



NEWCAS²⁰¹⁹

June 23 - 26
Munich, Germany
www.newcas2019.org

KEYNOTE SPEAKERS



Dr. Alessandro Curioni
 Vice President Europe &
 Director IBM Research, CH

„Quantum Computing:
 From Curiosity to First
 Useful Applications“



**Benoît Dupont de
 Dinechin**
 CTO Kalray, FR

„Kalray's MPPA@
 Manycore Processor: At
 the Heart of
 Intelligent Systems“



Wolfgang Furtner
 Infineon, Munich, DE

„Tiny AI – How sensors
 become truly smart“



Prof Boris Murmann
 Stanford University, USA

„Mixed-Signal Techniques
 for Embedded Machine
 Learning Systems“

17th International IEEE NEW Circuits and Systems Conference Call for Demo Proposals

Hilton Munich Park, Munich, Germany; June 23-26, 2019

The International IEEE NEW Circuits and Systems Conference (NEWCAS) is holding an International Circuits and Systems Design Contest. It provides a forum for universities and industry to showcase original circuit designs and system solutions to highlight the design innovations targeting:

- energy-efficiency improvement
- sensing and edge computing
- machine learning and artificial intelligence

The goal is to encourage and highlight design-oriented approaches for future-oriented topics. The best proposals will be selected and accepted for demonstration/presentation at NEWCAS 2019. A session in the conference will be devoted

to the Demonstrators during the Networking Reception.

The best designs and demonstrations from industry and academia based on the on-site demonstration and presentation will be honored.

Please use the Demonstrator Submission Form (<http://s.fhg.de/2z3>) for your proposal and send the completed form to the Demonstrator Evaluation Committee (demo-newcas2019@fraunhofer.de) until May 5, 2019.

The proposal shall clearly describe the demonstrator scope, its scientific contribution, planned method of showcasing (live or poster), and its physical dimensions. Acceptance notices will be emailed to the contact author by May 12, 2019.

Submission deadline: 11:59PM GMT-0700, May 5, 2019

Demonstrator Evaluation Committee: demo-newcas2019@fraunhofer.de



TUTORIALS, Fraunhofer EMFT				CONFERENCE, Hilton Munich Park		
Sunday, June 23rd, Fraunhofer EMFT, Hansastrasse 27d, Munich				Monday, June 24th	Tuesday, June 25th	Wednesday, June 26th
8:00				Registration		
8:30	Registration				Registration	Registration
9:00	T1: Systematic design of low-power Analog/RF CMOS circuits using the Inversion Coefficient* Prof. Christian Enz, EPFL, Switzerland	T2: Spread-spectrum techniques for mitigation of inband jammers in RF transceivers* Prof. Ramesh Harjani, University of Minnesota, USA	T3: An Efficient Solution to Simulate Mixed-Signal Circuits in C* Dr. Yves Leduc, Associate Member Polytech Lab, University of Nice Sophia-Anipolis, France	Keynote: Dr. Alessandro Curioni, Vice President Europe & Director IBM Research, Switzerland „Quantum Computing: From Curiosity to First Useful Applications“	Keynote: Professor Boris Murmann, Stanford University, USA „Mixed-Signal Techniques for Embedded Machine Learning Systems“	Keynote Dr. Benoît Dupont de Dinechin, CTO, Kalray, France „Kalray’s MPPA@ Manycore Processor: At the Heart of Intelligent Systems“
10:00	Prof. Willy Sansen, KU Leuven, The Netherlands			Coffee break	Keynote: Wolfgang Furtner, Infineon AG, Munich, Germany „Tiny AI – how sensors become truly smart“	Coffee break
10:30				A1L-A: Neuromorphic Circuits & Neural Networks (5 papers) A1L-B: Robust & Reliable Circuit Design (5 papers)		B1P-C: Posters (14 papers) & Coffee
11:00						
12:00						
12:30	Lunch break			Lunch break	Lunch break	Lunch break
13:30					A2L-A: SPECIAL SESSION: SOI based RF and mm-wave Design (3 papers) A2L-B: Efficient Image & Video Processing (5 papers)	B2L-A: Analog-to-Digital & Digital-to-Analog Converters (5 papers) B2L-B: Neural Networks (5 papers)
14:00	T4: Amplifier Efficiency vs. Linearity: What physics does and does not allow?*	T5: Things you always wanted to know about the bioelectricity of living cells and their marriage with electronics – but never dared to study*	T6: Design and Mitigation methodologies of COTS FPGAs for Aerospace Missions* Assoc. Prof. Luca Sterpone, Politecnico die Torino, Italy	Coffee break	Coffee break	Coffee break
15:00	Prof. Dr. Earl McCune, TU Delft, The Netherlands	Prof. Joachim Wegener, Fraunhofer EMFT, Germany	Prof. Sven Ingebrandt, RWTH Aachen, Germany	A3L-A: SPECIAL SESSION: 5G and beyond: from Material to Systems (4 papers) A3L-B: Digital Circuits & Designs for Digital Systems (5 papers)	B3L-A: Power Amplifiers: Design, Modeling & Optimization (5 papers) B3L-B: SPECIAL SESSION: Rapid Design Tools and Methodologies (4 papers)	C3L-A: Wireless Communications (5 papers) C3L-B: Circuits for Sensing Applications (5 papers)
15:30	Prof. Thierry Taris, University of Bordeaux, France					
17:00				SOI CONSORTIUM PANEL DISCUSSION	B4L-A: Circuits for Wireline Communications (5 papers) B4L-B: SPECIAL SESSION: Security of Systems and Cryptographic Circuits (6 papers)	Best Students’ Paper & Poster Awards Closing Ceremony & See you at NEWCAS 2020
17:30	Individual Transfer to the Conference Venue Hilton Munich Park, Am Tucherpark 7, 80538 Munich					
18:00				Welcome Event IEEE NEWCAS 2019, Hofbräuhaus Munich Bus transfer from Hilton Munich Park		
19:00					Networking Reception IEEE NEWCAS 2019 Hilton Munich Park	

*30 Min. Coffee break included



NEWCAS²⁰¹⁹

June 23 - 26
Munich, Germany

www.newcas2019.org

Organizing Committee

General Co-Chairs

Erkan Isa, Fraunhofer EMFT
Mohamad Sawan, Polytechnique Montréal

Technical Program Co-Chairs

Linus Maurer, Universität der Bundeswehr München
Benoit Gosselin, Université Laval

Tutorial Co-Chairs

Dominique Morche, CEA-Leti
Joachim Wegener, University of Regensburg
Shahriar Mirabbasi, University of British Columbia
Yann Deval, University of Bordeaux

Special Session Co-Chairs

Oliver Bringmann, Eberhard-Karls-Univ. Tübingen
Didier Belot, CEA-Leti

Financial Chair

Elke Drath-Hjorth, Fraunhofer EMFT

Industrial Liaison

Peter A. Stokes, CMC Microsystems
Peter Kücher, Fraunhofer EMFT
Christoph Kutter, Fraunhofer EMFT

Publicity Co-Chairs

Boris Murmann, Stanford University
Engin Afacan, Kocaeli University
Mounir Boukadoum, Université du Québec à Montréal
Patricia Desgreys, Telecom ParisTech
Pirjo Larima-Bellinghoven, Fraunhofer EMFT
Ricardo Reis, Univ. Federal do Rio Grande do Sul
Wilfried Uhring, University of Strasbourg

Publication Co-Chairs

Christof Landesberger, Fraunhofer EMFT
Elena Blokhina, University College Dublin

Venue

We look forward to welcome you to Munich, close to the mountains on the banks of the river Isar, the third largest city in Germany and a major centre of technology, science & innovation, education, culture, and business & finance. Our castles, churches and magnificent buildings, long-established traditions along with modern art and high tech buildings attract a very lively student and business scene as well as the international sightseer.

Contact

Dr ès sc. Erkan Isa | Fraunhofer EMFT, Hansastr. 27d, 80686 Munich, Germany
erkan.isa@emft.fraunhofer.de | +49 172 246 13 64



IEEE

cadence®



soitec

