

Seasonal School on Advanced Analog and Mixed-Signal (AMS) IC Design 2025

Powered by **POEMS - Microelectronics Academy**

June 12 - July 31

**7 weeks
9h30 - 17h30**

Where:

UNINOVA Auditorium and “Espaço Multiusos” SANTANDER
located at the School of Science and Technology of NOVA University of Lisbon (NOVA FCT)

Apply and register now for a **FREE** Seasonal School on Advanced AMS IC Design, in Lisbon, at UNINOVA and benefit from this unique opportunity.

Apply until May 30, 17h00 WEST

URL for registration link:

<https://forms.gle/iWBqUhLnLG7nze2u5>

Registration link:



Target Audience:

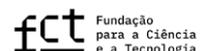
Mainly MSc and PhD students and early-career professionals in electrical and computer engineering – will engage with best practices in design-for-yield (DFY) and design-for-manufacturing (DFM).

Program:

This intensive course is a key initiative of POEMS, strongly committed to promoting advanced training in AMS IC design with a particular emphasis on state-of-the-art CMOS technologies. The program offers an immersive, hands-on learning experience focused on the design of complex AMS building blocks, targeting applications in automotive, IoT, and wireless/wireline communications.

Kick-off Day (OPEN to ALL): June 12, 10h00 – 17h00, UNINOVA Auditorium

Technical Sponsors:



Broadcast Technology/ Circuits and Systems/ Consumer Technology
Joint Chapter

Solid-State Circuits
Chapter

By Santander

Funded by
the European Union

Keynote Speakers June 12, June 16



José Franca
INSTITUTO SUPERIOR TÉCNICO,
U. de LISBOA;
Former CEO of CHIPIDEA
Portugal

“Opening Speech”
June 12

José Franca graduated in Electrical Engineering from Instituto Superior Técnico (1978), received the Ph.D. from Imperial College London (1985), and completed the executive program on Management of Research and Technology-based Innovation at the Sloan School of Management, MIT (1992). He is Professor at Instituto Superior Técnico. In 1997 José Franca co-founded and became CEO and Chairman of Chipidea Microelectronics which pioneered and became a worldwide leader in the Semiconductor Analog Mixed-Signal IP industry until his departure in 2008 upon the acquisition by MIPS Technologies. Currently with c. 700 engineers in Portugal, the former Chipidea operation is now the largest European engineering centre of Synopsys. In 2012 José Franca was appointed by the Government of Portugal Chairman of the Board and CEO of Portugal Ventures, which he served until 2015 with the mandate to establish a modern, internationally recognized technology-based entrepreneurial ecosystem in Portugal laying out solid foundations for the attraction of international venture capital and steady worldwide inflows of talent and experience.



Dymitro Cherniak
CTO at INFINEON TECHNOLOGIES
Austria

**“Circuits and Techniques for
Next Generation Wireless”**
June 12

Dr. Cherniak received B.S. and M.S. degrees in electronic engineering from the National Technical University of Ukraine, Kyiv, in 2008 and 2010, respectively, and a Ph.D. degree in electronic engineering from the Politecnico di Milano, Milan, Italy, in 2019. He was with Intel Corporation from 2010 to 2011, and since 2011, he has been with Infineon Technologies, where he is currently the CTO of a central engineering wireless department. His research interests include digitally assisted analog, frequency synthesis, adaptive filtering, and stochastic processes. Dr. Cherniak was a recipient of the Dimitris N. Chorafas Award for the Best Ph.D. Thesis in 2019.



Mirjana Banjevic
SENSIRION
Switzerland

**“Inside of the World of IC Design
for Sensor Applications”**
June 12

Mirjana Banjevic received M.Sc. Degree in Electronics from the School of Engineering, Montenegro, 2006, and PhD Degree in Microelectronics and Microsystems from Ecole Polytechnique Fédérale de Lausanne, EPFL, in 2011 in the field of the integrated magnetic sensors based on Hall devices. From 2012 till 2023 she has been with Sensirion AG, Zürich, R&D department, working on the new sensors systems in the gas, flow and optical sensors as the technical lead and chip owner. From 2023 to date she has been the Analog Team Leader. Her research and development interests are semiconductor physics, low noise and low power sensor interface electronics, analog building blocks, power management units, AMS verification, etc. She has been a member of the ESSDERC Technical Programme Committee 2012-2022, ESSDERC Steering Committee 2022- to date, ESSDERC track chair from 2015-2024, served in the IEDM Technical Programme Committee 2015-2016, and as ISCAS 2017 reviewer. She is currently TCAS-I Associate Editor.



Boris Glass
Microelectronics Engineer,
European Space Agency,
The Netherlands

**“Ultra-Deep Submicron
Technologies for European Space
Sovereignty: Advancing Next-
Generation Processors and
System Integration”**
June 12

Boris Glass is a physicist and microelectronic engineer working at the European Space Agency. He specializes in space-grade semiconductor technologies, focusing on Ultra-Deep Submicron (UDSM) processes, mixed-signal radiation-hardened electronics, and the development of radiation-hardened standard cells and platforms for space applications. He plays an active role in advancing European sovereignty in space electronics through technology development programs and strategic collaborations. His work supports the next generation of high-performance and reliable microelectronics for future space missions.



Ricardo Reis
Executive Director at SYNOPSYS
Portugal

**“Challenges of Advanced Circuit
design of Giga Bit SerDes
(Serializer De-Serializer) PHYs”**
June 12

Graduated in IST in 1994, started in Microelectronics Design in an IST collaboration with Nokia on final thesis and continued as a founder of Chipidea (Portuguese company lead of Microelectronics IP design), leading Analog Mix Signal developments of IP such as Sigma-Deltas, RF design, and ADC-DAC based Analog front ends. Chipidea has been acquired by MIPS and then by Synopsys, in 2009. Currently Leading the Analog Mix signal Design of SerDes PHYs IP (up to 64GBPs) in Synopsys. Managing a team of 350 engineers contributing to a Revenue of ~\$200-Million.



Soumyajit Mandal
Brookhaven National Laboratory
(BNL), New York
USA

**“Extreme-Environment ASIC
Design for Scientific Instruments”**
June 16

Soumyajit Mandal received the B.Tech. degree from the Indian Institute of Technology (IIT) Kharagpur, India, in 2002, and the Ph.D. and S.M. degrees in electrical engineering from Massachusetts Institute of Technology (MIT), Cambridge, MA, USA, in 2004 and 2009, respectively. He was a Research Scientist with Schlumberger-Doll Research, Cambridge, MA, USA (2010–2014); an Assistant Professor with the Department of Electrical Engineering and Computer Science, Case Western Reserve University, Cleveland, OH, USA (2014–2019); and an Associate Professor with the Department of Electrical and Computer Engineering, University of Florida, Gainesville, FL, USA (2019–2021). He is currently a member of the Research Staff with the Instrumentation Department, Brookhaven National Laboratory, Upton, NY, USA, where he leads the Extreme Environments Research Group.

Detailed Program

Seasonal School on Advanced AMS IC Frontend Design

JUNE	12	Kick-Off Day - Invited Keynote Speakers
	holiday	
	weekend	
Week #1	weekend	
Designing ICs for harsh environments	16	AMICSA 2025
	17	AMICSA 2025
	18	AMICSA 2025
	holiday	
	20	Entrepreneurship #1 (José Franca / José-Maria Moniz)
	weekend	
Week #2	weekend	
Technology Characterization & PVT variations & Monte-Carlo & Voltage References	23	RENESAS PORTUGAL TEAM
	24	RENESAS PORTUGAL TEAM
	25	Paulo Santos / Edgar Albuquerque / Luis Oliveira
	26	Paulo Santos / Edgar Albuquerque / Luis Oliveira
	27	Entrepreneurship #2 (José Franca / José-Maria Moniz)
	weekend	
Week #3	weekend	
JULY	30	POWERTOOLS & PETsys & AURA SEMI
Designing Low-Dropout Regulators	1	Paulo Santos / Edgar Albuquerque / João Oliveira
	2	Paulo Santos / Edgar Albuquerque / João Oliveira
	3	Paulo Santos / Edgar Albuquerque / João Oliveira
	4	Entrepreneurship #3 (José Franca / José-Maria Moniz)
	weekend	
Week #4	weekend	
Designing Advanced Amplifiers and Dynamic Comparators	7	Hugo Serra / João Goes / Rui Tavares
	8	Hugo Serra / João Goes / Rui Tavares
	9	Marcelo Dal Alba / Hugo Serra / João Goes
	10	Marcelo Dal Alba / Hugo Serra / João Goes
	11	Entrepreneurship #4 (José Franca / José-Maria Moniz)
	weekend	
Week #5	weekend	
Designing Data-Converters (SAR ADCs)	14	RENESAS PORTUGAL TEAM
	15	Benjamin Tardivel / Helder Santos / Hugo Serra / Nuno Paulino
	16	Benjamin Tardivel / Helder Santos / Hugo Serra / Nuno Paulino
	17	Benjamin Tardivel / Helder Santos / Hugo Serra / Nuno Paulino
	18	Entrepreneurship #5 (José Franca / José-Maria Moniz)
	weekend	
Week #6	weekend	
Pipeline ADCs	21	Marco Rodrigues / Hugo Serra / João Goes / Nuno Paulino
	22	Marco Rodrigues / Hugo Serra / João Goes / Nuno Paulino
From Digital Design to Transistor Layout (FinFET)	23	SYNOPSYS Team
	24	SYNOPSYS Team
	25	Entrepreneurship #6 (José Franca / José-Maria Moniz)
	weekend	
Week #7	weekend	
Digital Design: Implementation & Verification	28	SYNOPSYS Team
	29	SYNOPSYS Team
	30	SYNOPSYS Team
	31	SYNOPSYS Team

Every Friday morning, over the span of six weeks, the school will feature exclusive lectures in Entrepreneurship by former Managing Directors, VPs, and CEOs of leading semiconductor companies (Instructors: José Franca & José-Maria Moniz).

Seasonal School Instructors' List:



José Franca

Full Professor at IST/University of Lisbon; founder and CEO of CHIPIDEA; former CEO of Portugal Ventures



João Goes

Full Professor at NOVA FCT; former Project Manager at CHIPIDEA; co-founder and CTO of ACACIA SEMI



José-Maria Moniz

C-suite Executive at ARM; former Global Vice President of Sales at Cosmic Circuits; former Vice President of Sales and Customer Service at CHIPIDEA



Paulo Santos

Principal Engineer at POWER TOOLS; former Senior Engineer at SILICON LABS, Austin, TX



Edgar Albuquerque

Principal Engineer at PETsys



Michael Figueredo

Senior member of Technical Staff at AURA Semiconductor Co., Ltd



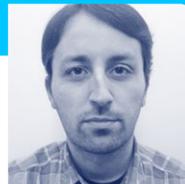
Luís B. Oliveira

Associate Professor at NOVA FCT



João P. Oliveira

Associate Professor at NOVA FCT; co-founder of KOALA TECH



Hugo Serra

Assistant Professor at NOVA FCT



Nuno Paulino

Associate Professor at NOVA FCT; former Analog Design Engineer at ROCKWELL Semiconductor, Irvine, CA; co-founder ACACIA SEMI



Rui Leitão-Tavares

Assistant Professor at NOVA FCT



Sónia Gonçalves

Director of the Digital Team at SYNOPSIS; former Senior Engineer at CHIPIDEA



André Costa

Manager of the Digital Implementation Team at SYNOPSIS



Benjamin Tardivel

Analog Design Manager at RENESAS Portugal



Marco Rodrigues

Analog Design Assistant Manager at RENESAS Portugal; former Senior Analog Design Engineer at ACACIA SEMI



Marcelo Dal Alba

Staff Analog Design Engineer at RENESAS Portugal



Helder Santos

Staff Analog Design Engineer at RENESAS Portugal