



## Proceedings

Kickoff Operation of CTIF Global Capsule (CGC) jointly with  
the Round Table Discussions on

## Knowledge Home

Thursday, September 8, 09:00-17:00 hrs

New Jersey Institute of Technology (NJIT), 151 Bleeker Street, Newark, NJ 07102, Campus  
Center, Ballroom B



This Conference is Co-sponsored by the IEEE Princeton Central Jersey Section, and  
IEEE North Jersey Section Communications Society

## Welcome Message

*It gives me a great sense of pride and honor to welcome you all to the Kickoff Operation of CTIF Global Capsule (CGC) jointly with the Round Table Discussions on Knowledge Home at New Jersey Institute of Technology (NJIT), USA. This platform gives us opportunity to take upon a very innovative challenge. In a traditional Home, we talk with each other through voice or indicate using visionary system. Basically, only two senses performing seeing and hearing play the major role in our daily life. The telecom revolution particularly in the wireless communications has paved the way of two-way-communications with regard to these two functions over long distances. However, human has additionally three more senses performing the functions of smelling, touching and tasting. In today's parlance, a "Knowledge Home" or "Smart Home" is capable of transmitting and receiving, several information related to the health, entertainment, education etc, satisfying the requirements of 'seeing' and 'hearing' via telecom media. A novel concept of "Human Bond Communications (HBC)" was hypothesized for establishing communications for all the five senses. It is postulated that new concept of "Knowledge Home" will amalgamate the 'HBC' and present day 'Knowledge Home'. This will have the skill, where human kind will communicate feelings and emotions of all the five senses over modern communication technologies.*

*Ramjee Prasad*

*CTIF, Global Capsule,*


*Aarhus University, Denmark*



*Ramjee Prasad*

<b>Time</b>	<b>Program</b>
8:30-	Registration
<b>9:00-10:30 hrs: Session 1: Opening and Introduction</b>	
<i>Session Chair: Konstantinos Karachalios, IEEE Standards Association, USA</i>	
9:00-9:30	“Welcome & Introduction to CGC”, Ramjee Prasad, CTIF Global Capsule, Aarhus University, Denmark
9:30-10:00	“Mobile Computing and Crowdsensing with Avatars and Aliens”, Cristian Borcea, NJIT, USA
10:00-10:30	“Digitizing the Power Grid: Fusion of Data and Power”, Roberto Rojas-Cessa, , NJIT, USA
<b>10:30-11:00</b>	<b>Coffee Break</b>
<b>11:00-13:00 hrs: Session 2: HBC &amp; Business Model</b>	
<i>Session Chair: Kwang-Cheng Chen, University of South Florida, USA</i>	
11:00-11:30	“Challenges and Opportunities in SDN/NFV Security”, Ashutosh Dutta, AT&T, USA
11:30-12:00	“Wireless Access: An Imperative for Human Endeavor?”, Ajay Rajkumar, Nokia Bell Labs, NJ, USA
12:00-12:30	“Human Bond in a world of Disruptive Technology based Business Models”, Peter Lindgren, Aarhus University, Denmark
<b>12:30-13:30</b>	<b>Lunch Break</b>
<b>13:30-15:00 hrs: Session 3: HBC Research Challenges</b>	
<i>Session Chair: Ashutosh Dutta, AT&amp;T, USA</i>	
13:30-14:00	“Cross/- Multi Disciplinary Challenges in HBC”, Bharat Biswal, NJIT, USA
14:00-14:30	“An Interdisciplinary Challenge: Integration of Nanoelectronics, Nanotechnology and Information Technology”, Dugra Misra, NJIT, USA
14:30-15:00	“Holistic Communications”, Kwang-Cheng Chen, University of South Florida, USA
<b>15:00-15:30</b>	<b>Coffee Break</b>
<b>15:30-16:45 hrs: Round Table Discussions: KNOWLEDGE HOME</b>	
<i>Moderator: Neeli Rashmi Prasad, SPA Solutions LLC, Mountain View, CA USA</i>	
15:30-16:45	<b>Panelists:</b> Ernestina Cianca, CTIF Global Capsule, Italy Pranela Rameshwar, New Jersey Medical School, USA Neeli Rashmi Prasad, SPA Solutions LLC, Mountain View, CA, USA
16:45-17:00	Concluding Remark: Ramjee Prasad, CTIF Global Capsule, Aarhus University, Denmark
-17:00	Closure

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*Session 1: Opening and Introduction*

## Konstantinos Karachalios

*Member,  
IEEE Management Council,  
USA*



*A globally recognized leader in standards development and intellectual property, Dr. Ing. Konstantinos Karachalios is managing director of the IEEE Standards Association and a member of the IEEE Management Council.*

*As managing director, he has been enhancing IEEE efforts in global standards development in strategic emerging technology fields, through technical excellence of staff; expansion of global presence and activities and emphasis on inclusiveness and good governance, including reform of the IEEE standards-related patent policy.*

*As member of the IEEE Management Council, he championed expansion of IEEE influence in key techno-political areas, including consideration of social and ethical implications of technology, according to the IEEE mission to advance technology for humanity. Results have been rapid in coming and profound; IEEE is becoming the place to go for debating and building consensus on issues such as Internet governance and ethics in design of autonomous systems.*

*[Before IEEE, Konstantinos played a crucial role in successful French-German cooperation in coordinated research and scenario simulation for large-scale nuclear reactor accidents. And with the European Patent Office, his experience included establishing EPO's patent academy, the department for delivering technical assistance for developing countries and the public policy department, serving as an envoy to multiple U.N. organizations.]*

*[Konstantinos earned a Ph.D. in energy engineering (nuclear reactor safety) and masters in mechanical engineering from the University of Stuttgart.]*

## Session Chair: Introduction

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# Ramjee Prasad

*Director, Center for TeleInFrastruktur (CTIF),  
Aalborg University,  
Denmark*



*Ramjee Prasad is currently the Director of the Center for TeleInFrastruktur (CTIF) at Aalborg University, Denmark and Professor, Wireless Information Multimedia Communication Chair.*

*Ramjee Prasad is the Founder Chairman of the Global ICT Standardisation Forum for India (GISFI: [www.gisfi.org](http://www.gisfi.org)) established in 2009.*

*GISFI has the purpose of increasing of the collaboration between European, Indian, Japanese, North-American and other worldwide standardization activities in the area of Information and Communication Technology (ICT) and related application areas. He was the Founder Chairman of the HERMES Partnership – a network of leading independent European research centres established in 1997, of which he is now the Honorary Chair. He is a Fellow of the Institute of Electrical and Electronic Engineers (IEEE), USA, the Institution of Electronics and Telecommunications Engineers (IETE), India, the Institution of Engineering and Technology (IET), UK, Wireless World Research Forum (WWRF) and a member of the Netherlands Electronics and Radio Society (NERG), and the Danish Engineering Society (IDA).*

*He is also a Knight (“Ridder”) of the Order of Dannebrog (2010), a distinguished award by the Queen of Denmark. He has received several international award such as 2014 IEEE AESS Outstanding Organizational Leadership Award for: “Organizational Leadership in developing and globalizing the CTIF (Center for TeleInFrastruktur) Research Network”.*

*In January, 2015, he received “Convergence Award for Scholarly Achievements” by the Society for Digital Policy & Management, South Korea.*

*He has been honored by the University of Rome “Tor Vergata”, Italy as a Distinguished Professor of the Department of Clinical Sciences and Translational Medicine on March 15, 2016.*

*He is the Founder Editor-in-Chief of the Springer International Journal on Wireless Personal Communications. He is a member of the editorial board of other renowned international journals including those of River Publishers. Ramjee Prasad is Founder Co-Chair of the Steering committees of many renowned annual international conferences, e.g., Wireless Personal Multimedia Communications Symposium (WPMC); Wireless VITAE and Global Wireless Summit (GWS). He has published more than 30 books, 1000 plus journals and conferences publications, more than 15 patents, a sizeable amount of graduated PhD students (over 100) and an even larger number of graduated M.Sc. students (over 250). Several of his students are today worldwide telecommunication leaders themselves*

## **Welcome & Introduction to CGC**

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# Cristian Borcea

*Professor, Department of Computer Science,  
New Jersey Institute of Technology (NJIT),  
USA*



## **Education**

- *Ph.D., Computer Science, Rutgers University, 2004*
- *M.S., Computer Science, Rutgers University, 2002*
- *B.S., Computer Science, University Politehnica of Bucharest, Romania, 1996.*

## **Academic Appointments**

- *Chair, Department of Computer Science, New Jersey Institute of Technology (NJIT), July 2015 – Present*
- *Associate Chair, Department of Computer Science, NJIT, July 2012 – June 2015*
- *Professor, Department of Computer Science, NJIT, June 2016 – Present*
- *Associate Professor, Department of Computer Science, NJIT, June 2009 – June 2016*
- *Visiting Associate Professor, National Institute of Informatics, Tokyo, Japan, April 2012 – Present*
- *Assistant Professor, Department of Computer Science, NJIT, August 2004 – June 2009*

## **Grants and Contracts**

- *NJIT Secure Computing Initiative. NSF (DGE-1565478), \$4,078,364. Co-PI. 2015-2020.*
- *Mobile Distributed Computing in the Cloud. NSF (CNS-1409523), \$599,999. PI. 2014-2017*
- *CAE Cybersecurity Research: PARAPET-Preventing Attempted exfiltration and infiltration using encryPtED signatures. NSA (H98230-15-1-0274), \$297,387. Co-PI. 2015-2016*
- *Mobius: A Multi-Tier Socially-Aware Network Infrastructure. NSF (CNS-0831753), \$409,978. PI. 2008-2012*
- *Other 5 NSF grants between 2005 and 2009, omitted for brevity*

## **Five Publications Relevant to the Proposed Research**

- *M. Talasila, R. Curtmola, and C. Borcea. "Crowdsensing in the Wild with Aliens and Micro-payments". IEEE Pervasive Computing Magazine, Vol. 15, No. 1, 2016.*
- *Q. Minh, Y. Shibata, C. Borcea, and S. Yamada. "On-site Configuration of Disaster Recovery Access Networks Made Easy". Elsevier Ad Hoc Networks, Vol. 40, April 2016.*
- *C. Borcea, X. Ding, N. Gehani, R. Curtmola, M. A. Khan, H. Debnath, "Avatar: Mobile Distributed Computing in the Cloud," Proceedings of the 3rd IEEE International Conference on Mobile Cloud Computing, Services, and Engineering (MobileCloud '15), 2015.*
- *Q. T. Minh, K. Nguyen, C. Borcea, S. Yamada. "On-the-Fly Establishment of Multihop Wireless Access Networks for Disaster Recovery". IEEE Communications Magazine, Vol. 52, No. 10, 2014.*
- *G. Cardone, L. Foschini, C. Borcea, P. Bellavista, A. Corradi, M. Talasila, R. Curtmola, "Fostering ParticipAction in Smart Cities: A Geo-Social CrowdSensing Platform," IEEE Communications Magazine, Special Issue on Smart Cities, Vol. 51, No. 6, 2013*

**Title: Mobile Computing and Crowdsensing with Avatars and Aliens**

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# Roberto Rojas-Cessa

*Professor, Department of Electrical and Computer Engineering,  
New Jersey Institute of Technology (NJIT),  
USA*



*Roberto Rojas-Cessa received the Ph.D. degree in Electrical Engineering from Polytechnic Polytechnic University (now the New York University Tandon School of Engineering, Polytechnic Institute), Brooklyn, NY. Currently, he is an Associate Professor in the Department of Electrical and Computer Engineering, New Jersey Institute of Technology. He has been involved in design of systems for high-speed computer communications, and in the development of high-performance and scalable packet switches and reliable switches. He participated in the design of a 40 Tb/s core router in Corec, Inc, in Tinton Falls, NJ. His research interests include data center networks, high-speed switching and routing, fault tolerance, quality-of-service networks, network measurements, and distributed systems.*

*He was an Invited Fellow of the Japanese Society for the Advancement of Science in 2009. He visited the University of Electro-Communications, Japan. He was a Visiting Professor in Thammasat University, Thailand. He is a co-author of the book "Advanced Internet Protocols, Services, and Applications," Wiley and Sons, 2012. His research has been funded by U.S. National Science Foundation and private companies. He has served in technical committees for numerous IEEE conferences, as a reviewer for several IEEE journals, and as a reviewer and panelist for U.S. National Science Foundation and U.S. Department of Energy. He is the recipient of the Excellence in Teaching Award 2013 from the Newark College of Engineering. He is a recipient of New Jersey Inventors Hall of Fame - Innovators Award in 2013. He is a Senior Member of IEEE.*

**Title: Digitizing the Power Grid: Fusion of Data and Power**





*Session 2: HBC & Business Model*

# Kwang-Cheng Chen

*Distinguished Professor,  
College of Electrical Engineering & Computer Science,  
National Taiwan University  
Taiwan*



*Kwang-Cheng Chen received B.S. from the National Taiwan University in 1983, M.S. and Ph.D from the University of Maryland, College Park, United States, in 1987 and 1989, all in electrical engineering. From 1987 to 1998, Dr. Chen worked with SSE, COMSAT, IBM Thomas J. Watson Research Center, and National Tsing Hua University, in mobile communications.*

*He was visiting Hewlett-Packard Laboratories in California USA during 1997 and a Guest Professor at the Delft University of Technology, Netherlands, 1998, Aalborg University, Denmark, 2008, and Visiting Scientist at the Research Laboratory of Electronics, Massachusetts Institute of Technology, 2012-2013 and 2014, SKKU Fellow Professor, Korea, 2013-2014.*

*Dr. Chen actively involves the technical organization of numerous leading IEEE conferences, including as the Technical Program Committee Chair of 1996 IEEE International Symposium on Personal Indoor Mobile Radio Communications, TPC co-chair for IEEE Globecom 2002, General co-chair for 2007 IEEE Mobile WiMAX Symposium in Orlando, USA, 2009 IEEE Mobile WiMAX Symposium in Napa Valley, USA, the IEEE 2010 Spring Vehicular Technology Conference, 2011 IEEE Online Conference on Green Communications, WPMC 2012, and many others.*

*Dr. Chen founded IEEE Workshop on Social Networks and IEEE Workshop on Smart Grid Communications. He has been a voting member for IEEE 802.11 (wireless LANs), IEEE 802.15 (Wireless Personal Area Networks), IEEE 802.14 (HFC modem), IEEE 802.16 (WiMAX) international standard working groups, and participating US TIA45.5 CDMA Cellular standard, ETSI SMG2 cellular standard, and ITU-R TG8/1 IMT-2000 (3G) standard, ETSI 3GPP, and was Vice Chair WWRF SIG3 2006-7.*

*He has authored and co-authored over 200 IEEE/ACM technical papers, 20 granted/pending US patents, a few book chapters, and 3 books Cognitive Radio Networks (with R. Prasad) by Wiley 2009, Mobile WiMAX (ed. with R. DeMarca) by Wiley 2008, and Principles of Communications by River 2009.*

*Dr. Chen was elected as an IEEE Fellow in 2007 Class (special report by IEEE Spectrum), one of Ten Outstanding Young Engineers in 1994, one of Ten Outstanding Young Persons (the most prestigious achievement award for people under age 40 in Taiwan) in 1996, NSC Excellent Research Award in 2000, Outstanding Engineering Professor in 2002, etc. He was invited as a speaker in the United Nation ITU TELCOM 95 Technology Summit, Asia TELCOM 97 Strategy Summit, and keynotes in various international conferences in recent years. He also led APEC Telecommunication Working Group WTO Implementation task group with 19 member economies. Dr. Chen received 2011 IEEE ComSoc Wireless Communication Recognition Award. His research interests include data analytics, wireless communications and network science, particularly in 5G wireless and cyber-physical systems, large wireless networks, inference on big networked data, and biochemical molecular communications.*

## Session Chair: HBC & Business Model

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# Ashutosh Dutta

*Director, Technology Security,  
AT&T's Mobility and Cloud Security Division,  
USA*



*Ashutosh Dutta is currently Director Technology Security at AT&T's Chief Security Office in Middletown, New Jersey. His more than 25 years of career includes CTO of Wireless at a Cybersecurity company NIKSUN, Senior Scientist in Telcordia Research, Director of Central Research Facility at Columbia University, adjunct faculty at NJIT, and Computer Engineer with TATA Motors. He has more than 80 conference and journal publications, three book chapters, and 30 issued patents. Ashutosh is co-author of the book, titled, "Mobility Protocols and Handover Optimization: Design, Evaluation and Application," published by IEEE and John & Wiley. Ashutosh served as the chair for IEEE Princeton / Central Jersey Section, Industry Relation Chair for Region 1 and MGA, Pre-University Coordinator for IEEE MGA. As the vice chair of Education Society Chapter of PCJS, he co-founded the IEEE STEM conference (ISEC) in 2011 and helped to implement EPICS (Engineering Projects in Community Service) in the high schools within PCJS. Ashutosh currently serves as the director of Industry Outreach for IEEE Communications Society Board of Governors and is the co-lead for IEEE 5G initiative. He was recipient of the prestigious 2009 IEEE MGA Leadership award and 2010 IEEE-USA professional leadership award. Ashutosh obtained his BS in Electrical Engineering from NIT Rourkela, India, MS in Computer Science from NJIT, and Ph.D. in Electrical Engineering from Columbia University, New York. Ashutosh is a senior member of IEEE and ACM.*

**Title: Challenges and Opportunities in SDN/NFV Security**

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# Ajay Rajkumar

*Director, Nokia Bell Labs, New Jersey,  
USA,*



*Ajay Rajkumar received a Ph.D. in Computer Science from Courant Institute of Mathematical Sciences, New York University. Dr. Rajkumar currently leads the SDN and Programmable Networks domain in Mobile Networks CTO at Nokia. Dr. Rajkumar has received Bell Labs President's Award for Design and Prototype of Base Station Router (BSR) which was used to develop flat IP architectures across many different cellular standards and has since its early days evolved into Edge Computing and Content paradigm. He has received another Bell Labs President's Silver award for the first prototype that demonstrated seamless interworking across heterogeneous access networks for real-time applications. Dr. Rajkumar led the mobile industry to develop standards that enable ubiquitous coverage across heterogeneous access and was the Founding Chair of IEEE 802.21 for Media Independent Handover. He was also a Member of the IEEE 802 Executive Committee Board. Dr. Rajkumar has been a frequent invited speaker at research labs, universities, industry and technical panels. He has many publications and has received more than 25 patents in very diverse areas of technology.*

**Title: Wireless Access: An Imperative for Human Endeavor?**

## Peter Lindgren

*Professor,  
Multi business model and Technology innovation ,  
Aarhus University,  
Denmark*



*Professor Peter Lindgren, Peter Lindgren holds a full Professorship in Multi business model and Technology innovation at Aarhus University – Business development and technology innovation and has researched and worked with network based high speed innovation since 2000. He is author to several articles and books about business model innovation in networks and Emerging Business Models. He has been researcher at Politecnico di Milano in Italy (2002/03) and Stanford University, USA (2010/11) and has in the time period 2007 – 2010 been the founder and Center Manager of International Center for Innovation [www.ici.aau.dk](http://www.ici.aau.dk) at Aalborg University. He works today as researcher in many different multi business model and technology innovations projects and knowledge networks among others E100 - <http://www.entovation.com/kleadmap/>, Stanford University project Peace Innovation Lab <http://captology.stanford.edu/projects/peace-innovation.html>, The Nordic Women in business project - [www.womeninbusiness.dk/](http://www.womeninbusiness.dk/), The Center for TeleInFrastruktur (CTIF) at Aalborg University [www.ctif.aau.dk](http://www.ctif.aau.dk), EU FP7 project about "multi business model innovation in the clouds" - [www.Neffics.eu](http://www.Neffics.eu). He is co-author to several books. He has an entrepreneurial and interdisciplinary approach to research and has initiated several Danish and International research programmes.*

*His research interests are multi business model and technology innovation in networks, multi business model typologies and new global business models.*

### **Title: Human Bond in a world of Disruptive Technology based Business Models**





*Session 3: HBC Research Challenges*

## Ashutosh Dutta

*Director, Technology Security,  
AT&T's Mobility and Cloud Security Division,  
USA*



*Ashutosh Dutta is currently Director Technology Security at AT&T's Chief Security Office in Middletown, New Jersey. His more than 25 years of career includes CTO of Wireless at a Cybersecurity company NIKSUN, Senior Scientist in Telcordia Research, Director of Central Research Facility at Columbia University, adjunct faculty at NJIT, and Computer Engineer with TATA Motors. He has more than 80 conference and journal publications, three book chapters, and 30 issued patents. Ashutosh is co-author of the book, titled, "Mobility Protocols and Handover Optimization: Design, Evaluation and Application," published by IEEE and John & Wiley. Ashutosh served as the chair for IEEE Princeton / Central Jersey Section, Industry Relation Chair for Region 1 and MGA, Pre-University Coordinator for IEEE MGA. As the vice chair of Education Society Chapter of PCJS, he co-founded the IEEE STEM conference (ISEC) in 2011 and helped to implement EPICS (Engineering Projects in Community Service) in the high schools within PCJS. Ashutosh currently serves as the director of Industry Outreach for IEEE Communications Society Board of Governors and is the co-lead for IEEE 5G initiative. He was recipient of the prestigious 2009 IEEE MGA Leadership award and 2010 IEEE-USA professional leadership award. Ashutosh obtained his BS in Electrical Engineering from NIT Rourkela, India, MS in Computer Science from NJIT, and Ph.D. in Electrical Engineering from Columbia University, New York. Ashutosh is a senior member of IEEE and ACM.*

## Session Chair: HBC Research Challenges

# Durga Misra

*Professor,  
Department of Electrical and Computer Engineering,  
New Jersey Institute of Technology,  
USA*



*Prof. Durga Misra is a Professor in the Department of Electrical and Computer Engineering, New Jersey Institute of Technology, Newark, USA. His current research interests are in the areas of nanoelectronic/optoelectronic devices and circuits; especially in the area of nanometer CMOS gate stacks and device reliability. Prof. Misra received several research awards from the National Science Foundation, NASA, State of New Jersey and various Industries. He is currently a Distinguished Lecturer of IEEE Electron Devices Society (EDS) and serving in the IEE EDS Board of Governors. He has organized many IEEE International Conferences on Solid-State Science and Technology field and at the Technical Meetings of the Electrochemical Society as General Chair, Program Chair and Track Chair, Technical Program Committee member. He is a Fellow of the Electrochemical Society (ECS) and he received the Thomas Collinan Award from the Dielectric Science & Technology Division of ECS. He is also the winner of the Electronic and Photonic Division Award from ECS. He edited and co-edited more than 40 books and conference proceedings in his field of research. He has published more than 200 technical articles in peer reviewed Journals in International Conference proceedings including 75 Invited Talks. He has graduated 18 PhD students and 35 MS students. He received the M.S. and Ph.D. degrees in electrical engineering from the University of Waterloo, Waterloo, ON, Canada, in 1985 and 1988, respectively*

**Title: An Interdisciplinary Challenge: Integration of Nanoelectronics, Nanotechnology and Information Technology**

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# Kwang-Cheng Chen

*Distinguished Professor,  
College of Electrical Engineering & Computer Science,  
National Taiwan University  
Taiwan*



*Kwang-Cheng Chen received B.S. from the National Taiwan University in 1983, M.S. and Ph.D from the University of Maryland, College Park, United States, in 1987 and 1989, all in electrical engineering. From 1987 to 1998, Dr. Chen worked with SSE, COMSAT, IBM Thomas J. Watson Research Center, and National Tsing Hua University, in mobile communications.*

*He was visiting Hewlett-Packard Laboratories in California USA during 1997 and a Guest Professor at the Delft University of Technology, Netherlands, 1998, Aalborg University, Denmark, 2008, and Visiting Scientist at the Research Laboratory of Electronics, Massachusetts Institute of Technology, 2012-2013 and 2014, SKKU Fellow Professor, Korea, 2013-2014.*

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## **Title: Holistic Communications**

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## Neeli Rashmi Prasad

*Founder CEO, SPA Solutions-LLC,  
USA*



*Neeli Prasad is the Founder CEO of the SPA solutions-LLC, Mount View, California, USA. She is the former Research Head ,CTIF, Aalborg University, Denmark and Director CTIF-USA.*

*She is a security and wireless technology strategist, who through her career has been driving business and technology innovation, from incubation to prototyping to validation. She has focus and the abilities to transform organizations and networking technologies to address changes in markets. She has made her way up the waves of secure communication technology by contributing to the most groundbreaking and commercial inventions. She has general management, leadership, and technology skills, having worked for service providers and technology companies in various key leadership roles.*

*She was leading a global team of 20+ researchers across multiple technical areas and projects in Japan, India, throughout Europe and USA. She has been involved in projects and plays a key role from concept to implementation to standardization. Her strong commitment to operational excellence, innovative approach to business and technological problems, and aptitude for partnering cross-functionally across the industry have reshaped and elevated her role as project coordinator making her the preferred partner in multinational and European Commission project consortium.*

*Her notable accomplishments include enhancing the technology of multinationals including CISCO, HUAWAI, NIKSUN, Nokia-Siemens and NICT, defining the reference framework for Future Internet Assembly and being one of the early key contributors to Internet of Things. She is also expert member of governmental working groups and cross-continental forums.*

*Previously, she has served as chief system/network architect on large-scale projects from both the network operator and vendor looking across the entire product and solution portfolio covering security, wireless, mobility, Internet of Things, Machine-to-Machine, eHealth, smart cities and cloud technologies. She was one of the key contributors to the commercialization of WLAN for which she has published two books*

### **Moderator: Round Table Discussions: Knowledge HOME**

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# Ernestina Cianca

*Professor,  
Dpt. of Electronics Engineering,  
University of Tor-Vergata, Rome  
Italy*



*Ernestina Cianca is Assistant Professor in Telecommunications at the URTV (Dpt. of Electronics Engineering), teaching Digital Communications and Advanced ICT infrastructures and Applications. She is also coordinator of a II Level Master on Advanced Satellite Communication and Navigation Systems where she also teaches Principles of Satellite Communications. She is Editor in Chiefs of the Journal of CONASENSE (Com/Nav/Sensing and Services), River Publishers. For more information about the CONASENSE initiative and the motivations of the journal, please visit [www.conasense.org](http://www.conasense.org). She has been coordinator and participated to several European and national projects. Her background is on: wireless communications, in particular, OFDM-based and in general FDE-based air interfaces, CDMA (power control, resource allocations and cross-layer design); signal processing techniques for multiple-antennas (beamforming, MIMO, Space-time coding); transmission at EHF frequencies, both for terrestrial and satellite communications. Recently, her research interests has moved towards microwave radar medical imaging and passive RF sensing for activity recognition. She has been General Chair of the conference ISABEL2010 (Third Symposium on Applied Sciences in Biomedical and Telecommunication Engineering), she has been TPC Co-Chair of the conference European Wireless Technology 2009 (EuWIT2009), joint event with the European Microwave Week 2009, and TPC Co-Chair in the conference Wireless Vitae 2009 (<http://www.wirelessvitae2009.org>). She is Guests Editors of some Special Issues in journals such as Wireless Personal Communications (Kluwer) and Journal of Communications (JCM, ISSN 1796-2021). She is author of about 90 papers, on international journals/transactions and proceedings of international conferences.*

## **Panelist: Round Table Discussions: Knowledge HOME**

# Pranela Rameshwar

Professor,  
Department of Medicine,  
Rutgers New Jersey Medical School,  
USA



## Education

- B.S., 1985, University of Wisconsin, Medical Microbiology
- Ph.D., 1993, Rutgers University, Biology

## Relevant Publications:

- Park JM, Munoz JL, Won BW, Bliss SA, Greco SJ, Patel SA, Kandouz M, Rameshwar P. (2013) Exogenous CXCL12 activates protein kinase C to phosphorylate. *Cancer Lett* 331:84-91.
- Chang VT, Yook C, Rameshwar P. (2013) Synergism between fibronectin and TGF- $\beta$ 1 in the production of substance P in monocytes of patients with myelofibrosis. *Leuk Lymphoma* 54:631-638.
- Munoz JL, Bliss SA, Greco SJ, Ramkissoon SH, Ligon KL, Rameshwar P. Delivery of functional anti-miRNA-9 by mesenchymal stem cells-derived exosomes to Glioblastoma Multiforme conferred chemosensitivity. *Mol Ther - Nucleic Acids* 2:e126, 2013.
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## Panelist: Round Table Discussions: Knowledge HOME

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# Neeli Rashmi Prasad

*Founder CEO, SPA Solutions-LLC,  
USA*



*Neeli Prasad is the Founder CEO of the SPA solutions-LLC, Mount View, California, USA. She is the former Research Head ,CTIF, Aalborg University, Denmark and Director CTIF-USA.*

*She is a security and wireless technology strategist, who through her career has been driving business and technology innovation, from incubation to prototyping to validation. She has focus and the abilities to transform organizations and networking technologies to address changes in markets. She has made her way up the waves of secure communication technology by contributing to the most groundbreaking and commercial inventions. She has general management, leadership, and technology skills, having worked for service providers and technology companies in various key leadership roles.*

*She was leading a global team of 20+ researchers across multiple technical areas and projects in Japan, India, throughout Europe and USA. She has been involved in projects and plays a key role from concept to implementation to standardization. Her strong commitment to operational excellence, innovative approach to business and technological problems, and aptitude for partnering cross-functionally across the industry have reshaped and elevated her role as project coordinator making her the preferred partner in multinational and European Commission project consortium.*

*Her notable accomplishments include enhancing the technology of multinationals including CISCO, HUAWEI, NIKSUN, Nokia-Siemens and NICT, defining the reference framework for Future Internet Assembly and being one of the early key contributors to Internet of Things. She is also expert member of governmental working groups and cross-continental forums.*

*Previously, she has served as chief system/network architect on large-scale projects from both the network operator and vendor looking across the entire product and solution portfolio covering security, wireless, mobility, Internet of Things, Machine-to-Machine, eHealth, smart cities and cloud technologies. She was one of the key contributors to the commercialization of WLAN for which she has published two books*

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