



**Dan Klein** started his high-tech career in 1983 in Motorola Semiconductor Israel, finishing successfully the intensive internal training course of IC Layout Designer. In the following years built a solid knowledge of all Motorola Semiconductor design and layout flows. During this period, he released a lot of flow and procedures enhancements from Datapath to I/O, clock generators and closing with standard cells libraries. In 1991 Dan moved to Canada and joined MOSAID where he slowly built a team of 10 people by internal training courses and lateral hires. During this period, he also jumped to help Carleton University by providing a layout addition to Martin Snelgrove Introduction to VLSI curs in 1994-95. As a result of this courses Dan wrote together with a work colleague Gregg Shimokura, who replace Martin in the 1995 course edition, the first IC Layout book, *CMOS IC Layout Concepts Methodologies and Tools*, released in December 1999.

In the year 2000 joined PMC Sierra to build a Mixed signal Layout team that reached by 2010, 32 people in 5 cities in 4 countries. From 2000 until 2013 Dan continued to provide internal training courses and work with vendors for new tools. Partially retired working on the book revision with a few experts to ad chapters like CAD, Digital implementation, Photonics, MEMS and Quantum Computing in superconductors.



Professor **Glenn Cowan** received the B.A.Sc. degree from the University of Waterloo, Canada and the M.S. and Ph.D. degrees from Columbia University, New York, NY, in 2001 and 2005, respectively. In 2005, he joined the Communications Technology Department at the IBM T. J. Watson Research Center, Yorktown Heights, NY. His research activities included CMOS circuits for high-speed communications, design for manufacturability, and circuits for the measurement of process variability. In 2007, he joined the Department of Electrical and Computer Engineering at Concordia University in Montreal, QC, Canada, where he is a professor.

At Columbia, Dr. Cowan was a 2003 recipient of Analog Device's Outstanding Student Designer Award. He was the 2005 recipient of Columbia's Eliahu I. Jury award for outstanding achievement by a graduate student in the areas of systems, communications, or signal processing. His current research activities include low-power mixed-signal circuits for biomedical applications and wireline communication, as well as mixed-signal computation.

Prof. Cowan brings more than 20 years of mixed-signal IC design experience for applications ranging from programmable analog VLSI computation, biomedical signal acquisition, wireline communication, and power electronics for industrial applications. His work in analog computation launched 21<sup>st</sup> century interest in VLSI analog computation. He has explored various burst-mode schemes for power reduction, equalizer-based optical receivers, high-speed inductorless designs, noise analysis and optimization and more recently, drivers for microring modulators and their thermal stabilization. His expertise in this field is captured in his recently published book, *Mixed-Signal CMOS for Wireline Communication*, published in 2024 by Cambridge University Press.



**Chris Fayomi** is a Professor at the Université du Québec à Montréal (UQAM, Canada) and co-founder of Synapse IC LLC. He earned his Bachelor's degree (First Class Honours) in Electromechanical Engineering, as well as his M.A.Sc. (First Class Honours) and Ph.D., both in Electrical Engineering. He previously worked as an Analog and Mixed-Signal Integrated Circuit Design Engineer at Goal Semiconductor Inc. in Montreal (Quebec, Canada), and as an Advisory Engineer in the Microelectronics Division of IBM in Essex (Vermont, USA). He also served as a Consulting Engineer for ASIC North Inc. in Williston (Vermont, USA). Chris has contributed as a reviewer for numerous journals and international conference publications. His research focuses on practical circuit techniques and design methodologies for low-voltage and low-power integrated circuits, with particular emphasis on biomedical applications that do not require specialized process enhancements. According to Microsoft Academic Search, his publication record includes 47 publications with over 590 citations. He has received

several prestigious awards, including the Best Analog Research Paper Award at the IEEE International Symposium on Integrated Circuits and Systems Design (2010) and the Excellence in Teaching Award at UQAM. He has also served as Chair of the Flexible Electronics Special Interest Group within the IEEE Circuits and Systems Society, contributing to advancements in flexible hybrid and printed electronics.



**Gordon W. Roberts** received the B.A.Sc. degree from the University of Waterloo, Canada, in 1983 and the M.A.Sc. and Ph.D. degrees from the University of Toronto, Canada, in 1986 and 1989, respectively, all in electrical engineering. At McGill University, he is a Distinguished James McGill Professor in Electrical and Computer Engineering. He has co-written seven textbooks related to analog IC design and mixed-signal test. He has published numerous papers in scientific journals and conferences, and he has contributed chapters to various industrially focused textbooks.

Dr. Roberts has held many administration roles within various conference organizations, such as the International Test Conference, Custom Integrated Circuit Conference, Design Automation Conference and the International Symposium on Circuits and Systems. He was the 2009 and 2013 General Chair of the International Test Conference. Dr. Roberts is named on 19 patents, with two pending, and has received numerous department, faculty and university awards for teaching test and electronics to undergraduates and received several IEEE awards for his work on mixed-signal testing. Most recently he has been researching flexible hybrid electronic circuit techniques for large volume applications. Dr. Roberts is a IEEE Life Fellow.



**Louis-François Tanguay** holds a B.Sc. in Physics, a B.A.Sc. in Electrical Engineering, an M.A.Sc. in Biomedical Engineering, and a Ph.D. in Microelectronics from École Polytechnique de Montréal. He joined PMC-Sierra in 2009, where he spent four years developing mixed-signal ICs for high-speed communications. In 2013, he moved to Cadence Design Systems, where he currently serves as a SERDES Design Architect within the Silicon Solutions Group (SSG).

As technical lead on multiple projects spanning USB, PCIe, ONFI/DDR, and Ethernet applications, he has driven the design of high-performance SERDES solutions across a broad range of industry-standard interfaces. Beyond circuit design, he collaborates closely with the ADE Virtuoso, Spectre, and Quantus R&D teams to help define new tool features and played a key role in the development of the Quantus Insight parasitic reporting tool. He is also at the forefront of integrating AI technologies into design methodology and project migration flows, leveraging advanced tools to accelerate development and enhance engineering efficiency. Dr. Tanguay has authored 12 journal and conference papers and holds three patents in high-speed data sampling and decision feedback equalization.



**Michael Venditti** received his Ph.D. in Electrical and Computer Engineering from McGill University in Montreal, Canada, in 2003. His graduate research focused on the design of CMOS-based optical receivers and transmitters with heterogeneously integrated VCSELs and photodetectors, resulting in several published papers in this field. He has more than 27 years of combined academic and industry experience in transmit and receive path subsystems, clocking and clock synthesis, and ESD/latchup-aware design for high-speed I/Os. He has authored or co-authored 23 journal and conference papers and holds nine patents.

Dr. Venditti began his career at PMC-Sierra as a mixed-signal designer, developing circuits for SATA, SAS, and PCIe SERDES, as well as 802.11n wireless applications. He subsequently worked at Microchip Technology as a technical leader for OpenCAPI/OIF-28G and PCIe SERDES developments. He is currently a Group Director in Analog/Mixed-Signal Design at Cadence Design Systems' Silicon Solutions Group (SSG). At Cadence, he has contributed to GPON/EPON, USB, CCIX, and PCIe SERDES IP and is presently leading multiple SERDES IP development programs while also conducting business development activities with external customers.