Alatishe S. Adeyemi was born in Lagos, Nigeria in 1986. He graduated from Covenant University (CU) with a B.Eng. Degree in Information and Communication Technology in 2008 and a Masters of Engineering (M.Eng.) in Information and Communication Technology at Covenant University in 2012. He currently lecturers in the Department of Electrical and Information Engineering, Covenant University, Nigeria. Alatishe Adeyemi is a member of a number of professional associations including: the Institute of Electrical and Electronic Engineers (IEEE), the International Association of Engineers (IAENG), among others. His current research interests are in Satellite communications, Digital signal processing and control systems, E-learning and Operations research.

**Oluseyi Olanrewaju Ajayi** holds a B.Sc., M.Eng., and Ph.D. in Mechanical Engineering. His research area includes Energy systems, Design, and Production Technology. Professionally, Ajayi is a registered member of the Council for the Regulation of Engineering profession in Nigeria (COREN) as well as the Nigerian Society of Engineers (NSE).

Alexander Lakovlevich Anoprienko is the Dean of Computer Science and Technology at Donetsk National Technical University, the Director of the Technopark DonNTU UNITECH, a specialist in Computer Systems, Network Information Technology, and Computer Modeling, the initiator and administrator of the portal Masters DonNTU, and the author of a number of original scientific concepts. His research interests include the generic code-logical basis, integrated modeling environment, and cognitive computer simulation.

**Mehrdad Ardebilipour** was born in Iran, on February 1954. He received B.Sc. and M.Sc. Degrees in electrical engineering from K.N. Toosi University of Technology, Tehran, Iran, in 1977 and Tarbiat Modarres University, Tehran, Iran, in 1989, respectively. He has also been awarded the degree of Ph.D. by the University of Surrey, Guildford, England, in 2001. Since 2001, he has been assistant professor at K.N. Toosi University of Technology and is directing the Communications Engineering Department and the Spread Spectrum and Wireless Communications research laboratory. His current research interests are cognitive radio, cooperative communication, ad-hoc and sensor networks, MIMO communication, OFDM, game theory, and cross-layer design for wireless communications.

**Charles K. Ayo** holds a B.Sc., M.Sc. and Ph.D in Computer Science. His research interests include: mobile computing, Internet programming, E-business, government, and object oriented design and development. He is a member of the Nigerian Computer Society (NCS) and Computer Professional Registration Council of Nigeria (CPN). He is currently the Head of Computer and Information Sciences Department of Covenant University in Ota, Ogun state, Nigeria. Dr. Ayo is a member of a number of international research bodies such as the Centre for Business Information, Organization, and Process Management (BIOPoM), University of Westminister, the Review Committee of the European Conference on E-Government, and the Editorial Board of *Journal of Information and Communication Technology for Human Development*.

## About the Contributors

Aderemi A. Atayero graduated from the Moscow Institute of Technology (MIT) with a Bachelor's of Science Degree in Radio Engineering and a Master's of Science Degree in Satellite Communication Systems in 1992 and 1994 respectively. He earned a Ph.D. in Telecommunication Engineering/Signal Processing from Moscow State Technical University of Civil Aviation, Russia in 2000. He is a member of a number of professional associations including: the Institute of Electrical and Electronic Engineers (IEEE), the International Association of Engineers (IAENG), and a professional member of the International Who's Who Historical Society (IWWHS) among others. He is a registered engineer with the Council for the Regulation of Engineering in Nigeria, COREN. As a two-time Head of the Department of Electrical and Information Engineering at Covenant University in Nigeria, he was also the coordinator of the School of Engineering at Covenant University. Dr. Atayero is widely published in International peer-reviewed journals, proceedings, and edited books. He is on the editorial board of a number of highly reputed International journals. Atayero is a recipient of several awards including the 2009/10 Ford Foundation Teaching Innovation Award. His current research interests are in Radio and Telecommunication Systems and Devices; Signal Processing, and Converged Multi-Service Networks. Atayero is a Full Professor of Communication Engineering and the current Vice-Chancellor (Academic) at Covenant University, Nigeria.

**Oleg I. Sheluhin** was born in 1952 in Moscow, Russia. In 1974 he graduated from the Moscow Institute of Transport Engineers (MITE) with a Master of Science Degree in Radio Engineering. After that he entered the Lomonosov State University (Moscow) and graduated in 1979 with a Second Diploma of Mathematics. He received a Ph.D. (Techn.) at MITE in 1979 in Radio Engineering and D.Sc. (Techn.) at Kharkov Aviation Institute in 1990. The title of his PhD thesis was "Investigation of Interfering Factors Influence on the Structure and Activity of Noise Short-Range Radar." His Doctorate of Science thesis is titled, "Synthesis, Analysis and Realization of Short-Range Radio Detectors and Measuring Systems." Sheluhin is a member of the International Academy of Sciences of Higher Educational Institutions. He has published 15 scientific books and textbooks for universities and more than 250 scientific papers. Since 1990 he has been the Head of the Radio Engineering and Radio Systems Department of Moscow State Technical University of Service (MSTUS). He is also the Chief Editor of the scientific journal, *Electrical and Informational Complexes and Systems*, and a member of Editorial Boards of various scientific journals. In 2004 he was awarded the title "Honored Scientific Worker."

## About the Contributors

**A. A. Azeta** earned his Bachelor's of Science degree in Computer Science at the University of Benin in Benin City, Nigeria from 1989 to 1992 with a second class (Hons) upper division. Thereafter, he got admitted to the University of Lagos, Nigeria to work for his Master's in Computer Science between 1998 and 1999. He has worked as a consultant in so many Information and Communications Technology (ICT) companies in Nigeria, among them Compumetrics Solutions Limited, a technology research company based at Ikoyi Lagos, between 2001 and 2005. Mr. Azeta Joined Convenant University in 2005 as an Assistant Lecturer in the Department of Computer and Information Sciences, College of Science and Technology. He is currently a Ph.D. student in the Department of Computer and Information Sciences, College of Sciences Covenant University, Nigeria. His current research interests are on Software Engineering, Mobile Computing and Algorithm Design. He is a member of the Nigerian Computer Society (NCS), and Computer Professional Registration Council of Nigeria (CPN). He has attended and presented papers in conferences. He is married with four children.

**Oshin Babasanjo** is a seasoned Network Consultant, with years of experience and currently working for a Cisco Partner in Milan, Italy. His research area includes wireless technology, networking and telecommunications. Oshin Babasanjo is a member of the Institute of Electrical and Electronic Engineers (IEEE). He holds various industry certifications from Cisco, Juniper, and ITSM. He currently holds a 1st degree and a Masters degree in Information and Communication Technology from the prestigious Covenant University, Ogun State, Nigeria.

**Eduard Babulak** is an international scholar, researcher, consultant, educator, professional engineer, and polyglot with more than thirty years of teaching experience and industrial experience as a professional engineer and consultant. His academic and engineering work was recognized internationally by the Engineering Council in UK, the European Federation of Engineers, and credited by the Ontario Society of Professional Engineers and APEG in British Columbia in Canada. He is a Mentor, Elite Group Member, and Chartered Fellow of British Computer Society, Fellow of Royal Society RSA, Nominated Fellow of the Institution of Engineering and Technology, Mentor and Senior Member of IEEE, Senior Member of ACM, Member of American Society for Engineering Education. Professor Babulak speaks 14 languages and his biography was cited in the *Cambridge Blue Book*, Cambridge Index of Biographies and number of issues of *Who's Who*.

**Panos S. Bakalis** received his B.Sc. in Electrical Engineering in Athens in 1975, and his PG Diploma in Electronics and Control in 1980, at CLP London. He received his M.Sc. in Systems Engineering 1982, and his Ph.D. in Control Engineering both at City University London. From 1986-92 he was Senior Lecturer at Thames Polytechnic, London and from 1992-96 became Senior Lecturer in the School of Computing at the University of Greenwich. Since then, he moved to the Department of Computer and Communications at the Medway School of Engineering, University of Greenwich where he has worked as a Senior Lecturer in Computer Networking. His research interests are in computer process control and optimization of large-scale systems. He has published papers in international Control Conferences and Journals. From 2008 he has widened his research interests to include the field of Ad Hoc Wireless

**A. Khandurin** was born in 1985 in Zhukovsky, Moscow region, Russia. He graduated Radio engineering faculty of the Moscow Power Engineering Institute (MPEI) in 2008. In 2011, in MPEI, he has defended a Ph.D. thesis on a subject "Signals with an Additive Fractal Structure." A. Khandurin works in the Department of Fluctuations and Signals Generation of MPEI as a principal engineer. His research interests are in the study of dynamical chaos and fractals, controlling and synchronization of nonlinear circuits and systems, and secure information transmission.

**Stavros A. Kotsopoulos** received his B.Sc. in Physics from the Aristotle University of Thessaloniki (1975) and got his Diploma in Electrical and Computer Engineering from the University of Patras (1984). Moreover, he is an M.Phil and Ph.D. holder. Prof. Kotsopoulos is a member of the academic staff of the Department of Electrical and Computer Engineering of the University of Patras and holds the position of Professor. Since 2004 he is the Director of the Wireless Telecommunications Laboratory and develops his professional life teaching and doing research in the scientific area of Wireless Telecommunications. He is the (co)author of the book titled "mobile telephony" and (co)author of the "Handbook of Research in Heterogeneous Next Generation Networking: Innovations & Platforms". Professor Kotsopoulos directs a research team and has been the leader of several National and European research projects. He is a member of the Greek Physicists Society and of the Technical Chamber of Greece.

**Matthew Kwatri Luka** hails from Adamawa state, Nigeria. He received his B.Eng. in Electrical and Electronics Engineering from Federal University of Technology, Yola in 2009 and a M.Eng. (ICT) in the department of Electrical and Information Engineering, Covenant University Ota in 2012. His research interests are in Mobile communication networks, satellite communications and Artificial Intelligence.

**Elena V. Medvedeva** in 2012 had got the scientific degree of Doctor of Technical Sciences. She is Professor of State Educational Institution of Higher Professional Education "Vyatka State University." She is the author of over 100 scientific publications. Her research interests include multidimensional Markov fields in image processing.

**Mustapha Muhammad** was born in Kano, Nigeria on the 24<sup>th</sup> July 1977. He received the Bachelor of Engineering and the Master of Engineering degrees from Bayero University, Kano, Nigeria in January 2001 and February 2007 respectively. In March 2004, he joined Department of Electrical Engineering, Bayero University, Kano, Nigeria as a Graduate Assistant and rose to the rank of Lecturer I in 2012. He was on Study fellowship since 2010, as Ph.D. student in the Department of Mechatronics and Robotics, Faculty of Electrical Engineering, Universiti Teknologi Malaysia. His research interests include the areas of artificial neural networks, fuzzy modeling and control, intelligent control theories and mobile robots.

**Charles Ndujiuba** holds a Ph.D. in Electrical & Electronics Engineering from the University College London (University of London); Mastere Specialise (Masters with Specialisation) in Radio Communications from Ecole Superieure d'Electricite (SUPELEC) France; M.Sc. in Electrical Engineering from the University of Lagos; B.Sc. in Electronics & Communications Engineering from the London Metropolitan University. He is a Chartered Electronics Engineer (CEng) and a highly skilled wireless professional. He has more than 25 years RF, Microwave, Fixed-line (SDH and PDH), and PMR experience, with

**Yury A. Ivanov** was born in Moscow, Russia in 1985. He obtained a M.Sc. degree in Systems, network and devices in telecommunications from Chuvash State University in 2007. He obtained a Ph.D in Telecommunication Networks and Systems in 2011 from Moscow State University of Communication and Informatics. Ivanov has published over 35 scientific papers and his current research interests include Radio and Telecommunications Systems and Devices, transmission of multimedia data across telecommunication networks, assessment of the quality of video sequences. Ivanov is a member of a number of professional associations including: the Institute of Electrical and Electronic Engineers (IEEE) and the International Association of Engineers (IAENG).

**Samuel Ndueso John** is a Senior Lecturer in the department of Electrical and Information Engineering at Covenant University, Ota, Ogun State, Nigeria since December, 2007 to date. He obtained his Ph.D. degrees in Computer Systems and Network Engineering, from Donetsk National Technical University, Ukraine. He is a registered Computer Engineer by the Council for the Regulation of Engineering in Nigeria (COREN), a member of Nigeria Society of Engineering (MNSE), and a member of the Institution of Engineering and Technology (MIET). John has attended several conferences and published many technical papers in major professional journals. His areas of research interest are: The Effect of Latency on Quality of Service (QoS) in Voice over Internet Protocol (VoIP), Convergence of ICT: Prospects and Challenges as the new Emerging Technology & Network efficiency in data exchange (LAN & WLAN), and Surveillance Security Systems.

Ashkan Kalantari was born in Iran, on 1987. He received the B.S. in electrical engineering, communication from K. N. Toosi University of Technology, Tehran, Iran, in 2009. From September 2009 he has been a M.S. student at the faculty of electrical engineering, K. N. Toosi University of Technology. His current research interests are cooperative communication, and multi-user communication.

**M. Kapranov** graduated Radio Engineering faculty of the Moscow Power Engineering Institute (MPEI) in 1952. In 1957, in MPEI, he has defended a Ph.D thesis on a subject "Phase Self-tuning of Frequency". In 1961, he became an associate professor of the department of Radiotransmitting Devices MPEI. Since 1992 Kapranov is a professor and in 2009 he has received a title of "Honorary professor of MPEI." In 1986 as a part of a group of authors he was awarded the State Prize of the USSR in the field of a science for a cycle of publications "Phase Lock in Communication and Control." M. Kapranov is an expert in the field of the theory of nonlinear oscillations, dynamic chaos, fractals, and secure communications. He has prepared more than 15 doctors of philosophy. He is the author and the coauthor of about 160 scientific publications, among which 5 monographs, and some manuals under the theory of nonlinear oscillations, phase lock, and dynamic chaos.

**James Katende** was born in 1954 at Kampala, Uganda. He received the B.Sc., M.Sc., and Ph.D. degrees in Electrical Engineering, from the University of Lagos, in 1978, 1982, and 1987, respectively. He is Professor and Founding Dean of the College of Engineering & Technology, Botswana International University of Science & Technology. Formerly Professor and Dean, College of Science & Technology, Covenant University, Ota, Nigeria, Professor of Electrical Engineering, Bayero University, Kano, and Lecturer of Electrical Engineering, University of Lagos, Nigeria. He specializes in automatic controls and robotics.

papers in international journals. He is a member of The Nigerian Society of Engineers, a COREN Registered Electronics Engineer, and a member of the Nigeria Computer Society. His principal researches are in the areas of developing and implementing microprocessor-based systems and performance optimization of local area networks.

**Richard Olayiwola Fagbenle** (BSME (Illinois), MSME (Iowa State), Ph. D (Illinois)) is a Professor of Mechanical Engineering. He currently lectures at the Mechanical Engineering Department, Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria. Equally, He is an adjunct Professor of Mechanical Engineering Department, Covenant University, Ota, Ogun State, Nigeria and a retired Professor and Adjunct Professor of Mechanical Engineering, University of Ibadan, Ibadan, Nigeria. Professionally, Prof. Fagbenle is a member of the Council for the Regulation of Engineering profession in Nigeria (COREN) and also a Fellow of the Nigerian Society of Engineers (NSE).

**Samuel Oluwole Falaki** is a Professor of Computer Engineering at the Federal University of Technology in Akure, Nigeria. He holds a Master's of Engineering Degree in Electrical Engineering from Leningrad University, a Master's of Science Degree in Computer Science from UCLA, and a Ph.D in Electrical Engineering from the University of Lagos in Lagos, Nigeria. His research interests are in the areas of Computer Architecture, Computer Communications and Networking, Network Security and Digital Signal Processing. He is a Fellow of the Nigeria Computer Society, a Member of the Nigerian Society of Engineers, a Member of IEEE, and a Member of ACM.

**Artem V. Garmashev** was born in Electrostal, Russia in 1986. He graduated from the Moscow Technical University of Communication and Informatics in 2011 with a Master's of Science Degree in IT. Later he began his Ph.D. program at the same university and continues study at present. His current research interests are information security, signal processing, and time series analysis.

**D. Golubchikov** was born in 1984 in Sochi, Russia. He graduated from Taganrog State University of Radio Engineering (TSURE) with a diploma of Engineering in Protected system of communication in 2006. He has been working in Taganrog Institute of Technology, South Federal University as assistant professor and writing his Candidate of Science (Ph.D.) dissertation on the methodology of efficiency estimation of quantum key distribution systems. D. Golubchikov is an author more than 30 scientific works. He is head of quantum cryptography research laboratory and head of student research group. The most significant papers are Golubchikov D. M., Rumyantsev K. E. "Quantum cryptography: principles, protocols, systems". Moscow, 2008 and Golubchikov D. M., Rumiantsev K. E. "Estimation of influence of error correction and privacy amplification on keys generation rate in QKD systems", Taganrog, 2010. His research interests include quantum cryptography, information security of telecommunication systems.

**N.A. Ikhu-Omoregbe**, has a B.Sc. degree in Computer science from the University of Benin, in Benin City, a M.Sc. degree in Computer Sciences from the University of Lagos, and a Ph.D. in Computer Science from Covenant University in Ota, Nigeria. His research interests include: Software Engineering, Mobile Computing, Mobile Healthcare and Telemedicine Systems, and Soft Computing. He currently lectures at Covenant University. He is a member of the Institution of Electrical and Electronics Engineers (IEEE).

Computer Networks Protocols (MANET) using OPNET Modeler. He has published several papers in International Communications Conferences and Journals. As M.Sc. Programme Leader in Computer Networking he is supervising students for MSc projects and PhD thesis, in the capacity of MANET field.

Lawal Bello received his B.Sc. degree in Computer Science in 2004 from Usmanu Danfodiyo University in Sokoto, Nigeria and M.Sc. degree in Computer Networking Engineering from University of Greenwich, United Kingdom. He is currently a Ph.D. student with the Mobile and Wireless Research Centre at the School of Engineering, University of Greenwich, United Kingdom. His research interest includes Wireless Communications, design and performance, evaluation of routing protocols in mobile ad hoc wireless networks, and Power Management in MANET.

**Christian Bolu**, who is presently the Acting Head of the Department of Mechanical Engineering at Covenant University in Nigeria holds a Ph.D. in Industrial & Systems Engineering from University of Wales, United Kingdom, M.Eng. in Industrial Engineering from University of Toronto, Canada, and a B.Sc. in Mechanical Engineering from University of Nigeria, Nsukka. He has several years of university teaching experience from Covenant University, University of Nigeria, Nsukka, University of Ibadan, and University of Toronto. A Fellow of the Nigerian Society of Engineers, Dr Bolu has several SAP Solution Consultant and Solution Architect certifications. He has worked as Chief Executive Officer, Technical Manager and Technical Consultant in several companies in Nigeria, Kenya, and Ghana. His current research interest includes plant maintenance total productivity measurement, mechatronics adaptations, cutting stock problems, digital asset management and fibre optics network optimization.

**Theofilos Chrysikos** was born in Patras, Greece in 1982. He received his Engineering Diploma from the Department of Electrical and Computer Engineering of the University of Patras in 2005 and obtained his PhD in 2012 on Wireless Channel Characterization with emphasis on path loss modeling, shadowing, RF propagation mechanisms, channel modeling and measurements, and wireless information-theoretic security (physical layer security). Other topics of academic interest and research include ad-hoc networks, emergency services, roadside networks, MIMO fading channels, QoS in wireless networks, Cellular Mobile Telephony (2,5G/3G), Next Generations Networks, and migration issues. He is a member of the Technical Chamber of Greece.

**Monday Ofori Eyinagho** obtained a Bachelor's of Science Degree in Electronic and Electrical Engineering from the Obafemi Awolowo University in Ile-Ife, Nigeria in 1988. He also holds a Post-Graduate Diploma in Computer Science from the University of Lagos in Lagos, Nigeria (1991), an M.B.A. (General Management) Degree from the River State University of Science and Technology in Port-Harcourt, Nigeria (2003), a Master's of Science Degree in Computer Engineering, from the Federal University of Technology in Owerri, Nigeria (2004), and a Ph. D. in Computer Engineering from Covenant University in Ota, Nigeria (2011). Dr. Eyinagho has had extensive industrial work experience in a number of corporate organizations. He is currently a lecturer in the Department of Electrical and Information Engineering at Covenant University in Ota, Nigeria. Dr. Eyinagho has published scholarly

considerable international exposure. Ndujiuba has attended several conferences and published many technical papers in major professional journals of IEEE and IET. Prior to his present position as Senior Lecturer at Covenant University in Ota, Nigeria, Ndujiuba was the Technical Director in Globe Trunk Ltd in UK. His research interests include: Ultra-Low Noise Amplifiers, Active Devices and Circuits, UWB Transmitter, Modelling & Simulation, and Dielectric Resonator Antennas.

**Eugeny P. Petrov** is Dr.Sci (Techn.), professor of State Educational Institution of Higher Professional Education "Vyatka State University," the Head of Radio Electronic Means Department of the said University. He has coordinated numerous Russian research projects in the field of radio communications and digital image processing. He was a scientific supervisor of many researches fulfilled on the basis Governmental Order. E. Petrov has made a large contribution in the development of mathematical theory of image processing with Markov chains application. He is author of more than 300 scientific publications, books and conference proceedings. He is Academician of Russian Academy of Natural Sciences and Honored Employee of Higher Professional Education of Russian Federation. He has prepared of 4 Doctors of Sci (Techn.) of his University Department.

**K. Rumyantsev** was born in 1951, Taganrog, Rostov Region, Russia. He graduated from Taganrog State University of Radio Engineering (TSURE) with a diploma of Electrical Engineering in 1974. He worked in the Leningrad Institute of Electronic Technology and defended his Candidate of Science (Ph.D.) dissertation on the problems of receiving optical signals in the harsh noise environment from 1974 to 1978. He defended his second (doctoral) dissertation at the Leningrad Institute of Precise Mechanics and Optics, which was dedicated to the development of the theory of space-time approach to search and detection of optical radiation sources in 1988. K. Rumyantsev has worked in the TSURE as an Assistant Professor, Associate Professor, Full Professor, and Vice-Rector for Research since 1979. He was Head of the Department of Receiver and TV System of the TSURE from 1989 to 1997. He has been Head of the Department of Information security of telecommunication systems of the Southern Federal University since 1997. He is a holder of 290 scientific papers, 17 books, and 40 patents. His research interests include principles of construction, theory of analysis, algorithms of functioning, and models of the registrations of weak light signals.

**Apkar Salatian** (B.Sc., Ph.D.) obtained a B.Sc. Second Class Honors Upper Division in Computer Science from University Of Strathclyde, Glasgow, UK in 1991. He then obtained a Ph.D. in Computer Science from University Of Aberdeen, Aberdeen, UK in 1997. After working as a university lecturer in the UK for 12 years he is now a lecturer of Information Technology and Communications at the American University of Nigeria, Yola, Nigeria. His research interests are in the areas of time series analysis of high frequency, voluminous and noisy data, telemedicine, data mining, and software engineering and computing for development.

**Sergey M. Smolskiy** is Dr. Sci. (Techn.), professor of the National Research University Moscow Power Engineering Institute (MPEI). He has participated in various researches and coordinated many Russian projects in the field of communication, radar technologies, theory of nonlinear oscillations, radio monitoring, electrodynamics, quantum radio physics etc. He was a scientific supervisor of many researches fulfilled on the basis of Governmental Order. He is a member of editorial board of different

## About the Contributors

scientific national and international journals and author of more than 250 scientific publications, books and conference proceedings. He is the co-author of eight large scientific books printed in English in USA, UK, Germany. He is Academician of three International Academies of Sciences, Honored Doctor of three foreign universities, member of IEEE.

**Ehsan Soleimani-Nasab** obtained the B.Sc. in Electrical Engineering from the Iran University of Science and Technology, Iran in 2006. He then received the M.Sc. and Ph.D. in Communication Systems from the K. N. Toosi University of Technology, Iran in 2009 and 2013, respectively. From April through October 2012, he was with the Department of Signals and Systems, Chalmers University of Technology, Sweden working as a Visiting Researcher. His research interests span signal processing for wireless communications, cooperative communications, MIMO systems, and cognitive radio networks.

**Igor S. Trubin** is Dr. Sci. (Techn.), professor of State Educational Institution of Higher Professional Education "Vyatka State University." He has participated in the few Russian research projects in the field of communication and digital image processing. He is author of more than 100 scientific publications, books and conference proceedings.