

CURRICULUM VITAE  
**Ioannis Kontoyiannis**

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University of Cambridge

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## EDUCATION

STANFORD UNIVERSITY, **Ph.D. Electrical Engineering.** June 1998.

*Recurrence and Waiting Times in Stationary Processes, and their Applications in Data Compression.*  
Advisor: Thomas M. Cover. Associate Advisor: Amir Dembo.

STANFORD UNIVERSITY, **M.S. Statistics.** June 1997.

CAMBRIDGE UNIVERSITY, **M.S. Pure Mathematics.** June 1993.

Distinction in Part III of the Cambridge Mathematics Tripos.

IMPERIAL COLLEGE, UNIVERSITY OF LONDON, **B.S. Mathematics.** June 1992.

First Class Honors.

## ACADEMIC APPOINTMENTS

UNIVERSITY OF CAMBRIDGE (United Kingdom) *October 2019 – present*  
*Churchill Professor of Mathematics of Information, Statistical Laboratory, DPMMS.*

UNIVERSITY OF CAMBRIDGE (United Kingdom) *February 2018 – October 2019*  
*Professor, Chair of Information & Communications.*

ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS (Greece) *March 2010 – present*  
*Professor, Department of Informatics.*

FOUNDATION FOR RESEARCH AND TECHNOLOGY – HELLAS (Greece) *June 2017 – present*  
*Collaborating researcher, Institute of Applied & Computational Mathematics.*

ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS (Greece) *March 2004 – March 2010*  
*Associate Professor, Department of Informatics.*

BROWN UNIVERSITY (USA) *July 2004 – July 2005*  
*Associate Professor (with tenure), Division of Applied Mathematics and (jointly) Department of Computer Science.*

BROWN UNIVERSITY (USA) *Oct. 2002 – July 2004*  
*Manning Assistant Professor, Division of Applied Mathematics and (jointly) Department of Computer Science.*

BROWN UNIVERSITY (USA) *Aug. 2001 – July 2004*  
*Assistant Professor, Division of Applied Mathematics and (jointly) Department of Computer Science.*

PURDUE UNIVERSITY (USA) *Aug. 1998 – Aug. 2001*  
*Assistant Professor, Department of Statistics, and (by courtesy) Department of Mathematics, and the School of Electrical and Computer Engineering.*

## RESEARCH INTERESTS

Probability and stochastic processes, information theory, data compression, statistics, simulation, communications and signal processing, mathematical biology

## PROFESSIONAL APPOINTMENTS

- POSIMARK ASSOCIATES S.L. (SPAIN) *Sept. 2016 – Dec. 2016*  
*Consultant*, Statistical analysis of financial data for prediction and investment.
- CASPIDA (USA) *March 2014 – Dec. 2014*  
*Consultant*, Statistical analysis of “Big Data” for online security: [www.caspida.com](http://www.caspida.com)
- IBM T.J. WATSON RESEARCH CENTER (USA) *June 1995 – Dec. 1995*  
*Research Co-op.* Worked on the IBM-NASA Satellite Image Explorer Project. Research in image processing, classification and compression algorithms.

## VISITING POSITIONS

- COLUMBIA UNIVERSITY *Jan. 2008 – Dec. 2008*  
*Visiting Associate Professor*, Department of Statistics.
- BROWN UNIVERSITY *July 2005 – July 2007*  
*Visiting Associate Professor (Research)*, Division of Applied Mathematics.
- BROWN UNIVERSITY *Sept. 2002 – July 2007*  
*Visiting Research Associate*,  
 Computation and Mathematics of Mind (under NSF’s IGERT Program),  
 Department of Neuroscience.
- ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS *Sept. 2004 – Feb. 2005*  
*Visiting Associate Professor*, Department of Informatics.
- BROWN UNIVERSITY *Aug. 2000 – July 2001*  
*Visiting Assistant Professor*, Division of Applied Mathematics.
- CAMBRIDGE UNIVERSITY *July ’99, June ’98, June ’97, Aug. ’96, June ’95, Sept. ’93*  
*Visiting Scholar*, Statistical Laboratory  
 (Dept of Pure Mathematics and Mathematical Statistics).

## PUBLICATIONS

Kontoyiannis has published **40 over journal papers**, most in the top international journals in probability, information theory and statistics, and has given **over 90 conference papers and talks**, almost all of which in top international conferences in his field.

He has written **two book chapters**, has been granted **two U.S. patents**, has written **an introductory textbook in probability**, and has **edited five volumes** of collected research papers.

He has been an **invited or plenary speaker** in numerous international conferences (over forty) and given seminars in many of the world-leading universities, including Stanford, M.I.T., UC Berkeley, Cambridge U., Columbia U., Brown U., and Cornell U., among many others.

Overall, his published research work has received **over 2200 citations** according to GoogleScholar.

## AWARDS, DISTINCTIONS

### IEEE FELLOW

Elevated to the grade of Fellow in 2011.  
*“For contributions to data compression”.*

### MARIE CURIE FELLOW

International Outgoing Fellowship, Marie Curie Program (EU), entitled *Control Variates for Markov Chain Monte Carlo Variance Reduction*, 2009 – 2011.

### HONORARY MASTER OF ARTS DEGREE, AD EUNDEM

Awarded by Brown University, May 2005.

### SLOAN RESEARCH FELLOW

By the Sloan Foundation, 2004 – 2006.

### MANNING ASSISTANT PROFESSOR

Endowed assistant professorship, awardee by Brown University, October 2002.

### PLENARY SPEAKER

*International Zurich Seminar on Information and Communication*  
 Zurich, Switzerland, February 2018.

*16th Conference of the ASMDA International Society*  
 Piraeus, Greece, July 2015.

*International Workshop on Information-Theoretic Methods in Science and Engineering*  
 Tampere, Finland, August 2009.

*2002 Symbol Technologies Lecturer*  
 Brooklyn Polytechnic, ECE Department, March 2002.

*Conference on Stochastic Processes and their Applications*  
 Cambridge, UK, July 2001.

### TEACHING FOR TOMORROW AWARD

Received (Spring 2000) the annual Purdue Teaching for Tomorrow Award, which “recognizes young faculty members for their commitment to and accomplishments in teaching and student learning.”

## RESEARCH FUNDING, GRANTS

### POSIMARK ASSOCIATES GRANT

Research grant awarded by Posimark Associates S.L. (Barcelona, Spain). *An investigation of the applicability of variable-length contexts for use in predictive algorithms in finance*, 2016. [~**Euro 6,000**].

### EU-NSRF GRANTS [THALES]

Investigator in three research grant programs, CROWN, DISCO and SWINCOM, funded by the European Union (European Social Fund ESF) and by Greek national funds through the operational program “Education and Lifelong Learning of the National Strategic Reference Framework (NSRF) Research Funding.” 2012 – 2015. [~**Euro 2,000,000**].

### MARIE CURIE FELLOWSHIP

International Outgoing Fellowship, Marie Curie Program (EU), entitled *Control Variates for Markov Chain Monte Carlo Variance Reduction*, 2009 – 2011. [~**Euro 200,000**].

### AUEB “BASIC RESEARCH” GRANT

AUEB Basic Research (PEVE) grant entitled *Simulation, computational learning and hypothesis testing: Theory and algorithms for efficient statistical computation*, 2009 – 2010. [~**Euro 10,000**].

## EU RESEARCH GRANT

Investigator on European Union research grant entitled *Novel issues and techniques for the analysis of hyperlink structure on the WWW graph*, 2006 – 2008. [~\$20,000].

## SLOAN RESEARCH FELLOWSHIP

Awarder by the Sloan Foundation, March 2004. [~\$40,000].

## NSF RESEARCH GRANT

PI on NSF research grant entitled *Efficient lossy data compression via statistical model selection*, July 2000 – June 2004, under the Communications Research Program. [~\$100,000].

## USDA RESEARCH GRANT

Co-PI with R.W. Doerge and L.M. McIntyre (Genomics, Purdue Univ.) on four-year USDA grant entitled *Development of statistical methodology for agricultural genomics*, beginning October 1, 2000, under the Initiative for Future Agriculture and Food Systems (IFAFS) Program. [~\$1,000,000].

## SUMMER FACULTY GRANT

Awarded by the Purdue Research Foundation. Summer support for 1999.

## PURDUE GLOBAL INITIATIVE FACULTY GRANT

Miscellaneous research support for the “Purdue Mini-Seminar on Information Theory,” held in April–May 1999. Awarded by the Purdue Research Foundation. [\$10,000].

## RESEARCH GRANT

Student support from the Purdue Research Foundation, for a research student for two years. [~\$25,000].

## PROFESSIONAL ACTIVITIES

HEAD *Signal Processing and Communications Laboratory*, Department of Engineering, University of Cambridge, 2018–present

ASSOCIATE EDITOR *IEEE Transactions on Information Theory*, At Large, 2017–present

EDITORIAL ADVISORY BOARD *Lecture Notes in Mathematics series*, Springer, 2013–present

LABORATORY DIRECTOR *Theory, Economics and Systems Lab*, Department of Informatics, Athens University of Economics & Business, 2013–2018

ASSOCIATE EDITOR *Acta Applicandae Mathematicae*, published by Springer, 2010–present

CO-ORDINATING EDITOR (probability-statistics-operations research) *Bulletin of the Hellenic Mathematical Society*, 2015–present

ASSOCIATE EDITOR *IEEE Transactions on Information Theory*, At Large, 2011–2013

EDITORIAL BOARD *Foundations and Trends in Communications and Information Theory*, 2012–present

EDITOR-IN-CHIEF (interim) *IEEE Transactions on Information Theory*, June–November 2013

ASSOCIATE EDITOR *IEEE Transactions on Information Theory*, Shannon Theory, 2007–2010

EDITORIAL COMMITTEE *Quarterly of Applied Mathematics*, published by the American Mathematical Society, 2004–present

EDITORIAL BOARD *Entropy Journal* (Electronic) ISSN 1099-4300, 1999–2008.

URL: [www.mdpi.org/entropy](http://www.mdpi.org/entropy)

## IEEE INFORMATION THEORY T.M. COVER DISSERTATION AWARD

Member of the committee, which is responsible for this annual award to the author of an outstanding doctoral dissertation (2016-17)

## IEEE INFORMATION THEORY SOCIETY BOARD OF GOVERNORS

Board of Governors Member (2013)

## IEEE INFORMATION THEORY SOCIETY AWARDS COMMITTEE

Member of the committee, which is responsible, among others, for the *Information Theory Society Best Paper Award*, the *Joint Information Theory-Communications Society Best Paper Award* and the *ISIT Student Paper Award* (2009-10, 2010-11)

## CONFERENCE TECHNICAL PROGRAM CO-CHAIR

*IEEE International Symposium on Information Theory* (2016)

*IEEE Workshop on Information Theoretic Methods in Science and Engineering* (2008, 2009, 2010)

*IEEE Information Theory Workshop* (2009)

## CONFERENCE GENERAL CO-CHAIR

Entropy Power Inequalities, American Institute of Mathematics Workshop (2017)

Athens Probability Colloquium (2012, 2014, 2015, 2016, 2017, 2018)

Greek Stochastics ( $\alpha'$  2009,  $\beta'$  2010)

Athens Workshop on MCMC Convergence and Estimation (2009)

Purdue Mini-Seminar on Analytic Information Theory (1999)

## CONFERENCE PROGRAM COMMITTEE

*IEEE International Symposium on Information Theory* (2008, 2009, 2010, 2011, 2012, 2013, 2018)

*IEEE International Workshop on Signal Processing Advances in Wireless Communications* (2018)

*IEEE Information Theory Workshop* (2005, 2006, 2007, 2008, 2010, 2012, 2015, 2016)

*IEEE Communication Theory Symposium of the IEEE Int. Conference on Communications* (2010)

*IEEE Int. Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks* (2009)

*Int. Conference on Performance Evaluation Methodologies & Tools* (ValueTools 2006, 2007, 2008)

*Information Theory and Statistical Learning Conference* (2008)

INVITED SESSION ORGANIZER at various IEEE Information Theory Workshops (IEEE ITW), the Conference on Information Sciences and Systems (CISS), IEEE International Workshops on Signal Processing Advances in Wireless Communications (SPAWC), and the International Zurich Seminar on Communications (IZS)

FELLOW of the Institute of Electrical and Electronic Engineers (IEEE)

MEMBER of the American Mathematical Society (AMS); Institute of Electrical and Electronic Engineers (IEEE) – Information Theory Society; Institute of Mathematical Statistics (IMS); London Mathematical Society (LMS); Mathematical Association of America (MAA); Society for Industrial and Applied Mathematics (SIAM)