Keynote Speakers 2012

Robert A. Freling
Executive Director, Solar Electric Light Fund (SELF)
<u>Date & time</u>: Monday, October 22, 2012 6:30 PM – 8:30 PM
<u>Biography</u>:
Robert Freling is Executive Director of the Solar Electric Light Fund (SELF), a Washington, DC-based nonprofit organization that has been on the cutting edge of delivering solar solutions to rural villages since 1990. Under Freling's leadership, SELF has pioneered the use of solar power for a wide range of applications including household lighting, water pumping, school electrification, drip irrigation and wireless Internet access. SELF has completed projects in 20 countries, making it a leader among non-governmental organizations in providing practical and cost-effective renewable energy alternatives for the developing world. Fluent in Spanish, French, Portuguese, Russian, Chinese and Indonesian, Mr. Freling holds a B.A. in Russian Studies from Yale University, and an M.A. in Communications Management from the Annenberg School of Communications at the Uni. of Southern California.   Mr. Freling is the recipient of the 2008 King Hussein Leadership Prize.
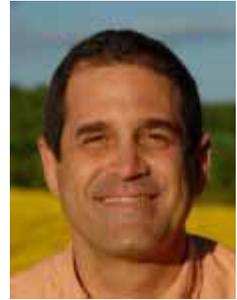
Gretchen Kalonji
Assistant Director General for Natural Sciences, UNESCO
<u>Date & time</u>: Monday, October 22, 2012 8 AM – 10 AM
<u>Biography</u>:
Gretchen Kalonji assumed the position of Assistant Director General for Natural Sciences at UNESCO effective July 1, 2010.   Prior to joining UNESCO, starting in 2005, Kalonji served in various leadership roles at the University of California, including as Director of International Strategy Development at the UC Office of the President, where her responsibility was to lead in the design and implementation of the first coordinated and comprehensive international strategy for the ten-campus UC system, and as Director of Systemwide Research Development. Kalonji came to the UC from the University of Washington, where she served as Kyocera Professor of Materials Science from 1990 – 2005. Prior to joining UW, Kalonji served as Assistant and Associate Professor in the Department of Materials Science and Engineering at MIT, where she earned her B.Sc. degree in 1980 and her Ph.D in 1982.
Professor Kalonji's areas of materials science expertise include symmetry constraints on the structure and properties of crystalline defects, phase transformations and microstructural evolution. Kalonji also has extensive experience in innovations in science and engineering education, as well as in new models for international research collaboration.   Her work, both in materials science and in research and educational innovation, has been recognized with multiple honors and awards. She holds or has held visiting faculty appointments at the Max Planck Institute (Stuttgart), the University of Paris, Tohoku University, Sichuan University, Tsinghua University and the newly established Peking University Graduate School in Shenzhen.

Gertjan van Stam
CEO, LinkNet Zambia
<u>Date & time</u>: Tuesday, October 23, 2012 8 AM – 10 AM
<u>Biography</u>:
Gertjan van Stam (Rotterdam, 1965) studied wireless technologies at Hogeschool Utrecht, Netherlands, and worked in Swaziland in 1987. After achieving his degree in telecommunications he took on tasks in various capacities at the incumbent telecommunications operator of the Netherlands.

There he participated in practice and strategies for broadcast technologies, standardization platforms, telecommunications network and service operations including mobile networks (paging and GSM). Since 2000 Gertjan and his family live in rural Africa. First in Zimbabwe and, from 2003, in Zambia. He works with 'local talent' to engender transdisciplinary practices and holistic theory building. The goal is to identify and inspire local talent and introduce appropriate technologies in order to build the necessary capacity and intent for community-led activities to yield sustainable human development outcomes. His quest is for a logical framework understanding dynamics of change in rural African communities and engendering leadership capable of inspiring, initiating, implementing, operating, and scaling up of sustainable progress in the local community.

Gertjan's activities in Zambia were featured in IEEE "The Institute", and his carrier was documented in an award winning IEEE video at 'tryEngineering". The activities in Zambia were featured worldwide though BBC Clicks. He is part of IEEE's Ad Hoc Committee for Humanitarian Activities, and University of Zambia's Education Projects for Africa team. Further he authored the book Placemark, and publishes articles.

Krista Bauer
Director of Global Programs, GE Foundation
Date & time: Wednesday, October 24, 2012 8 AM – 10 AM
Title of the speech: Technology Application in the Developing World: Think Local
Biography:
Krista Bauer is the Director of Global Programs for GE Company, based in Fairfield, CT. Her responsibilities include GE's philanthropic programs related to health, the environment, non-US education, public policy and humanitarian relief, and she manages the Company's product donation investments worldwide. Krista is responsible for GE's disaster relief actions, as well as other Citizenship efforts related to product and service development targeting the needs of underserved populations across the developing world.

Krista oversees GE's signature health programs – Developing Health and Developing Health Globally – that aim to improve access to quality healthcare for underserved communities in the US and across the developing world through a combination of product-based donation, financial support and skill-based employee engagement.

Krista joined GE in 1996, and her background includes Six Sigma, product/process design and marketing. Prior to her current role, she held leadership roles in GE Capital, driving businesses reengineering, marketing and product development. Krista began her career as a process engineer with Lord Corporation, focusing on product development and process research in water-based adhesive technologies.

Krista holds a BS and MS in Chemical Engineering from Case Western Reserve University, and earned an MBA from the Kellogg School of Management at Northwestern University.

Gordon Day
2012 IEEE President and CEO
Date & time: Monday, October 22, 2012 8 AM – 10 AM
Biography:
Gordon Day is IEEE's 50th President. He spent most of his career in research and management at the National Institute of Standards and Technology, where he founded and led the NIST Optoelectronics Division. His personal research ranged from fundamental optical measurements to the development of standards for optical fiber and new concepts in instrumentation. More recently, he served as science advisor to Senator Jay Rockefeller and Director of Government Relations for the Optoelectronics Industry Development Association.

He has been a Professor Adjoint at the University of Colorado and a Visiting Fellow at the University of Southampton (UK), and has served on many industry, government, and academic advisory groups. He is a past President of the IEEE Photonics Society and of IEEE-USA, and is a Fellow of IEEE, AAAS, the Optical Society of America, and the Institute of Physics (UK). He received B.S., M.S., and Ph.D. degrees in electrical engineering from the University of Illinois.

Peter Staecker
2013 IEEE President and CEO
Date & time: Wednesday closing, October 24
Biography:
Peter Staecker holds BS and EE degrees from MIT, and MS and PhD degrees from Polytechnic University. His professional career started in 1972 at MIT Lincoln Laboratory, where he developed microwave design and test techniques for satellite communications. In 1986 he joined M/A-COM, where he led program, product and process development, then helped the company's transition from defense to commercial markets. During this period he also established strong ties with US and European universities and with research organizations. He retired from M/A-COM as Director of Research & Development. Staecker served industry and government on manufacturing and advisory panels, and is consulting editor to *Microwave Journal*.
Staecker is Past-President and Honorary Life Member of the MTT Society, and is an IEEE Life Fellow. His 28-year service to IEEE includes leadership roles in Finance, Strategic Planning, Publications, and Membership. He has served on the IEEE Board of Directors for five years.

Jim Fruchterman
CEO, Benetech
Date & time: Wednesday, October 24, 2012 4 PM – 5 PM
Biography:
Jim Fruchterman is social entrepreneur and CEO of Benetech, a nonprofit technology company based in Palo Alto, California. A technology entrepreneur and engineer, Fruchterman has been a rocket scientist, founded two of the foremost optical character recognition companies, and created numerous technology social enterprises. Fruchterman cofounded Calera Recognition Systems and RAF Technology, Inc. both of which were based on optical character recognition technology. In 1989, Fruchterman founded Benetech as a nonprofit social enterprise, to produce reading machines, based on the Calera technology, for people who are blind.
Benetech expanded its focus in 2000 and began creating new technology for people with disabilities as well as the human rights and environmental movements. Benetech's programs include Bookshare, the world's largest accessible online library for people with print disabilities, Martus, software for tracking human rights violations and Miradi, project management tools for conservationists. Fruchterman received a MacArthur Fellowship in 2006 in recognition of his work as a pioneering social entrepreneur. He believes that technology is the ultimate leveler, allowing disadvantaged people to achieve more equality in society.

Byron Reese
Chief Innovation Officer, Demand Media
Date & time: Sunday, October 21, 2012 7:30 PM – 9:30 PM
Title of the speech: Big Data and the Coming Golden Age of Humanity
Biography:
Byron Reese employs his profound understanding of technical data to illuminate how the technology of today can solve many global challenges. Byron started his

first business as an undergraduate at Rice University. He later founded and sold two companies: Hot Data, ultimately to Pitney Bowes; and PageWise, the parent company of ExpertVillage.com, to Demand Media. He currently serves as Chief Innovation Officer for Demand Media. The company holds and has filed numerous patents on Reese's work in disciplines including crowdsourcing, content creation, and psychographics. Byron has just completed the forthcoming book "Golden Age 2.0: How The Internet Will End Ignorance, Disease, Hunger, Poverty, And War". An entrepreneur, inventor, technologist, public speaker and historian, Byron speaks and writes about the intersection of history, technology and philosophy. Visit Byron's website at www.byronreese.com.

Abstract:
We are entering an age where more data will be collected every minute than has been collected in the whole of human history. "Today we are connecting people digitally, and we are also beginning to connect the data their lives generate as well. The universe is full of non-obvious causal relationships invisible to both the eye and intuition. For example, why do Academy Award winners live longer than the other nominees, and first basemen outlive other players on the team? Why do children in schools with fluorescent lighting get fewer cavities than those in incandescent-lit schools? How might a sophisticated computational answer engine of the future help us find these relationships and thereby cure disease, end poverty, and usher in a new golden age for humanity? Moore's Law, big data, and cheap sensors will bring about this great new future. Now, why does this matter to companies today? Because it is actionable today.

We start by looking at new kinds of data in behavioral targeting, how we can roll in new data sources such as real-time weather, concepts trending in Twitter, etc. In other words, think of accessible data sources that might not have traditionally been used before. Everything is connected to everything else in the world of information, we just have to figure out the relationships.

Knut Aanstad
Advisor, UN Sustainable Energy for All
Date & time: Monday, October 22, 2012 8 AM – 10 AM
Title of the speech: An Overview of the Sustainable-Energy-for-All Initiative
Biography:
Knut M. Aanstad is an employee of Norwegian energy company Statoil. He is currently seconded to the United Nations to work on the Sustainable Energy for All initiative. Within the Sustainable Energy for All initiative, Mr. Aanstad is part of a team with the United Nations that is working to mobilize commitments from the private sector toward reaching the three goals of universal access to modern energy services, doubling the rate of improvement in energy efficiency and double the shareof renewable energy in the global energy mix.