NAS   | Regulation of photosynthesis                                                                                                                                                                             | Current capacity and needs for algae in the Nordic region |
| 10:45–11:15                | Nordic invited<br><b>Lauri Nikkanen, University of Turku, Finland:</b><br>Dynamic regulation of the proton motive force in cyanobacteria                                                                 | TBA                                                       |
| 11:15–11:45                | Nordic invited<br><b>Dimitris Petroutsos, Uppsala University, Sweden:</b> Photoreceptor-mediated regulation of photosynthesis in green microalgae                                                        | Selected from abstract                                    |
| 11:45–12:00                | Selected from abstract                                                                                                                                                                                   | Selected from abstract                                    |
| 12:00–13:00                | Lunch                                                                                                                                                                                                    |                                                           |
| Session 3:                 |                                                                                                                                                                                                          |                                                           |
| 13:00–13:45                | Invited – International<br><b>Tomas Morosinotto, Università di Padova, Italy:</b><br>Balancing Photoprotection and Efficiency to Enhance Photosynthetic Productivity in Algae and Plants                 |                                                           |
| 13:45–14:15                | Invited – Nordic<br><b>Armando F J Perez Cueto Eulert, Umeaa University, Sweden</b>                                                                                                                      |                                                           |
| 14:15–14:30                | Invited – Nordic<br><b>Kirsten Krause, UiT The Arctic University of Norway:</b><br>National education and infrastructure networks connect and unify plant and algae research across Norway               |                                                           |

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| 14:30-14:45                    | TBA                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                              |
| 14:45-15:15                    | Coffee                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                              |
| <b>Session 3<br/>NPC - NAS</b> | <b>Molecular<br/>basis of assembly, photoinhibition and<br/>repair</b>                                                                                                                                                               | <b>Algae based<br/>products</b>                                                                                                                                                                                                                              |
| 15:15-15:45                    | Nordic invited<br><b>Simon Stael, The Swedish University of<br/>Agricultural Sciences, Uppsala, Sweden:</b><br>Burning Glass Effect of Water Droplets<br>Triggers a High Light-Induced Calcium<br>Response in the Chloroplast Stroma | Nordic invited<br><b>Cornelia Spetea Wiklund, University of<br/>Gothenburg, Sweden:</b><br>SEAlgaePower – Sustainable development<br>of microalgae-based ingredients using<br>waste streams from aquaculture and<br>seafood processing industry as feedstock |
| 15:45-16:05                    | Selected<br>from abstract                                                                                                                                                                                                            | Selected<br>from abstract                                                                                                                                                                                                                                    |
| 16:05-16:25                    | Selected<br>from abstract                                                                                                                                                                                                            | Selected<br>from abstract                                                                                                                                                                                                                                    |
| 16:25-16:45                    | Selected<br>from abstract                                                                                                                                                                                                            | Selected<br>from abstract                                                                                                                                                                                                                                    |
| 16:45-18:00                    | <b>Poster session – NPC–NAS</b>                                                                                                                                                                                                      |                                                                                                                                                                                                                                                              |
| 19:00                          | <b>Dinner</b>                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                              |

# NPC–NAS 2025 Programme

| Day 3 – Wednesday 22 October |                                                                                                                                                                       |                                                                                                                                                  |
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|                              | NPC                                                                                                                                                                   | NAS                                                                                                                                              |
| Day 3 22/10<br>Session 4     |                                                                                                                                                                       |                                                                                                                                                  |
| 8:30–9:15                    | Invited International<br><b>Maria Barbosa, Wageningen University &amp; Research, The Netherlands: TBA</b>                                                             |                                                                                                                                                  |
| 9:15–9:45                    | Invited – Nordic<br><b>Pia Lindberg, Uppsala University, Sweden:</b><br>Engineering cyanobacteria for sustainable production of solar chemicals and fuels             |                                                                                                                                                  |
| 9:45–10:00                   | TBA                                                                                                                                                                   |                                                                                                                                                  |
| 10:00–10:30                  | Coffee                                                                                                                                                                |                                                                                                                                                  |
| Session 4 –<br>NPC – NAS     | Light harvesting                                                                                                                                                      | Algae engineering                                                                                                                                |
| 10:30–11:00                  | Invited<br><b>Dario Leister, Ludwig-Maximilians-University Munich, Germany:</b><br>Adaptive evolution in fluctuating light                                            | Nordic – invited<br><b>Pauli Kallio, University of Turku:</b><br>Approaches to cyanobacterial pathway optimization via combinatorial engineering |
| 11:00–11:20                  | Selected from abstract                                                                                                                                                | Selected from abstract                                                                                                                           |
| 11:20–11:40                  | Selected from abstract                                                                                                                                                | Selected from abstract                                                                                                                           |
| 11:40–12:00                  | Selected from abstract                                                                                                                                                | Selected from abstract                                                                                                                           |
| 12:00–13:00                  | Lunch                                                                                                                                                                 |                                                                                                                                                  |
| Session 5:                   |                                                                                                                                                                       |                                                                                                                                                  |
| 13:00–13:45                  | Invited international<br><b>Christiane Raines, University of Essex, UK:</b><br>Engineering photosynthetic carbon fixation for crop improvement                        |                                                                                                                                                  |
| 13:45–14:15                  | Invited – Nordic<br><b>Johan Andersen-Ranberg, Univ. of Copenhagen, Denmark:</b><br>Identification and characterization of enzymes for biosynthesis of algae pigments |                                                                                                                                                  |
| 14:15–14:30                  | TBA                                                                                                                                                                   |                                                                                                                                                  |
| 14:30–15:00                  | Coffee                                                                                                                                                                |                                                                                                                                                  |
| Session 5 –<br>NPC–NAS       | Improving and utilizing photosynthesis                                                                                                                                | Algae biotechnology                                                                                                                              |

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| 15:00-15:30 | <p>Nordic invited<br/> <b>Cecilia Blikstad, Uppsala University, Sweden:</b><br/> Encapsulation and regulation of carboxysomal carbonic anhydrases</p> | <p>Nordic invited<br/> <b>Luca Morelli, University of Southern Denmark:</b><br/> Decoding and rewiring <i>Phaeodactylum tricornutum</i> metabolism for high-value compound production.</p>                             |
| 15:30-16:00 | Selected from abstract                                                                                                                                | <p>Nordic invited<br/> <b>Tore Brembu, Norwegian University of Science and Technology, Norway:</b><br/> Investigating fundamental features of cell wall biomineralization in the large diatom <i>Coscinodiscus</i></p> |
| 16:00-16:20 | Selected from abstract                                                                                                                                | Selected from abstract                                                                                                                                                                                                 |
| 16:20-16:40 | Selected from abstract                                                                                                                                | Selected from abstract                                                                                                                                                                                                 |
| 16:45-18:00 | <b>Poster session – NPC-NAS</b>                                                                                                                       |                                                                                                                                                                                                                        |
| 19:00       | <b>Conference Dinner</b>                                                                                                                              |                                                                                                                                                                                                                        |

# NPC–NAS 2025 Programme

| Day 4 – Thursday 23 October |                                                                                                                                                                                    |                                                                                                                                                                       |
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|                             | NPC                                                                                                                                                                                | NAS                                                                                                                                                                   |
| Day 4 23/10<br>Session 6:   |                                                                                                                                                                                    |                                                                                                                                                                       |
| 8:30–9:15                   | Invited – International<br><b>Vitor Verdelho, European Algae Biomass Association / CEO of Cell4Food, Portugal:</b><br>Beyond conventional algae applications: cellular agriculture |                                                                                                                                                                       |
| 9:15–9:45                   | Invited – Nordic<br><b>Joan Albert Porcar-Castell, Univ. of Helsinki, Finland:</b><br>The quest to characterize the optical expression of photosynthesis under field conditions    |                                                                                                                                                                       |
| 9:45–10:00                  | TBA                                                                                                                                                                                |                                                                                                                                                                       |
| 10:00–10:30                 | Coffee                                                                                                                                                                             |                                                                                                                                                                       |
| Session 6 –<br>NPC – NAS    | New methods                                                                                                                                                                        | Algae biorefining                                                                                                                                                     |
| 10:30–11:00                 | Nordic – Invited<br><b>Mikko Tikkanen, University of Turku:</b><br>Minibiosphere and technologies for optimizing indoor farming                                                    | <b>Christiane Funk, Umeaa University, Sweden:</b><br>Waste-2-Plastic: recycling of CO <sub>2</sub> , nitrogen, phosphorus and water for the production of bioplastic. |
| 11:00–11:20                 | Selected from abstract                                                                                                                                                             | Selected from abstract                                                                                                                                                |
| 11:20–11:40                 | Selected from abstract                                                                                                                                                             | Selected from abstract                                                                                                                                                |
| 11:40–12:00                 | Selected from abstract                                                                                                                                                             | Selected from abstract                                                                                                                                                |
| 12:00–13:00                 | Lunch and Goodbye                                                                                                                                                                  |                                                                                                                                                                       |