

Dr. Toyoda received the B.E., M.E. and the Dr. Eng. degrees in communication engineering from Osaka University, Osaka, Japan, in 1985, 1987 and 1990, respectively. In 1990, he joined the NTT Radio Communication Systems Laboratories, Kanagawa, Japan, where he was engaged in developmental research based on electromagnetic analysis for the three-dimensional (3-D) and uniplanar MMICs. From 1994 to 1996, he was with the NTT Electronics Technology Corporation (NEL), Kanagawa, Japan, where he developed wireless communication equipment and MMICs. From 1996 to 1997, he was with the NTT Wireless Systems Laboratories, Kanagawa, Japan, where he conducted R&D on highly integrated multifunctional MMICs, high-frequency Si MMICs and MMIC design software based on the 3-D masterslice MMIC technology. From 1997 to 2001, he was engaged in developing ultra-high-speed digital ICs and MMICs for optical and wireless communication systems as Engineering Director of IC Design at NTT Electronics Corporation (NEL), Kanagawa, Japan. From 2001 to 2011, he conducted R&D on millimeter- and quasi-millimeter-wave high-speed wireless access systems and their applications at NTT Network Innovation Laboratory, Kanagawa, Japan. He was also active in developing IEEE 802.11, 802.15 and other national standards and led the Consortium for Millimeter Wave Practical Applications (CoMPA) as a Vice Chair. From 2007 to 2009, he was also engaged in a business strategy and incubation of R&D activities at NTT Science and Core Technology Laboratory Group. He was a Visiting Associate Professor of Niigata University from 2004 to 2007 and a Visiting Lecturer of Tokyo Denki University from 2007 to 2011. He was a Guest Editor of a 1998 special issue on “3D-Components and Active Circuits” of the International Journal of RF and Microwave Computer-Aided Engineering and a Guest Editor-in-Chief of a 2016 special issue on “Microwave researches in universities” of the Institute of Electronics, Information and Communication Engineers (IEICE) Transactions on Electronics. He was an Associate Editor for the IEICE Transactions on Electronics from 1999 to 2002, a Councilor, Tokyo Section, IEICE from 2007 to 2009, a Councilor, Kyushu Section, IEICE from 2014 to 2018 and a GA member (the representative of Asia-Pacific) of the European Microwave Association (EuMA) from 2017 to 2019 . He is now a Chair of IEEE AP-S Fukuoka chapter from 2019. He also served on the Technical Committee on Microwaves of the IEICE, Japan as a Secretary from 2004 to 2006 and Technical Committee on Electron Devices of the Institute of Electrical Engineers of Japan (IEEJ) as a Secretary from 2011 to 2013, a Vice-Chair from 2016 to 2018 and Chair from 2018 to 2020. He also served on the Technical Program Committee of several international conferences, the millimeter-wave investigation committee of the IEEJ, and the Technical Committees on Microwave Simulator Technologies, Short Range Wireless Communications and Wireless

Power Transfer of the IEICE, Japan. He is a co-author of “OFDM/OFDMA Text Book,” Impress R&D, “New Introduction to Information and telecommunications, 2nd ed.,” the Telecommunications Association and “Modulation in Electronics and Telecommunications,” IntechOpen. He is now a Professor at Saga University, Japan from 2011 and also a Dean of Faculty of Science and Engineering, Saga University. His current interests concern microwave circuits, antennas and their integration technologies for microwave and millimeter-wave wireless systems and their applications.

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