



## *Industrial Topics in Microelectronics and Photonics - Seminars*

# **In memory of Gordon E. Moore: Moore's Law is not dead!**

**Abstract:** More than a half century ago (April 1965) a young engineer at Fairchild Semiconductor, named Gordon E. Moore, predicted that the number of circuit components that could be economically crammed onto an integrated chip would be steadily doubling year after year (aka "The Moore's Law"). By successfully staying on an exponential trajectory for more than 50 years, the semiconductor industry has fueled the spectacular growth of the Information Technology with such a profound and revolutionary impact on society, and the beneficial effects on our communities. However, given the many billions of dollars required to build a new fab line, and the fundamental physical limits of silicon technology scaling, many people have predicted that the Moore's Law is about to come to an end. In this talk, we will show how radical innovations developed in the semiconductor industry, such as the FinFET device, have successfully kept the Moore's Law alive. Moreover, we will also outline a theoretical model which frames the Moore's Law within the Evolutionary Theory.

**Speaker: Davide Pandini, PhD**



**Davide Pandini** holds a PhD in Electrical and Computer Engineering from Carnegie Mellon University, US. He is MDG RFC Fellow of the Technical Staff, and MDG RFC Technology Strategy Technical Director leading the Advanced Digital Technology activities. He is the Chairman of ST Italy Technical Staff and received the ST Corporate STAR Gold Award in 2008 and 2020, the STRIVE Gold Award in 2022, and the STAR 30th Anniversary Award in 2023. Davide Pandini serves on the Advisory Board of DET Politecnico di Torino, and is a member of the Regional Forum for Research and Innovation of Regione Lombardia. He is also a member of the Technical Board "University and Research" of Assolombarda, and serves on the TPC of international conferences. Davide is also a recognized expert in financial technical analysis and was awarded the 2021 John Brooks Memorial Award, the highest recognition in this field, by the International Federation of Technical Analysts. He served as Volunteer at Universal Exhibition Expo2015, in Milano, Italy.

