

PROGRAM MEDICINTEKNIKDAGARNA 2023 MONDAY 9 OCT

10.00 - 17.00	<u>Kursdag på Norrbacka, KS</u>	Lokal
10.00 - 17.00	EKG Medicintekniker	S2:03 Tallen
10.00 - 17.00	Medicintekniska regelverk, MDR - IVDR	S2:03 Granen
15.00 -18.00	Registration Medicinteknikdagarna, BioClinicum	Foyer, ground level
17.30 - 18.00	Guided tour of NKS & BioClinicum <i>(pre-registration required)</i>	Foyer, ground level
18.00 - 20.00	Registration	
18.00 - 20.00	Welcome reception in the exhibition at BioClinicum <i>(pre-registration required)</i>	Foyer, ground level

PROGRAM MEDICINTEKNIKDAGARNA 2023 TUESDAY 10 OCT

8.30 - 9.30	Registration	Foyer, ground level
9.30 - 9.45	Welcome and opening	
9.45- 10.30	Plenary 1 - Prof. Barbara Jobst, MD <i>Chair and Professor of Neurology, Geisel School of Medicine at Dartmouth</i> Neurostimulation for seizures, memory and consciousness	J3:07 Sune Bergström Aula
10.30 - 11.00	Poster pitch	
11.00 - 11.30	Coffee break in the exhibition	Foyer, ground level

PROGRAM MEDICINTEKNIKDAGARNA 2023 TUESDAY 10 OCT

Parallel Sessions

	J3:07 Sune Bergström Aula	Lars Klareskog	J3:12 Nanna Svartz
	SA1: AI	SB1: Biomechanics	SC1: MT Education
11.30	Automatisk utvärdering av regional lungfunktion möjliggörs med datortomografi och maskininläring, Emelie Bäcklin/ KTH-KI	Acoustics and Fluid Structure Interaction of collapsible tubes relevant for biomedical applications, Marco Laudato/KTH	Digital lärplattform för Sveriges medicintekniska avdelningar, Lars Carlsson/ MTpodden
11.45	Age-Related Brain Atrophy Detection in Alzheimer's Disease via Deep Learning-Based Healthy Templates: A Cross-Sectional Study, Jingru Fu/ KTH	An experimental setup for assessment of traction force and associated fetal brain deformation in vacuum-assisted delivery, Estelle Pitti / KTH-KI	
12.00	Effect of data leakage in deep learning-based image classification: A show-case on optical coherence tomography data, Iulian Emil Tampu/ Linköpings universitet	Fat-IBC(Intra-Body Communication) based 3D printed Bionic Arm with multiple degrees of Freedom, Arvind Selvan Chezhan / Uppsala universitet	
12.15	Early Characterization of Stroke Using Video Analysis and Machine Learning, Viktor Johansson/ Chalmers	Geometrical influence on backflow in centrifugal blood pumps in low flow conditions, Federico Rorro/KTH	Healthcare Transformation Academy: Empowering Healthcare Professionals through continued education across Europe, Fernando Seoane/KI
12.30	A convolutional neural network-based method for the generation of super-resolution 3D models from high-resolution clinical CT images, Yijun Zhou / Uppsala universitet	Motor performance after treatment of pilocytic astrocytoma in childhood - A study if motor performance is affected during different balance tests, Fredrik Öhberg/Umeå universitet	Certifiering av medicintekniska ingenjörer – lägesrapport och diskussion, Björn-Erik Erlandsson/SIS paneldiskussion 30 minuter
12.45	Lesion Localization in Digital Breast Tomosynthesis via Deformable Detection Transformer, Zhikai Yang/KTH	Numerical investigation of fluid-structure interaction of simplified three-dimensional human soft palate in unsteady airway flow, Peng Li/KTH	

13.00 - 14.15

Lunch in the exhibition

Foyer, ground level

PROGRAM MEDICINTEKNIKDAGARNA 2023 TUESDAY 10 OCT

Parallel Sessions

	J3:07 Sune Bergström Aula	Lars Klareskog	J3:06 Ulf von Euler
	SA2: Imaging and image processing	SB2: LfMT 1	SC3: "Innovation Hive Live" - öppen workshop
14.15	Speed-of-sound as a novel ultrasound imaging biomarker for breast cancer and density, Bezek Deniz Bezek/ Uppsala universitet	MTP-rådets arbete med nationellt ordnat införande - framgångsfaktorer och utmaningar, Sofia Medin/ SKR	Vi kommer arbeta med utmaningar i kommunal vård och omsorg, skapa förslag på medicintekniska lösningar som skulle kunna lösa dessa och sätta en riktning framåt tillsammans. Arbetet sker i bikupor bestående av patienter, studenter, vård- och omsorgspersonal från regioner och kommuner samt alla de på plats som vill vara med. Jenny Christensson /MedTech4Health, Anna Berghplitz /Unique Power, Frida Lindberg /KTH, Helena Bysell /Uppsala Universitet
14.30	Improved frequency estimation using pre-beamformed ultrasound data, Tobias Erlöv/ Lunds universitet		
14.45	Motion magnification improves 2D micrometer motion estimation in skeletal muscle B-mode ultrasound images, Christer Grönlund/ Umeå universitet		
15.00	Speed-resolved perfusion imaging for assessment of chronic limb-threatening ischemia, Tomas Strömberg/ Linköpings universitet		
15.15	Invited speaker: AI for breast cancer detection in screening mammography in Sweden, Karin Dembrower/ St. Göran's hospital	Regelverket för MTP (MDR/IVDR) - förändringsbehov och hantering i regionen / Jessica Ylvén och Niklas Fridolf, Västra Götalandsregionen	
15.45			

15.45 - 16.15	Coffee break in the exhibition	Foyer, ground level
16.15	Erna Ebling prize lecture - Urban Wiklund	J3:07 Sune Bergström Aula
16.45 - 18.00	Poster Exhibition	Foyer, ground level
17.15 - 18.30	MTF Annual Meeting	
19.00 - 23.00	Gala dinner (pre-registration required)	Stockholm City Hall

PROGRAM MEDICINTEKNIKDAGARNA 2023 WEDNESDAY 11 OCT

Parallel Sessions

	J3:07 Sune Bergström Aula	J3:12 Nanna Svartz	J3:06 Ulf von Euler	
	SA3: Sensors and diagnostic systems	SB3: LfMT 2	SC3: Cardiovascular engineering	
8.30	A novel snapshot hyperspectral camera for retinal investigation, Diego Guenot/Mantis Photonics AB	Standardisering inom MT-området – en möjliggöra för framtida vård / Anders Grundin, Region Västerbotten	The physiological basis for the longitudinal motion of the arterial wall, Magnus Cinthio/Lunds universitet	
8.45	Dissecting the multiomics atlas of extracellular vesicles in Parkinson's disease, Vaibhav Sharma/Luleå universitet		Heart rate variability analysis in heart rate regions – a tool to study autonomic function in children with Long QT Syndrome?, Anna Lundström/Umeå universitet	
9.00	On-chip colorimetric assay for point-of-care lithium blood level determination using finger-prick-blood, Carl Olsson/KTH		Segmentera MT-utrustning i nätverket – Vilka problem löser vi? /Rasmus Engblom Strucke, Södersjukhuset AB	Numerical and experimental investigation of an ECMO drainage cannula, Fransesco Fiusco/KTH
9.15	In-line detection of TNF- α using an acoustic trap connected to an Infection-on-Chip model, Gabriel Werr/Uppsala universitet		Hur man genomför ett utbyte av flera tusen MTP/ Jacob Lidman, Medicinsk Teknik Sahlgrenska	Vascular robotics: A bioinspired robot for versatile application in vascular channels, Bobins Augustine/Uppsala universitet
9.30	A mobile app-based hearing test to detect 'the hidden hearing loss', Amin Saremi/Umeå universitet		Berättelsen Emboless®/ Per Jonsson, Region Västerbotten	Assessment of Femoro-femoro Extracorporeal Membrane Oxygenation in a Computation Fluid Dynamics Model, Hanna Hörwing/KTH
9.45	In-ear pulse wave amplitude recordings during synchronized walking, Aurora Rosato / KTH			A computational platform for virtual trials of fluid responsiveness in critically-ill patients, Marijn Mulder/Twente

10.00 - 10.30

Coffee break in the exhibition

Foyer, ground level

PROGRAM MEDICINTEKNIKDAGARNA 2023 WEDNESDAY 11 OCT

Parallel Sessions

	J3:07 Sune Bergström Aula	J3:06 Ulf von Euler	J3:12 Nanna Svartz
	SA4: Biomaterials	SB4: Digitalization and informatics in healthcare	SC4: MedTech4Health Financing "Pengar förenklar - när idé blir en lösning"
10.30	Nanotechnology-enabled medical devices against infections, Sotiriou Georgios/KI	A Scoping Review of Views, Use, and Experiences of Online Access to Pediatric Electronic Health Records for Children, Adolescents, and Parents, Josefin Hagström / Uppsala universitet	Almi Invest (for startups), Gustav Notander Life Science Venture Capital (EIR), Lovisa Backemar EIT Health, Christina Bergstrand MT4H, Avesta Starkholm Vinnova, Sanna Englund Sting, Olof Berglund
10.45	Electrical field accelerated wound repair – what we learnt from cell culture and the next steps towards clinical application, Maria Asplund/Chalmers	Towards providing type-2 diabetes patients with homogenous information on physical activity, Annica Kristoffersson/Mälardalens Högskola	
11.00	Antimicrobial Nanocellulose-based Wound Dressings for Treatment of Wound Infections, Elisa Zattarin/Linköpings universitet	En förstudie av utmaningar och behov i det dagliga arbetet på intensivvården, Maria Sjöberg/Getinge	
11.15	Nanocellulose meets host defense peptides: Investigating the functionalization of cellulose nanofibrils with KR-12 to obtain bioactive wound dressings, Natalia Ferrraz/Uppsala universitet	Information och IT säkerhet för MT lösningar/ Föreläsning och diskussion	
11.30	Additively manufactured Mg alloys may provide improved bioactivity, Niccoló De Berardinis /Uppsala universitet		
11.45	An examination of microbiological and structural interactions between implants and tissues in a cohort of extracted bone-anchored hearing implants, Ganeyev Marsel/Göteborgs universitet		

12.00 - 13.15

Lunch in the exhibition

Foyer, ground level

PROGRAM MEDICINTEKNIKDAGARNA 2023 WEDNESDAY 11 OCT

Parallel Sessions

	J3:06 Ulf von Euler	J3:12 Nanna Svartz	J3:07 Sune Bergström Aula
	SA5: Neural engineering and Bioelectronics	SB5: Safety, Regulatory affairs, Standards	SC5: Innovation and translation in biomedical engineering
13.15	B-CRATOS Wireless Brain-Connect interface TO MachineS, Robin Augustine/Uppsala universitet	Standarder och dess nytta inom vård och innovation, Jenny Acaralp / SIS	Single-use microwell chips for immune cell screening, Niklas Sandström/ KTH
13.30	Calibration-Free Myoelectric Decoding, Olsson Alexander/Lunds universitet	Militära krav på medicintekniska produkter, Bo Højdefors / FMV	UTI-lizer: Digital Point-of-Care Culture for Urinary Tract Infections, Emre Iseri/ KTH
13.45	Mapping improvement and side effects in deep brain stimulation, Teresa Nordin/ Linköpings universitet	Försvarmaktens Sjukvårdssystem. En viktig del av Funktionskedja sjukvård, Jens Lönnblad / Försvarmakten	Adding the third dimension to histology, Jenny Romell/Exciscope AB
14.00	Brain microcirculation in neurointensive care, Stina Mauritzon/Linköpings universitet	Säkerhet i medicinska gassystem: Fjärde utgåvan av SIS HB 370 publiceras med översättning av SS EN ISO 7396-1, Janie Thunman / SIS	Electroosmosis-based Technique for Cerebral Edema Treatment, Xiaogai Li/KTH
14.15	Unlocking the Potential of Ion Channels as Novel Biomarkers and Therapeutic Targets in Endometriosis and Ovarian Cancer, Oliya Abdullaeva/Luleå universitet	Tillsammans för patientsäkerhet, Patrick Borén / LMV	3D Spike micro-particles enhance transdermal drug delivery, Iordanidis Theocharis/KTH
14.30	Portable Semi-Shielded Chamber for Evaluation of Fat-Intrabody Communication, Roger Karlsson/Uppsala universitet	Abstrakt MT-dagarna 2023 Stockholm Medicinteknisk apparatur i hemmet (MAH) SLSO, Jimmy Daoud / SLSO	Targeting the vagus nerve non-invasively by using multiple temporal interference technology, Patrícia Mendes /KI

14.45 - 15.15 **Coffee break in the exhibition** **Foyer, ground level**

15.15 - 16.00 **Plenary 2 - Prof. Johan Hartman, MD** **J3:07**
Professor of Patology, Karolinska Institutet, Co-founder & CMO Stratipath AB **Sune Bergström Aula**
Stratipath- clinical implementation of AI-based cancer diagnostics

16.00 - 16.30 **MTF Prize lecture- To be announced** **J3:07**
16.30 - 17.00 **IFMBE prizes, quiz in exhibition prizes and closing** **Sune Bergström Aula**
17.00 **End**