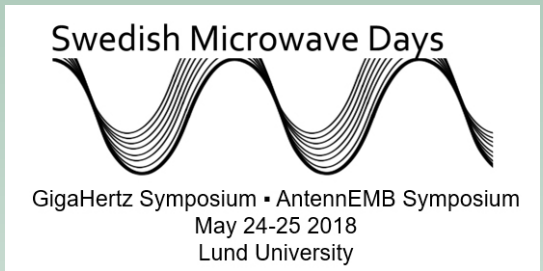

Swedish Microwave Days
24-25 May, 2018

AXIS COMMUNICATIONS

Flexitron

Altair

COPPER MOUNTAIN TECHNOLOGIES

NATIONAL INSTRUMENTS

COMSOL

CST

SAAB

AMTELE

MTT DESIGN AND VERIFICATION

IEEE

THE NATIONAL COMMITTEE FOR RADIO SCIENCE
THE ROYAL SWEDISH ACADEMY OF SCIENCES

EuMA

LUND UNIVERSITY

Swedish Microwave Days

Lund University, Lund, May 24-25, 2018

Welcome to Swedish Microwave Days 2018

The Swedish Microwave Days presents for the 4th time, the GigaHertz Symposium and AntennEMB Symposium into a major joint two-day microwave event in Lund. With joint exhibitions, plenary sessions, invited speakers, and social events the Swedish Microwave Days will be the perfect meeting point for everyone who is interested to learn about recent advances in microwave, millimeter-wave, THz, or antenna technology or to hear about the recent advances in wireless communications, sensor, and emerging applications!

The Swedish Microwave Days 2018 features a two-day meeting with five world-leading invited speakers, close to 150 conference delegates and 10 exhibitors and sponsors.

During the conference our invited speakers will give five plenary presentations. The delegates offer about 60 oral presentations and 40 poster contributions, covering the latest advances in the scoop of the conference. The exhibitors give five application seminars to complement the exhibition.

GigaHertz Symposium is a biennial conference in the field of GigaHertz technology. This will be the 14th GigaHertz Symposium after its start in Linköping 1992. The scope is broad, ranging from devices to systems, and from single GHz frequencies up to several THz. The conference is a meeting place for researchers in the field from industry, academia, and research institutes. The format of the conference is a mix of invited talks and regular submitted papers. Several leading researchers have been invited to give presentations of different hot topics in GigaHertz and TeraHertz technology.

AntennEMB, is the radio science conference on Antennas and Computational Electromagnetics organized by SNRV (Svenska Nationalkommittén för Radiovetenskap, the Swedish URSI Committee). The AntennEMB has been organized on a regular basis for more than a decade and the last conference was held in Linköping 2016 as part of the Swedish Microwave Days. The format of the conference combines invited key-note talks with original contributions from the conference participants in the form of oral presentations and interactive poster sessions.

We thank everybody that has contributed to the Swedish Microwave Days: invited speakers, conference delegates, exhibitors, sponsors, and program committees. We wish all the conference delegates a stimulating and inspiring scientific meeting at Lund University!

GigaHertz Symposium General Chair Erik Lind

AntennEMB Symposium General Chair Mats Gustafsson

Conference Committees

Steering Committee GigaHertz Symposium

Stefan Andersson, Ericsson

Christian Fager, Chalmers University

Sten Gunnarsson, SAAB

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Thomas Rylander, Chalmers

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Local Organizing Committee

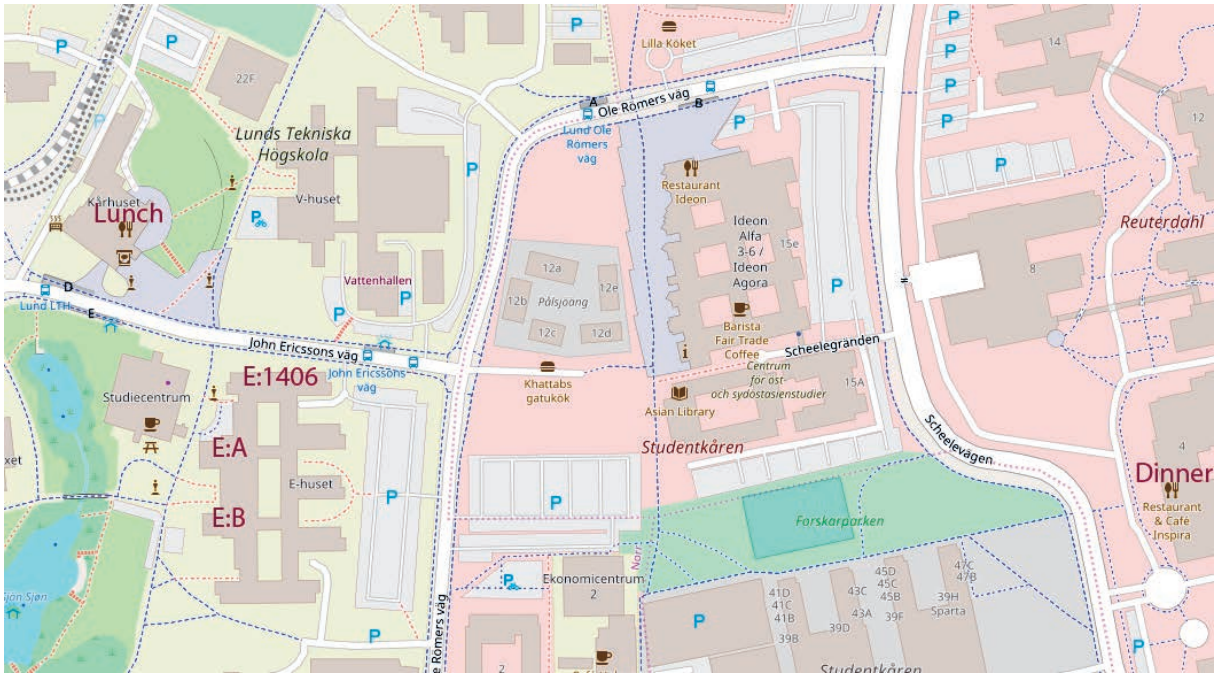
GigaHertz Symposium General Chair Erik Lind

AntennEMB Symposium General Chair Mats Gustafsson

Exhibition and Sponsor Chair Anders Karlsson

Local Arrangements Chairs Anne Andersson and Linda Bienen

Practical information



Homepage http://www.microwavedays.se/

Abstracts https://www.eit.lth.se/smd/

Oral presentations in E:A, E:B, and E:1406

Coffee breaks and Exhibition in hallway outside E:A and E:B

Lunch at Lunch Moroten & Piskan Thursday 13-14 and Friday 12.10-13.30

Inspira (Medicon Village) Thursday aperitif 18-19 and dinner 19-22

Thursday May 24

	GHz Symposium		AntennEMB	Coffee Application Seminar	
08:00-09:00	Registration and coffee				
09:00-09:15	Opening Session (E:A)				
09:15-10:45	Plenary Session (E:A)				
10:45-11:15	Coffee Break and Exhibition			Flexitron (E:A)	CST (E:B)
11:15-13:00	Passive and active devices I (E:A)	mm-wave circuits (E:B)	EMBAntenn I (E:1406)		
13:00-14:00	Lunch and Exhibition				
14:00-15:40	Passive and active devices II (E:A)	Communication Circuits (E:B)	EMBAntenn II (E:1406)		
15:40-16:10	Coffee Break and Exhibition			Altair (E:A)	MTT (E:B)
16:10-17:10	Packaging (E:A)	Radars and Sensors (E:B)	EMBAntenn III		
17:15-18:00	Plenary Session (E:A)				
18:00-22:00	Aperitif 18-19 and Conference Dinner 19-22				

Friday May 25

	GHz Symposium		AntennEMB	Coffee Application Seminar	
09:15-10:00	Plenary Session (E:A)				
10:00-10:30	Coffee Break and Exhibition			COMSOL Multiphysics (E:A)	AWR-APLAC Corporation (E:B)
10:30-12:10	Passive and active devices III (E:A)	5G Systems (E:B)	EMBAntenn III (E:1406)		
12:10-13:30	Lunch and Exhibition				
13:30-14:45	RF Systems (E:A)	Power Amplifiers (E:B)	EMBAntenn IV		
14:45-15:15	Coffee Break and Exhibition			Copper Mountain (E:A)	Amtele (E:B)
15:15-16:00	Plenary Session (E:A)				
16:00-16:15	Closing Remarks (E:A)				

Plenary Joint GHz/AntennEMB opening session
Thursday May 24 09:00-10:45 (E:A)

Time:	Title:
09:00-09:15	**Welcome**
09:15-10:00	**Some considerations on antennas radiating into lossy media** Anja Skrivervik Ecole Polytechnique Fédérale de Lausanne
10:00-10:45	**5G Base Stations on mm-wave Frequencies** Martin Hansson Ericsson, Lund

GHz Sessions
Thursday May 24 11:15-13:00

Session: Active and Passive Devices I (E:A)

11:15-11:30	**Advanced Millimetre-Wave Waveguide Components Enabled by Silicon Micromachining** Adrian Gomez-Torrent, Umer Shah KTH Royal Institute of Technology
11:30-11:45	**Fabrication of Tunnel Field-Effect Transistors** Abinaya Krishnaraja, Elvedin Memisevic, Markus Hellenbrand et al. Lund University
11:45-12:00	**RF Characterisation of Vertical III-V Nanowire Tunnel FETs** Markus Hellenbrand, Elvedin Memisevic, Johannes Svensson et al. Lund University, EIT
12:00-12:15	**Electro-Thermal Memory of GaN HEMTs** Mattias Thorsell, Johan Bergsten, Anna Malmros et al. Microwave Electronics Laboratory, MC2, Chalmers
12:15-12:30	**Graphene field-effect transistors for high frequency applications** Muhammad Asad, Marlene Bonmann, Xinxin Yang et al. Chalmers University of Technology
12:30-12:45	**Micromachined Cavity Resonator Sensor for on Chip Material Characterisation at 260 GHz** Dragos Dancila[1], Bernhard Beuerle[2], Umer Shah[2] et. al. [1]Microwave group, Division of Solid-State Electronics, Uppsala University. [2]Micro and Nanosystems, Royal Institute of Technology
12:45-13:00	**Planar Goubau Line for THz on-Wafer Biosensing** Juan Cabello-Sánchez, Helena Rodilla, Vladimir Drakinskiy et al. Chalmers Tekniska Högskola

Session: mm-wave circuits (E:B)

11:15-11:30	**E-band Upconverting Transmitter Using X6 Multiplier** Dhecha Nopchinda1, Zhongxia He1, Göran Granström2 et al. 1Chalmers University of Technology, 2 Gotmic AB
11:30-11:45	**InP HEMT Design for Cryogenic Low Noise Amplifiers** E. Cha1, G. Moschetti2, N. Wadefalk2 et al. 1GigaHertz Centre, Chalmers University of Technology, Gothenburg, 2Sweden Low Noise Factory AB,Gothenburg, 3Sweden RISE Research Institute of Sweden, Boras, Sweden
11:45-12:00	**An InP DHBT G-band 140-220 GHz Low Noise Amplifier with 80 GHz bandwidth for high data rate communication and sensor applications** Herbert Zirath, Vessen Vassilev Chalmers University
12:00-12:15	**Characterization of Graphene FET based 200 GHz Mixer and 1 GHz Amplifier Integrated on a Si Substrate** Marlene Bonmann, Michael Andersson, Yaxin Zhang et al. Chalmers University of Technology
12:15-12:30	**An 85-GHz Digitally Controlled Oscillator Utilizing a Novel Frequency Fine-Tuning Technique** Rikard Gannedahl, Johan Holmstedt Electrical and Information Technology, Lund University
12:30-12:45	**Two mm-wave VCOs in 28-nm UTBB FD-SOI CMOS** Therese Forsberg, Johan Wernehag Markus Törmänen et al. Department of Electrical and Information Technology, Lund University

AntennEMB Session: (E:1406)
Thursday May 24 11:15-13:00

11:15-11:30 **Leaky Wave Antenna at 300 GHz in KTH's Micromachined Waveguide Technology**
Dragos Dancila, Bernhard Beuerle, Umer Shah
Uppsala University, Royal Institute of Technology,

11:30-11:45 **Recent Progress and Challenges of EMF Compliance of 5G Cellular Equipment**
Bo Xu, Davide Colombi, Zhinong Ying

11:45-12:00 **A Novel Design Procedure for Waveguide Slot Arrays**
Johan Wettergren, Per Magnusson, Erik Silfverswärd
RUAG Space AB, Bluetest AB

12:00-12:15 **Dense Patch Antenna Array with VCSEL based Interconnections for Future 5G Cellular Applications**
Zhongxia Simon He, Tamas Lengyel, Yang Jian
Chalmers

12:15-12:30 **Some Important Antenna Design Aspects for the 5th Generation mmWave User Device**
Zhinong Ying, Kun Zhao, Bo Xu
Sony, Ericsson AB

12:45-13:00 **Integrated Active Doherty Antenna Transmitter**
Marianna Ivashina, Christian Fager, Rob Maaskant
Chalmers

GHz Sessions
Thursday May 24 14:00-15:45

Session: Active and Passive Devices II (E:A)

14:00-14:15 **Drain current saturation in graphene field-effect transistors for high frequency applications**
Marlene Bonmann, Muhammad Asad, Xinxin Yang et al.
Chalmers University of Technology

14:15-14:30 **Optically Controlled Dielectric Rod Waveguides with Carbon Nanotube Thin Layers for Terahertz Wave Applications**
Dmitri V. Lioubtchenko, Serguei Smirnov, Ilya Anoshkin et al.
KTH Royal Institute of Technology

14:30-14:45 **InGaAs Nanowire MOSFETs for high-frequency applications**
Fredrik Lindelöw, Lasse Södergren, Erik Lind
Lunds Universitet

15:00-15:15 **Multilayer Micromachined Dual-Mode Elliptic Cavities Filter With Axial Feeding at 270 GHz**
Oleksandr Glubokov, Xinghai Zhao, James Campion et al.
KTH Royal Institute of Technology

15:15-15:30 **Magnetic Influence on Cryogenic InP HEMT LNAs**
Isabel Harrysson Rodrigues, Arsalan Pourkabirian, Jan Grahn
Chalmers University of Technology

15:30-15:45 **A revolutionary GaN-on-SiC heteroepitaxy for high-frequency power transistors**
Jr-Tai Chen et al.
SweGaN AB, Sweden, Department of Microtechnology and Nanoscience, Chalmers University of Technology.

Session: Communication Systems (E:B)

14:00-14:15 **An 8-bit, 800MS/s redundantly scaled SAR ADC**
Victor Åberg, Christian Fager, Lars Svensson
Chalmers University of Technology

14:15-14:30 **High-Speed High-Accuracy Time-Interleaved SAR ADC for 5G Radio Base Stations**
[1,2]Siyu Tan, [1]Pietro Andreani, [2]Mattias Palm et al.
[1]Department of Electrical and Information Technology, Lund University, [2]Ericsson Research

14:30-14:45 **A 40 Gbps PAM-4 RF-DAC with 1.2 pJ/bit Energy Efficiency**
Frida Strömbeck, Zhongxia Simon He, Herbert Zirath
Chalmers University of Technology

15:00-15:15 **Towards Long-Range Backscatter Communication with TunnelDiode Reflection Amplifier**
[1]Gustav Eriksson, [2]Ambuj Varshney, [1]Dragos Dancila et al.
[1]Microwavegroup, Division of Solid-State Electronics, Uppsala University. [2]Department of Information Technology, Uppsala University

15:15-15:30 **Two Tunable Integrated Duplexer Architectures**
[1]Imad ud Din, [1]Stefan Andersson, [1,2]Henrik Sjöland et al.
[1]Ericsson AB, [2]Lund University

15:30-15:45 **An All-Digital Polar PWM Transmitter**

[1]Muhammad Touqir Pasha, [1,2]Muhammad Fahim Ul Haque, [3]Jahanzab Ahmad et al.

[1]Department of Electrical Engineering, Linköping University, [2]Department of Electronic Engineering, NED University of Engineering and Technology, Karachi, Pakistan, [3]Intel Corporation, High Wycombe, United Kingdom

AntennEMB Session: (E:1406)
Thursday May 24 14:00-15:45

14:00-14:15 **Application of Higher-Order MLFMM for Efficient Monostatic RCS Calculation**

Peter Meincke

TICRA, Denmark

14:15-14:30 **On a Helmholtz transmission problem in planar domains with corners**

Anders Karlsson, Johan Helsing, Lund University

14:30-14:45 **On bandwidth of embedded antennas, a case study of the optimal position**

Lars Jonsson

KTH Royal Institute of Technology

15:00-15:15 **Bounds on the absorption in lossy surrounding media**

Sven Nordebo

Linnaeus University

15:15-15:30 **Perturbation approach to the reflection of modes from a deformed end surface in a PEC waveguide**

Martin Norgren, Fatemeh Ghasemifard

KTH

15:30-15:45 **Fast Analysis of Large Finite Electrically Interconnected Antenna Arrays using CEM One**

Bo Strand, Emil Kieri, Erik Abenius

ESI Group

GHz Sessions
Thursday May 24 16:10-17:10

Session: Packaging (E:A)

16:10-16:25 **Antenna in Package (AiP) for 5G mmWave systems**

[1]Bengt Madeberg, [2]Konstantinos Prionidis, Mark Holm

[1]Huawei Technologies Sweden AB, [2]Provinn AB

16:25-16:40 **Topology optimization of microwave components with minimum-size control**

Emadeldeen Hassan, Eddie Wadbro, Linus Hägg et al.

Department of Computing Science, Umeå University

16:40-16:55 **Compact Millimetre-Wave Integration Concept for Future Wireless and Sensor Systems**

[1]K. Rasilainen, [1,2]M. Thorsell, [1]K. Buisman et al.

[1] Chalmers University of Technology, [2]SAAB AB, 3Ericsson AB

16:55-17:10 **Enabling Millimeter-Wave High Power Generation with Wide-Band Spatially Distributed TE10 Excitation**

[1]Artem Roev, [1]Rob Maaskant, [1]Marianna Ivashina et al.

[1]Chalmers University of Technology, [2]SAAB AB

Session: Radars and Sensors (E:B)

16:10-16:25 **Multi-Port Front-End and DSP Co-Design for Vital Signs Detector**

Adriana Serban, Qin-Zhong Ye et al.

ITN-Communication Electronics, Linköping University, Campus Norrköping

16:25-16:40 **Homodyne Detection Based System for Continuous Glucose Monitoring**

Lars Haulin, Dragos Dancila

Microwave group, Division of Solid-State Electronics, Uppsala University

16:40-16:55 **Continuous Complex Permittivity Extraction of Water-Glucose Solutions with a Resonant Microwave Cavity at 300 MHz**

Matthias Carlsson, Gustav Eriksson, Jens Ljungberg et al.

Microwave group, Division of Solid-State Electronics, Uppsala University

16:55-17:10 **Multi-Path Suppression for Millimeter-Wave Reflectrometry**

Sebastian Heunisch, Lars Ohlsson, Lars-Erik Wernersson

Lund University

AntennEMB: Poster Session Thursday May 24 16.10-17:10

16:10-17:10 **A Ka-Band Active Integrated Antenna for 5G Applications: Initial Design Flow**
Wan-Chun Liao, Rob Maaskant, Thomas Emanuelsson, Marianna Ivashina
Chalmers

16:10-17:10 **Effect of the Fat Thickness Variation on In-Body Microwave Propagation**
Noor Badariah Asan, Mauricio Perez, Jacob Velander
Uppsala University

16:10-17:10 **User Body Impact on User Equipment Antennas and Channel Characteristics in 5G Communication Systems**
Kun Zhao, Carl Gustafson, Qingbi Liao
Sony Mobile Communications

16:10-17:10 **Micromachined140 GHz Planar Gap Waveguide Array Antenna for Line of Sight (LOS) MIMO Backhaul Links**
S.Farjana, A.U.zaman, P.Enoksson
Chalmers

16:10-17:10 **Electromagnetically Coupled Multilayer Patch Antenna for 60 GHz Communications**
Imran Aziz
Uppsala University

16:10-17:10 **Low Cost Aperture Coupled Patch Antenna Design**
A. Gustafsson, T. Boman, D. Axelsson
FOI Swedish Defence Research Agency, Cinside

16:10-17:10 **A Study on Phased Array Antennas for Long Range Detection VHF Radar**
Jakob Helander, Daniel Sjöberg
Lund University

16:10-17:10 **Multifilar Helix Antenna with High Isoflux Gain and Low Cross-Polarization**
Patrik Dimming, Joakim Johansson
RUAG Space

16:10-17:10 **Combined Optimisation of Feed Chains and Large Reflectors**
Peter
TICRA

16:10-17:10 **Partial Element Equivalent Circuit Simulations of Electromagnetic Field Propagation through Magneto-Dielectric Slabs**
Andreas Hartman, SwedenGiulio Antonini, Università degli Studi dell
Luleå University of Techology

16:10-17:10 **Volume Integral Equation Formulation for Microwave Tomography**
Michael Mattes
Technical University of Denmark (DTU)

16:10-17:10 **Perfectly matched layers for the finite element method with higher-order basis functions**
Thomas Rylander
Chalmers

16:10-17:10 **RCS-calculation methodology tested on a scale model fighter aircraft**
Magnus Gustavsson, Åsa Andersson, Rolf Jonsson
FOI

16:10-17:10 **Using Convex Optimization to Compensate for Radome Effects in Monopulse Arrays**
Henrik Frid
Saab and KTH

16:10-17:10 **Multiple scattering by a collection of randomly located obstacles distributed in a dielectric slab**
Niklas Wellander and Gerhard Kristensson
Swedish Defence Research Agency (FOI) , Lund University

16:10-17:10 **Design and Characterization of Circular Polarization Selective Structures**
Johan Lundgren, Andreas Ericsson, Daniel Sjöberg
Lund University, Ticra

16:10-17:10 **TE-wave propagation in a graded waveguide structure**
Mariana Dalarsson, Sven Nordebo
Linnaeus University

Plenary Joint GHz/AntennEMB session
Thursday May 24 17:15-18:00 (E:A)

17:15-18:00 **Efforts in superconducting quantum computing enabled by microwave technology**
Jonathan Burnett
Chalmers University of Technology

Plenary Joint GHz/AntennEMB session
Friday May 25 09:15-10:00 (E:A)

9:15-10:00 **Gap Waveguide Technology in Real Life**
Thomas Emanuelsson
Chalmers University of Technology and Gapwaves

GHz Sessions, Friday May 25 10:30-12:00

Session: Active and Passive Devices III (E:A)

10:30-10:45 **CMOS Integration Based on All-III-V Materials**
Adam Jönsson, Johannes Svensson, Lars-Erik Wernersson
Lund University, Electrical and Information Technology

10:45-11:00 **Low-Loss Hollow and Silicon-Core Micromachined Waveguide Technologies Above 100 GHz**
James Campion, Bernhard Beuerle, Aleksandr Krivovitca et al.
KTH Royal Institute of Technology

11:00-11:15 **Comparison among Microstrip, Covered Microstrip and Inverted Microstrip Gap Waveguide in Losses based on Variational Method**
Jinlin Liu, Jian Yang, Ashraf Uz Zaman
Chalmers University of Technology

11:15-11:30 **Low-Loss Micromachined Waveguide Power Divider and Hybrid Coupler for mm-Wave and THz Systems**
[1]Robert Malmqvist, [1]Andreas Gustafsson, [1]Jan Svedin et al.
[1]Swedish Defence Research Agency (FOI), [2]Royal Institute of Technology (KTH)

11:30-11:45 **Thru-Reflect-Line for Nanowire MOSFET Calibration**
Stefan Andric, Lars Ohlsson, Lars-Erik Wernersson
Department of Electrical and Information Technology, Lund University

11:45-12:00 **Homodyne detection in graphene FET power detectors**
Xinxin Yang, Andrei Vorobiev, and Jan Stake
Chalmers University of Technology

Session: 5G Systems

10:30-10:45 **LO system for 5G mmW Antenna Array Systems**
Christian Elgaard, Tony Påhlsson, Henrik Sjöland et al.
Ericsson Research AB

10:45-11:00 **MATE, Chalmers' millimeter-wave MIMO testbed towards 100 Gbit/s**
Koen Buisman, Thomas Eriksson
Chalmers University of Technology

11:00-11:15 **Smart Bowtie - A UWB mm-Wave Array for 5G Communication Systems**
Jian Yang, Sadegh Mansouri Moghaddam, Ashraf Zaman et al.
Chalmers University of Technology

11:15-11:30 **Compensation of Hardware Impairments in MATE, the Chalmers mmWave MIMO Testbed**
Mohammad Hossein Moghaddam, Koen Buisman, Thomas Eriksson et al.
Chalmers University of Technology

11:30-11:45 **On the Impact of Colored Transmitter Noise on Millimeter Wave MIMO Systems**
Sina Rezaei Aghdam, Thomas Eriksson
Department of Electrical Engineering, Chalmers University of Technology

11:45-12:00 **Link Performance Characterization of D-band Radios**
[1]Mikael Hörberg, [1]Yinggang Li, Vessen Vassilev[2] et al.
[1]Antenna and Microwave HW Research Center, Ericsson Research, Ericsson AB,[2]Microwave Electronics Laboratory, MC2, Chalmers University of Technology

AntennEMB Session: (E:1406), Friday May 25 10:30-12:00

10:30-10:45 **60 GHz Dual-polarized Probe for Spherical Near-Field and Power Flow Diagnostics for a Standard Gain Horn**
Paula Irina Muntianu, Olav Breinbjerg
Technical University of Denmark

10:45-11:00 **A Numerical Analysis of the Random-LOS Measurement Accuracy for Vehicle Applications**
Madeleine Schilliger Kildal, Jan Carlsson, Andrés Alayón Glazunov,
Chalmers, Provinn AB, University of Twente

11:00-11:15 **SAR-ISAR blending using a combination of L1 and L2-minimization methods**
Christer Larsson, Johan Jersblad
Saab Dynamics and Lund University, Saab Barracuda

11:15-11:30 **Microwave technology for detecting abdominal bleeding**
Stefan Candefjord
Chalmers

11:30-11:45 **Channel Hardening in Massive MIMO - A Measurement Based Analysis**
Sara Gunnarsson, Liesbet Van der Perre, Fredrik Tufvesson
Lund University, KU Leuven

11:45-12:00 **Comparative Study of Planar and Spherical Phaseless Nearfield Antenna Measurements**
Javier Fernández Álvarez, Olav Breinbjerg
DTU

GHz Sessions, Friday May 25 13:30-14:45

Session: RF Systems (E:A)

13:30-13:45 **A Flexible Multi-Gbps Transmitter Using Ultra-High Speed Sigma-Delta-over-Fiber**
Ibrahim Can Sezgin, Thomas Eriksson, Johan Gustavsson et al.
Chalmers University of Technology

13:45-14:00 **GaN for Microwave Radio Links**
David Gustafsson, Kristoffer Anderson, Jonas Hansryd
Ericsson AB

14:00-14:15 **DEEP INTEGRATION: Fusing Antennas and Electronics**
Rob Maaskant
Chalmers & TU/e

14:15-14:30 **Digital predistortion with bandwidth limitations for a 28 nm WLAN 802.11ac transmitter**
[1]Ted Johansson, [1]Oscar Morales Chacón, [2]Thomas Flink
[1]Linköping University, [2]Catena Wireless Electronics AB

14:30-14:45 **Measurement technique of parameters of transmission lines with spatially-spaced connectors**
[1]Vladimir Guba, [2]Aleksandr A. Savin, [3]Olesia N. Bykova et al.
[1]Copper Mountain Technologies USA, [2]Tomsk State University of Control Systems and Radio Electronics, [3]NPK TAIR

Session: Power Amplifiers (E:B)

13:30-13:45 **Optimal Power Consumption during the Charging of Superconducting Cavities using Drain Voltage Modulation of Solid State Power Amplifiers**
Long Hoang Duc, Anirban Bhattacharyya, Jörgen Olsson et al.
Microwave group, Division of Solid-State Electronics, Uppsala University

13:45-14:00 **Design, fabrication and measurement of 1kW Class-E amplifier at 100 MHz**
Stefan Book, Long Hoang Duc, Dragos Dancila
Solid state electronics, Uppsala University

14:00-14:15 **Harmonic Tuning of Mixed-Mode Outphasing Amplifiers**
[1]Paolo Enrico de Falco, [2]Konstantinos Mimis, [2]Souheil Ben Smida et al.
[1]Telecommunication Research Laboratory, Toshiba Research Europe Limited, Bristol, UK, [2]Communication Systems and Networks Laboratory, University of Bristol, Bristol, UK

14:15-14:30 **Load Modulated Balanced Amplifier with Doherty-like Driving**
[1]William Hallberg, [2]Prathamesh Pednekar, [1]Christian Fager
[1]Chalmers University of Technology, [2]University of Colorado, Boulder, CO, USA

14:30-14:45 **Implementation of a Highly Efficient Solid State RF Power Source for Superconducting Cavities**
Long Hoang Duc, Anirban Bhattacharyya, Jorgen Olsson et al.
Microwave group, Division of Solid-State Electronics, Uppsala University

AntennEMB: Poster Session, Friday May 25 13:30-14:45

13:30-14:45 **On stored energies of thin periodic antennas and scatterers**
Andrei Ludvig-Osipov, B. L. G. Jonsson
KTH Royal Institute of Technology

13:30-14:45 **A Case Study for Antenna Current Optimization Problems with Quadric Constraints**
Shuai Shi, B. L. G. Jonsson
KTH Royal Institute of Technology

13:30-14:45 **Novel Harmonic Suppressed Miniaturized FSS for UWB Low Signature Sensor Integration**
Alireza Kazemzadeh
Altair Engineering AB

13:30-14:45 **Low-Dispersive All-Metal High-Symmetric Metasurfaces**
Fatemeh Ghasemifard, Martin Norgren, Oscar Quevedo-Teruel
KTH Royal Institute of Technology

13:30-14:45 **Optimization and Experimental Verification of Dual Band Circular Polarization Selective Structures**
Andreas Ericsson, Johan Lundgren, Daniel Sjöberg
Ticra, Lunds Universitet

13:30-14:45 **Thermal Tuning of a Microwave Water-Based Metasurface**
Rasmus Elkjaer Jacobsen, Samel Arslanagić
Technical University of Denmark

13:30-14:45 **Saab Antenna Test Range Overview**
Bengt Svensson, Christer Larsson, Lars-Gunnar Huss
Saab AB

13:30-14:45 **A TEM-cell for electromagnetic characterization**
Torleif Martin, Ronny Gunnarsson, Edward Lindenholst
Saab, Lund university

13:30-14:45 **A New Analytical Model for Microstrip Multi-layer Split-Ring-Resonator based Sensor for Biomedical Applications**
Viktor Mattsson, Mauricio Perez, Robin Augustine
Uppsala Universitet

13:30-14:45 **A Simulation Study of a Self Learning Haemorrhagic Detection Algorithm**
Andreas Fhager, Stefan Candefjord, Mikael Persson
Chalmers, MedTech West

13:30-14:45 **Gesture recognition using a cheap FMCW radar system interfaced with a machine learning algorithm**
Daniel Sjöberg
Lund University

13:30-14:45 **Physical Bounds for new Antenna types and Environments**
Casimir Ehrenborg, Mats Gustafsson
Lund University

13:30-14:45 **Monitoring healing progression after craniosynostosis-based craniotomy with a non-invasive microwave approach: An overview**
Syaiful Redzwan, Jacob Velander, etal
Uppsala University

13:30-14:45 **Direct metal laser sintering printed millimeter and submillimeter waveguides**
Max Holmberg, Dragos Dancila, Anders Rydberg
Uppsala University

13:30-14:45 **On plasmonic resonances in layered waveguide structures**
Yevhen Ivanenko, Mariana Dalarsson, Sven Nordebo
Linnaeus University

13:30-14:45 **A Planar Dual-Polarized Ultra-Wideband Millimeter-Wave Array Antenna**
Sadegh Mansouri Moghaddam, Jian Yang, Andrés Alayón Glazunov
Chalmers

Plenary Joint GHz/AntennEMB closing session, Friday May 25 15:15-16:15 (E:A)

15:15-16:00 **The status of the European Spallation Source**
Mats Lindroos
European Spallation Source (ESS)

16:00-16:15 **Closing remarks**

Swedish Microwave Days

GigaHertz Symposium ▪ AntennEMB Symposium
May 24-25 2018
Lund University