



2018 Marconi Society Symposium

Honoring Prof. Tom Leighton

“Restoring Trust on the Internet”

9:00 – 9:10 a.m.

WELCOME AND INTRODUCTIONS by Marconi Chair **Vinton Cerf**, Chief Internet Evangelist, Google; **Giovanni Corazza**, Professor, University of Bologna and CEO, Cineca; and **Gabriele Falciasecca**, Chairman, Guglielmo Marconi Foundation

9:10 – 10:10 a.m.

INTRODUCTORY KEYNOTE by **Tom Leighton**, Co-founder and CEO, Akamai Technologies: **“The Role of CDNs in Restoring Trust on the Internet”**

ABSTRACT: The Internet is the invention of our generation and compares well with the advent of television, radio, and even the printing press when measured in terms of its impact on the way we live. And this is just the beginning—we probably can’t even imagine what amazing applications are yet to be invented as billions of people, hundreds of billions of devices, and countless exabytes of data become intelligently connected as part of the Internet of Things. But the future of the Internet, along with all the good that it has enabled, is now threatened by multiple powerful entities that would exploit it to do harm. In this talk, we will briefly review the development of CDN technology and the role it can play in reestablishing trust in the connected world that we all rely on.

10:10 – 10:50 a.m.

CONVERSATION: Social Networks Have Been Weaponized. What Could We See Next and What Are the Solutions?

Vinton Cerf

Maria Farrell, Writer, technology, politics and policy at *The Guardian*, *Slate*, The Internet Society; teaches geo-politics and public policy at Oxford University

Sarah Roberts, Assistant Professor of Information Studies, UCLA

10:50 – 11:20 a.m.

BREAK

11:20 a.m. – Noon

PANEL: What Does Privacy Mean In the Age of Tracking, Eavesdropping, Recording and IOT? Should You Care?

Moderated by **Giovanni Corazza**

Panelists:

Ade Adewunmi, Consultant, TeraData,

Michelle Denedy, CPO, Cisco

Stefano Pileri, CEO, Italtel

Noon – 12:40 p.m.

PANEL: Mitigating Cyber-Threats to Financial Systems, Infrastructure and the Military.

Moderated by **Whitfield Diffie**, Professor Emeritus, Stanford University

Panelists:

Jay Coley, Senior Director at Akamai Technologies

Giovanni Guidotti, Chief Technical Officer, Security & Information Division, Leonardo

Martin E. Hellman, Professor Emeritus, Stanford University

12:40 – 1:10 p.m.

WRAP-UP Q/A: Moderated by **Vinton Cerf**



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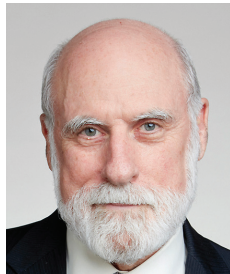
“Restoring Trust on the Internet”

Speaker Profiles



Ade Adewunmi, Senior Industry Consultant, Teradata

Ade Adewunmi is a senior industry consultant at Teradata with a focus on public sector organisations, especially those operating in the health space. As a problem solver working at the intersection of data, digital and strategy she advises organisations on how to make the best use of their data and harness the power of analytics. She blogs about the ways in which data can be made useful for organisations and wider society as well as the leadership and organisational cultures that make this possible. When she’s not advising or blogging or speaking about technology and data, she almost certainly is watching too much TV and justifying it on the grounds of cultural relevancy (as if any justification were needed!).



Dr. Vinton G. Cerf, Vice President and Chief Internet Evangelist, Google; Marconi Society Fellow

Dr. Cerf contributes to global policy development and continued spread of the Internet. Widely known as one of the “Fathers of the Internet,” Cerf is the co-designer of the TCP/IP protocols and the architecture of the Internet. He has served in executive positions at MCI, the Corporation for National Research Initiatives and the Defense Advanced Research Projects Agency and on the faculty of Stanford University. He served as chairman of the board of the Internet Corporation for Assigned Names and Numbers (ICANN) from 2000-2007 and has been a Visiting Scientist at the Jet Propulsion Laboratory since 1998. He currently serves as chair of the Marconi Society.

Cerf was founding president of the Internet Society (ISOC) from 1992-1995. He has served as President of the Association for Computing Machinery, chairman of the American Registry for Internet Numbers (ARIN) and completed a term as Chairman of the Visiting Committee on Advanced Technology for the US National Institute of Standards and Technology. President Obama appointed him to the National Science Board in 2012. He has received numerous awards and commendations in connection with his work on the Internet, including the US Presidential Medal of Freedom, US National Medal of Technology, the Queen Elizabeth Prize for Engineering, the Prince of Asturias Award, the Tunisian National Medal of Science, the Japan Prize, the Charles Stark Draper award, the ACM Turing Award, the Franklin Medal, Officer of the Legion d’Honneur and 29 honorary degrees. In December 1994, People magazine identified Cerf as one of that year’s “25 Most Intriguing People.”

Speaker Profiles, continued

Jay Coley, Senior Director – Security Strategy and Planning, EMEA, Akamai Technologies



As a Senior Director at Akamai Technologies, Jay Coley is responsible for Akamai's Security (Sales and Pre-sales) Strategy in EMEA. He joined Akamai in early 2014, when the company acquired DDoS and mitigation specialists Prolexic.

With a career in the technology industry spanning more than 20 years, Coley has become an expert in Security and Network engineering, with a particular focus on DDoS mitigation and Application Security. He joined Prolexic in 2006, where he held a number of positions including being responsible for Prolexic's global architecture delivering DDoS mitigation services as VP for Global Solutions Architecture. Prior to joining Prolexic, Coley held positions with NTT and XchangePoint. Mr. Coley holds a BS in Computing and IT as well as serving for eleven years in the US Military.

Professor Giovanni Emanuele Corazza, Professor, Department of Electrical, Electronic, and Information Engineering "Guglielmo Marconi", University of Bologna; President, Cineca



Giovanni Emanuele Corazza is a Full Professor at the Alma Mater Studiorum University of Bologna and President of the High-Power Computing Cineca consortium, founder of the Marconi Institute for Creativity, President of the Scientific Council of the Fondazione Guglielmo Marconi, and member of the Marconi Society Board of Directors. He was a member of the Alma Mater Board of Directors from 2012-2018, Head of the Department of Electronics, Computer Science and Systems (DEIS) from 2009 to 2012, Chairman of the School for Telecommunications from 2000 to 2003, member of the Board of the 5G Infrastructure Association from 2013 to 2017, Vice-

Chairman of the NetWorld2020 European Technology Platform from 2013 to 2017, Chairman of the Advanced Satellite Mobile Systems Task Force (ASMS TF), and Founder and Chairman of the Integral Satcom Initiative (ISI). His multidisciplinary research interests are in 5G communication networks, navigation and positioning, and creativity studies.

Michelle Finneran Denedy, Vice President and Chief Privacy Officer, Cisco



Ms. Denedy works to raise awareness and create tools that promote privacy, quality, respect, trust, and asset-level possibilities for data. She is a unique visionary in the field of privacy and the IT industry, bringing together multifaceted approaches that provide sincere privacy protections and drive business value. She has led security and privacy initiatives ranging from regulatory compliance, privacy engineering, advocacy and education efforts to litigation, at companies including Cisco, McAfee/ Intel Security, Oracle, and Sun Microsystems. She founded The iDenedy Project, which seeks to change how people think about information and data and co-authored

The Privacy Engineer's Manifesto: Getting from Policy to Code to QA to Value.

Denedy sits on the boards of the International Association of Privacy Professionals (IAPP) and has been honored with many industry awards including being named one of "California's Most Powerful and Influential Women" by the National Diversity Council. She received the IAPP Vanguard Award; was named a "Woman of Influence for Security and Privacy" by the Executive Women's Forum (EWF) and CSO Magazine; and most recently, named "Woman of the Year in Technology and Transformation" by the Stevie American Business Awards.

Denedy has a Doctorate of Law degree from Fordham University and a Bachelor of Science degree in Clinical, Counseling and Applied Psychology and Economics from The Ohio State University.

Speaker Profiles, continued

Dr. Whitfield Diffie, Professor Emeritus, Stanford University, and Consulting Scholar at CISAC



Dr. Diffie, a Marconi Fellow, is best known for the discovery of the concept of public key cryptography, in 1975, which he developed along with Stanford University Electrical Engineering Professor Martin Hellman. Public key cryptography, which revolutionized not only cryptography but also the cryptographic community, now underlies the security of Internet commerce. During the 1980s, Diffie served as manager of secure systems research at Northern Telecom. In 1991, he joined Sun Microsystems as distinguished engineer and remained as Sun fellow and chief security officer until the spring of 2009. Diffie spent the 1990s working to protect the individual and business right to use encryption, for which he argues in the book *“Privacy on the Line, the Politics of Wiretapping and Encryption,”* written jointly with Susan Landau. Diffie is an ACM Turing Laureate, a Marconi fellow and the recipient of a number of awards including the National Computer Systems Security Award (given jointly by NIST and NSA) and the Franklin Institute’s Levy Prize.

Maria Farrell, Writer, technology, politics and policy at *The Guardian*, *Slate*, The Internet Society; teaches geo-politics and public policy at Oxford University



Maria Farrell is an Irish writer and consultant, based in London. Her client work currently focuses on the future of the Internet. She teaches geo-politics and public policy on Oxford University’s doctoral programme in cyber security.

Maria was deputy head of corporate affairs and policy officer at ICANN, based in Brussels, Los Angeles and Washington D.C. She then led communications and a government advisory project at infoDev, the World Bank/IFC program on technology and development. She was an Internet policy specialist at the International Chamber of Commerce, Paris, the UK’s Confederation of British Industry and The Law Society of England and Wales in the early 2000s.

Maria writes for The Guardian, Slate, and Irish Times, and recently finished a commissioned series for Medium on ‘how to cope with the end of the world’. From 2011 – 2018 she was a board director of the Open Rights Group. She has appeared as a technology policy expert on NBC, Sky News and the BBC, and blogs at www.crookedtimber.org. Twitter: @mariafarrell

Giovanni Guidotti, Chief Technical Officer, Security & Information Division, Leonardo



Mr. Guidotti graduated with Honors in Electrical Engineering at the University of Bologna in 1979 and joined Telettra, working there 12 years in the field of digital communications for defense applications with a variety of responsibilities, technical and managerial. In 1987 he spent 6 months at the University of California as Research Visitor, and in the following years he also acted as government expert in NATO and EUROCOM technical groups. Next, he moved to Alcatel, where he was responsible for developments in Radio Relays, PDH and SDH communications and DVB-T. He then joined Telit as Technical Director, working on IP-based GSM Systems and GSM-R terminals.

In 2001 he joined Selex Communications, working in military, professional and civil telecommunications, and in 2013 was appointed Chief Technical Officer for the Security & Smart Division of Selex ES, a company of the Finmeccanica Group, afterwards renamed as Leonardo. His main technical activities are in the field of Mission Critical Communications, Physical and Cyber Security, Air and Ground Transport Systems, Automation, Information Technology applications and services. He has published tens of technical papers and holds 10 patents and has been teaching Project Management at the University of L’Aquila for several years.

Speaker Profiles, continued

Dr. Martin E. Hellman, Professor Emeritus, Stanford University



Martin E. Hellman is best known for his invention, with Diffie and Merkle, of public key cryptography, the technology that, among other uses, enables secure Internet transactions. It is used to transfer literally trillions of dollars every day. He has been a long-time contributor to the computer privacy debate and was a key participant in the “first crypto war” of the late 1970s and early 80s that established the right of academic cryptographic researchers to publish their papers, free of government interference.

His work has been recognized by a number of honors and awards, including election to the National Academy of Engineering, induction as one of the first two dozen “Stanford Engineering Heroes,” the National Inventors Hall of Fame, and the Marconi International Fellowship – and, most recently, the 2015 ACM Turing Award, often called “the Nobel Prize of Computer Science.” More detailed information is available on his honors and awards, his university service, and his professional and civic service.

Dr. Tom Leighton, Akamai Technologies Co-founder and CEO; 2018 Marconi Fellow



Dr. Tom Leighton co-founded Akamai Technologies in 1998 and served as Akamai’s Chief Scientist until he became CEO in 2013.

As a professor of Applied Mathematics at MIT, Leighton became one of the world’s preeminent authorities on algorithms for network applications and cybersecurity, Dr. Leighton discovered a solution to freeing up web congestion using applied mathematics and distributed computing. Akamai used this technology to create the world’s largest distributed computing platform, which today delivers and secures tens of millions of requests per second to billions of users around the world. He holds more than 50 patents involving content delivery, Internet protocols, algorithms for networks, cryptography and digital rights management. He and Akamai’s co-founder Danny Lewin were inducted into the National Inventors Hall of Fame in 2017 for having “invented the methods needed to intelligently replicate and deliver content over a large network of distributed servers, technology that would ultimately solve what was becoming a frustrating problem for Internet users known as the ‘World Wide Wait.’” In 2018, the Marconi Society selected him to receive the Marconi Prize for “his fundamental contributions to technology and the establishment of content delivery networks.” He is also a member of the National Academy of Sciences, the National Academy of Engineers, and the American Academy of Arts and Sciences.

Speaker Profiles, continued

Stefano Pileri, Chief Executive Officer, Italtel



Mr. Pileri has been Chief Executive Officer of Italtel since 2010. He has led the company through financial restructuring and the implementation of a new industrial strategy. In December 2017, Italtel and Exprivia created a new leader for digital transformation in Europe and Latin American with revenue of more than \$600 million and 3000 engineers.

Before becoming CEO of Italtel, Mr. Pileri had spent his earlier career at Telecom Italy where he was the Chief Technology Officer and Director of Technology & Operations, responsible for about 30,000 people, the development of investments in excess of 3 billion Euros (national and international) and direct management costs of more than 1 billion Euros.

A technologist with an undergraduate Electronic Engineering degree and a master's in applied Electromagnetics, he has always devoted considerable attention to accelerating the development of the ICT sector in Italy through high level relationships with public and private institutions, including the National Communications Authority and the Ministry of Economic Development. From 2009 to 2011 he served as President of the Federation of Confindustria Innovative and Technological Services and from 2007 to 2010, he served as Vice President of the Union of Industries of Rome with the responsibilities for the project Digital City of Rome. He has received several international awards, including the Tele Management Forum Award, the International Engineering Consortium Award in the USA and EUCIP Champion.

Dr. Sarah Roberts, Assistant Professor of Information Studies, University of California at Los Angeles



Sarah T. Roberts focuses on the practices and policies social media and technology companies use to manage online content. Her work has shined a strong light on the commercial content moderation practices of companies such as Facebook and Twitter, and its impact on workers engaged in efforts to moderate or remove objectionable content from social media or websites. Examining the thin line of defense against digital age horrors, her groundbreaking research has detailed the labor conditions and mental health impacts on the thousands of workers who toil to remove the obscene, violent and criminal content on the internet. Roberts has also explored social media privacy issues and the implications of internet governance and policy. In 2017, she developed and convened what is believed to be the first national research conference on commercial content moderation, "All Things in Moderation," which was held at UCLA.

Dr. Roberts holds a Ph.D. in Information Science from the University of Illinois. She joined the UCLA Graduate School of Education & Information Studies in 2016 after three years at Western University in Ontario. Her research regarding the people and politics of social media has already drawn attention within academia and has generated significant public and policy interest. She has appeared more than 70 times in news outlets such as The New York Times, the Associated Press, Le Monde, The Economist, the BBC, the Los Angeles Times, Wired, the Washington Post and CNN, and others worldwide. She served as a consultant for and is featured in the documentary film "The Cleaners," about commercial content moderation in the Philippines, and in March 2017, she authored a feature news article based on her research, "Social Media's Silent Filter," for The Atlantic magazine. Roberts received a Carnegie Fellowship and the Electronic Frontier Foundation Pioneer award, both in 2018. Her book on commercial content moderation will appear from Yale University Press in early 2019.