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Alessandro Vespignani

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ABOUT ME

Dr. Vespignani is currently Sternberg Family Distinguished University Professor at Northeastern University where he is the founding director of the Northeastern Network Science Institute. Prof. Vespignani received his undergraduate degree and Ph.D., both in physics, from the University of Rome “La Sapienza”. He completed his postdoctoral research at Yale University and Leiden University. Prof. Vespignani worked at the International Center for Theoretical Physics (UNESCO) in Trieste and at the University of Paris-Sud in France as a member of the National Council for Scientific Research (CNRS). From 2004 to 2011, Vespignani was J.H.Rudy Professor of Informatics and Computing at Indiana University and the founding Director of the Center for Complex Networks and Systems Research and Associate Director of the Pervasive Technology Institute. Vespignani is elected fellow of the American Physical Society, member of the Academy of Europe, and fellow of the Institute for Quantitative Social Sciences at Harvard University. Recently Vespignani’s research activity focuses on the data-driven computational modeling of epidemic and spreading phenomena and the study of biological, social and technological networks.

WORK EXPERIENCE

2011 – CURRENT

STERNBERG DISTINGUISHED UNIVERSITY PROFESSOR NORTHEASTERN UNIVERSITY, USA

Joint appointments at the Physics department, College of Computer and Information Sciences, Bouvé College of Health Science. Director of the Network Science Institute.

2008 – 2011

J.H. RUDY PROFESSOR, SCHOOL OF INFORMATICS AND COMPUTING INDIANA UNIVERSITY, USA

Associate Director of the Pervasive Technology Institute; Director of the Center for Complex Networks and Systems.

2004 – 2008

PROFESSOR, SCHOOL OF INFORMATICS AND COMPUTING INDIANA UNIVERSITY, USA

Affiliate Biocomplexity Institute. & Cognitive Science program.

2002 – 2004

SENIOR RESEARCHER 1ST CLASS NATIONAL COUNCIL FOR SCIENTIFIC RESEARCH (CNRS), FRANCE

Core Faculty, Laboratoire de Physique Theorique, University of Paris-Sud, France.

1997 – 2002

SENIOR RESEARCHER INTERNATIONAL CENTER FOR THEORETICAL PHYSICS, TRIESTE ITALY

The United Nations Educational, Scientific and Cultural Organization (UNESCO)

1995 – 1997

MARIE CURIE POST DOCTORAL FELLOW INSTITUUT LORENTZ, LEIDEN UNIVERSITY, THE NETHERLANDS

Supervisor: Prof. J.M.J. van Leeuwen.

1994 – 1995
RESEARCH ASSOCIATE MATHEMATICS DEPARTMENT, YALE UNIVERSITY, USA

Supervisor: Prof. B.B. Mandelbrot.

EDUCATION AND TRAINING

1994
PH.D. IN THEORETICAL PHYSICS University of Rome “La Sapienza”, Rome, Italy

1990
LAUREA CUM LAUDE IN PHSYICS University of Rome “La Sapienza”, Rome, Italy

ADDITIONAL INFORMATION

LEADERSHIP EXPERIENCE

2015 – CURRENT
Founding Director of the Network Science Institute, Northeastern University

Leadership of an interdisciplinary Institute with 10 tenured and tenure track faculty, ~35 research faculty and postdoctoral researchers, ~30 graduate students, and 5 professional staff, with >$ 8M a year in research awards and contracts, 6 major research laboratories. The Institute is now expanding in the Portland (Maine) and London (UK) Northeastern Campuses with the addition of 12+ faculty and research staff.

2008 – CURRENT
Leading PI of the Laboratory for the Modeling of Biological and Socio-technical systems

The laboratory developing data-driven models for the spread of infectious diseases; studying social human behavior; modeling the evolution of complex social and technological networks. The laboratory supports postdoctoral associates, professional staff and graduate students. It has been funded by grants from NSF, NIH, DTRA, IARPA and a number of foundation and corporate contracts.

2012 – 2016
Founding Director of the Network Science Program, Northeastern University

Development and leadership of the first PhD program in Network Science in the USA. Leading the design and development of the interdisciplinary program that teaches and student tools and concepts to understand the structure and dynamics of networks. The program provides foundational training combining theoretically-driven inquiries with data collection and analytic tools and theories.

2012 – 2017
Founding Editor in Chief of EPJ Data Science journal, Nature- Springer Publisher

The journal that has received its first impact factor in 2016. The journal is a top quartile journal according to the Clarivate Web of Science, publishing >30 papers annually in the area of data science. human behavior, social interaction (including animal societies), economic and financial systems, management and business networks, socio-technical infrastructure, health and environmental systems, the science of science.

2012 – 2015
President elected of the Complex System Society

The Society aims to promote complex systems research (pure and applied) and assist and advise on problems of complex systems education. The society was launched in 2004, and since 2006 Since 2004, the Conference on Complex Systems organized by the society, is the most important annual meeting for the complex systems research community (~1,000 participants).

2008 – 2011
Founding Director of the Center for Complex Networks and Systems, Indiana University

2008 – 2011
Associate Director, Pervasive Technology Institute, Indiana University

2007 – 2009
Advisory Group, FET-ICT directorate of the European Commission

HONOURS AND AWARDS

2022
Lifetime Fellow of American Association for the Advancement of Science (AAAS)

2022
Clarivate highly cited researcher (top 0.1%, of the world's researchers)

09/12/2020
Knighted with the Order of the Star of Italy by the President of the Italian Government

2020
Euler Award for outstanding research discoveries in the field of network science, Network Science Society

2018
John Graunt award for extraordinary achievements in one of the population sciences, Radboud Institute for Health Sciences, The Netherlands

2018
Senior Scientific award for outstanding contributions to Complex Systems & Network sciences, Complex Systems Society

2018
Elected Fellow, Network Science Society

13/01/2017
Doctorate Honoris Causa, Delft Technical University, The Netherlands

04/2017
Best Paper Honorable Mention, WWW2017, Perth, Australia

2016
Aspen Institute Italia Award for scientific research and collaboration between Italy and the United States

2016
International Society for disease surveillance 2016 Awards for Outstanding Research Articles in Biosurveillance

2015
Excellence in Research and Creative Activity Award, Northeastern University.

10/09/2013
Congress of the United States briefing. "Harnessing Complex Networks to Solve the Nation's Grand Challenges", Washington, DC

2011
Elected member of the Academy of Europe, section Physics and Engineering

2011
Sternberg Family endowed chair, Northeastern University

2008
Fellow, American Physical Society

2008
James H. Rudy endowed chair Indiana University

Top cited article 2005-2010 award by the Theoretical Computer Science Journal, Elsevier

06/2007
Organizational Leadership Award, Global Information Technology Management Association

2005
Invited lecture National Academy of Engineering, U.S. Frontiers of Engineering Symposium

2004
Wired Magazine Rave Award, Top Five Scientist category, San Francisco

Marie Curie Fellow (1995-1997), the Human and Capital mobility program of the European Economic Community

MEMBERSHIPS, BOARDS AND SPEAKING ENGAGEMENT

Memberships, Boards and Speaking Engagement

Member of a number of Advisory boards for National and International Institutions and professional Journals. Keynote speaker, Plenary and Invited lecturer to 140+ major conferences in Physics, Computer sciences and Health Sciences. Along with major speaking engagements, I have given a large number of seminars and colloquiums at major institutions and universities, nationally and internationally. Organizer of more than three dozens International conferences and workshops.

PUBLICATIONS

Publications

More than 200 publications in major peer reviewed international scientific journals and conference proceedings. Among those: Science, Nature, Lancet ID, the Proceedings of the National Academy of Sciences USA, Review of Modern Physics and Physical Review Letters. Vespignani is author of several book chapters and editor of four books and special journal issues. Vespignani has also authored three monographic volumes: “Evolution and structure of the Internet: a statistical physics approach”, together with Romualdo Pastor-Satorras, published by Cambridge University Press (2004, paperback reprint 2007) and translated and published in France by Belin Editeur (2004); “Dynamical Processes on Complex Networks”, with A. Barrat and M. Barthelemy, published by Cambridge University Press (2008) [4th reprint in 2011; published in kindle format in 2012 and in paperback edition in 2013]; “Charting the Next Pandemic”, with A. Pastore y Piontti, N. Perra, L. Rossi & N. Samay, Springer (2019).

IMPACT AND MEDIA

Impact and Media

At the time of Spring 2023 Vespignani’s publications have received more than 87,000 citations in Google Scholar (h-index=123). Several papers have been placed in the top 1% within their field according to the Essential Science Indicators and the number of citations received in ISI Thomson’s Web of Science database. Vespignani’s works are featured in several science and popular science books. His research activities have been reported in major media and news outlets including the New York Times, Washington Post, FT, Le Monde, The Atlantic, Wired, NatGeo, CNN, Scientifc American, The Economist, La Repubblica, La Stampa, US Today etc.

Full list of publications with citations available at: https://scholar.google.com/citations?user=U3CXAPsAAAAJ&hl=en