

# INVITATION TO A SYMPOSIUM ON BIOMEDICAL ENGINEERING AND PHYSICS MARCH 5 2021

20<sup>th</sup> anniversary of Center for Biomedical Engineering and Physics,  
Umeå University and Luleå Technical University

It's a pleasure to invite you to a digital event where we will collect some of the interesting research environments established in the North of Sweden that draw on principles of physics, math and engineering to understand and characterize physiological systems in health and disease. The event will highlight some of the established and new lines of research with potential for future impact in healthcare. We will also describe efforts to help bringing results from research to the patient. In celebration of the interdisciplinary nature of the center, we encourage interested researchers and developers from all faculties, as well as healthcare professionals to attend.

With the symposium we hope to inspire and spark ideas on how to approach new challenging questions using the diverse and strong skillset that exists within the network.

Welcome!

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## SCHEDULE

March 5, 2021, Zoom Link:

<https://umu.zoom.us/j/68888262416>

**08.30-09.00** **Opening addresses.**

*Anders Wåhlin, Director Center for Biomedical Engineering and Physics  
Göran Larsson, Head of Research and Education – Region Västerbotten*

**09.00-09.30** **Lecture 1.** Reflections Over Two Decades of Biomedical Engineering Research

*Olof Lindahl, Previous and Founding Director of Center for Biomedical engineering and Physics, Professor, Umeå University & Region Västerbotten*

**09.30-09.45** **Lecture 2.** A Model Bringing Medical Technology to the Patient

*Per Hallberg, Head of Biomedical engineering - R&D dept., Region Västerbotten  
Linda Pommer, PhD, Umeå University*

**09.45-10.00** **Lecture 3.** Opportunities for CMTF as a regional node in MedTech4Health

*Tomas Gustafsson, Innovation Strategist, Region Västerbotten*

**10.00-10.15** **Break**

**10.15-10.30** **Lecture 4.** The Glymphatic System Discovery Prompts Innovation

*Anders Eklund, Professor, Umeå University*

**10.30-10.45** **Lecture 5.** Predicting Intracranial Pressure Crisis in Traumatic Brain Injury

*Nina Sundström, Associate Professor, Umeå University & Region Västerbotten*

**10.45-11.00** **Lecture 6.** Breathborne Biomarkers

*Florian Schmidt, Associate Professor, Umeå University*

**11.00-11.15** **Lecture 7.** Convolutional Neural Networks for Evaluation of Hydrocephalus

*Sara Qvarlander, PhD, Region Västerbotten*

**11.15-11.30** **Lecture 8.** Exosome Biomarkers for Parkinson's Disease

*Fredrik Nikolajeff, Professor, Luleå Technical University*

**11.30-11.45** **Concluding remarks.**

*Anders Wåhlin*