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February 08, 2015

**Dr. M. Yasin Akhtar Raja ([raja@uncc.edu](mailto:raja@uncc.edu)): Biographic Summary**

M. Yasin Akhtar Raja is a senior Professor of Physics and Optical Science and ECE (adjunct) at the University of North Carolina (UNC) at Charlotte, NC, USA. He joined UNC Charlotte in 1990 and has served since then in various faculty positions and played a leadership role in several planning and program committees for establishing new Ph.D. programs, research centers, and academic units. His research expertise in Optical Science and Engineering spans the Photonic and Optoelectronic devices and components for Optical Communication Networks. His Labs have been engaged in Micro-Nanophotonics and Optical Networks including design, simulations and testbed implementation, especially, network topologies, challenges in optical layer, and passive optical networks (PON) for broadband access. He has several patents and published over 180 articles in journals, book chapters, and refereed conference proceedings. He has established an annual series of International Symposia/Conference “HONET” [<http://honet-ict.org> ] with initial co-sponsorship of NSF and IEEE since 2004. Prof. Yasin Raja received his Ph.D. in 1988 from the University of New Mexico, Albuquerque, where he conducted a pioneering research in special type of semiconductor lasers based on resonant periodic gain (RPG), now known as “VCSELS” at the center for high technology materials (CHTM) [[www.chtm.unm.edu](http://www.chtm.unm.edu)]. In his home department at UNC Charlotte, he played a leading role in establishing new graduate degrees MS in Applied Physics and PhD in Optical Science & Engineering. He also served as a graduate program director in Applied Physics and Optics program over two years. During that period he led the pioneering work for establishing new Ph.D. and the Optics Center (<http://opticscenter.uncc.edu>) and is the founding lead member of ‘Center for Optoelectronics and Optical Communications’, and interdisciplinary graduate programs (Ph.D. and MS) in Optical Science and Engineering. Professor Raja has served and chaired high-level statutory and search committees. For example, he served past seven years continuing as a member of University Faculty Council; he chaired and served on committees for hiring center director, department chairs, and professors, and staff.

In the research area, he leads Micro-Nanophotonics and Optical Communication Labs and coordinated the Optical Networks Testbed Initiative at UNC Charlotte. His research expertise and interests include design, integration, and characterization of photonic components and novel Nanophotonic devices (e.g. VCSELS, LDs, LEDs, Detectors and Solar Cells). Prof. Raja has developed several new courses in optical communication and networks as well as in optoelectronics and nanophotonics area; these courses serve optical science and engineering Ph.D. and MS students in multiple colleges and departments. He also has been engaged in network design, simulations and testbed implementation, e.g., network topologies, challenges in optical layer, and passive optical networks (PON) for broadband access. He has wide range of collaborators from national and international academics as well as industrial institutions.

As noted earlier, Prof. Raja received his Ph.D. in the area of Optical Physics/Optoelectronics from the University of New Mexico, Albuquerque, NM, USA. He obtained his M. Phil. (Lasers Physics) and M.Sc. (Physics) from the Quaid-i-Azam University Islamabad, Pakistan. He co-invented and conducted a pioneering research in RPG semiconductor lasers “VCSELs” at the Center for High Tech Materials (CHTM). He also contributed in developing the high-tech laser research labs at CHTM then newly established center at UNM. He has organized ten major international conferences as a General Chair; served on several national and regional symposia technical committees and NSF panels. He is a Senior Member of OSA, Senior member of IEEE and ComSoc (served as Chair in Greater Charlotte region), he is also member of SPIE, FTTH Council and Physics Honor Society (Sigma Pi Sajama). He is also serving on international advisory boards of various universities.

