Curriculum Vitae
George V. Moustakides

Address

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Education

PhD and MSc in Electrical Engineering and Computer Science (1980 - 1983),
Princeton University, Department of Electrical Engineering and Computer Science.
Thesis Title: The Representation of Bivariate Densities with Applications in Detection and Estimation.
Thesis Advisor: John B. Thomas.

MSE in Systems Engineering (1979 - 1980),
University of Pennsylvania, Department of Systems Engineering.
Thesis Title: Robust Wiener Filters for Imprecise Second Order Statistics.
Thesis Advisor: Saleem Kassam.

Diploma in Electrical and Mechanical Engineering (1973 - 1978),
National Technical University of Athens, Department of Electrical & Mechanical Engineering.
Thesis Title: Subharmonic oscillations in the systems $\ddot{x}+g(x,\dot{x},t)=0$.
Thesis Advisor: John E. Diamessis.

Main Academic Positions

Emeritus Professor (2023 - Today), Department of Electrical & Computer Engineering, University of Patras, Patras, Greece.

Professor (2007 - 2022), Department of Electrical & Computer Engineering, University of Patras, Patras, Greece.

Long-Term Visiting Professor (2017 - 2019), Member of the Graduate School, Department of Computer Science, Rutgers University, Piscataway, NJ, USA.

Professor (2002 - 2007), Department of Computer & Communication Engineering, University of Thessaly, Volos, Greece.

Senior Researcher (2001 - 2004), Directeur de Recherche, tenured position, Institut National de Recherche en Informatique et en Automatique - INRIA, France.

Professor (1996 - 2002), Department of Computer Engineering and Informatics, University of Patras, Patras, Greece.

Associate Professor (1991 - 1996), Department of Computer Engineering and Informatics, University of Patras, Patras, Greece.

Researcher (1988 - 1991), Computer Technology Institute of Patras, Patras, Greece.

Military Service (1986 - 1987), Greek Air Force. (Not an academic position, but a true "Academic" Experience).

Junior Researcher (1983 - 1986), Institut National de Recherche en Informatique et en Automatique - INRIA, France.

Research and Teaching Assistant (1980 - 1983), Department of Electrical Engineering and Computer Science, Princeton University, Princeton, USA.

Research Assistant (1979 - 1980), Department of Systems Engineering, Moore School of Electrical Engineering, University of Pennsylvania, Philadelphia, USA.

Temporary Academic Positions

Adjunct Lecturer (8/2023 - 12/2023), Department of Electrical & Computer Engineering, University of Illinois, Urbana-Champaign, USA.

Visiting Professor (2/2022 - 6/2022), Department of Signal Processing and Acoustics, School of Electrical Engineering, Aalto University, Espoo, Finland.

Visiting Professor (9/2016 - 1/2017), Department of Computer Science, also Part Time Lecturer, Department of Electrical and Computer Engineering, Rutgers University, Piscataway, NJ, USA.

Visiting Professor (9/2015 - 12/2015), Department of Management Science & Information Systems, Business School, Rutgers University, Piscataway, NJ, USA.

Long-Term Distinguished Lecturer (9/2014 - 12/2014), Coordinated Science Lab, University of Illinois, Urbana-Champaign, IL, USA.

Visiting Professor (9/2013 - 2/2014), Department of Computer Science, Rutgers University, New Brunswick, NJ, USA.

Adjunct Professor and Visiting Researcher (9/2012 - 1/2013), Department of Electrical Engineering, Columbia University, New York, NY, USA.

Visiting Researcher (9/2011 - 1/2012), Department of Electrical Engineering, Columbia University, New York, NY, USA.

Adjunct Professor and Visiting Researcher (9/2009 - 1/2010), Department of Electrical Engineering, Columbia University, New York, NY, USA.

Research Scholar (10/2005 - 2/2006), Institute for Systems Research (ISR), University of Maryland, College Park, MA, USA.

Research Scholar (9/2000 - 2/2001), Institut National de Recherche en Informatique et en Automatique - INRIA, France.

Short-Term Visits/Appointments (support by the hosting institutes)

Université de Toulouse II, Jean Jaurès (04/24/2024 - 05/01/2024), Institut de Mathématiques de Toulouse, Toulouse, France. (Invited by Prof. S. Mercier).

Rutgers University (12/03/2016 - 12/16/2016), Coadjutant, Statistics department, Piscataway, NJ, USA. (Invited by Prof. P. Li).

University of Minnesota (1/5/2015 - 1/26/2015), Digital Technology Center, Minneapolis, MN, USA. (Invited by Prof. G. Giannakis).

University of Southern California (1/9/2011 - 2/28/2011), Department of Mathematics, Los Angeles, CA, USA. (Invited by Prof. A. Tartakovsky).

Bilkent University (9/1/2010 - 9/21/2010), Department of Industrial Engineering, Ankara, Turkey. (Invited by Prof. S. Dayanik).

University of Southern California (1/10/2010 - 1/16/2010), Department of Mathematics, Los Angeles, CA, USA. (Invited by Prof. A. Tartakovsky).

Georgia Institute of Technology (7/12/2009 - 7/31/2009), School of Industrial and Systems Engineering, Atlanta, GA, USA. (Invited by Prof. Y. Mei).

Université de Technologie de Troyes (6/8/2009 - 6/14/2009), Troyes, France. (Invited by Prof. I. Nikiforov).

University of Southern California (1/10/2009 - 1/25/2009), Department of Mathematics, Los Angeles, CA, USA. (Invited by Prof. A. Tartakovsky).

Georgia Institute of Technology (7/28/2008 - 8/30/2008), School of Industrial and Systems Engineering, Atlanta, GA, USA. (Invited by Prof. Y. Mei).

Université de Technologie de Troyes (4/28/2008 - 5/7/2008), Laboratoire de Modélisation et de Sûreté de Systèmes, Troyes, France. (Invited by Prof. I. Nikiforov).

University of Southern California (2/5/2008 - 2/27/2008), Department of Mathematics, Los Angeles, CA, USA. (Invited by Prof. A. Tartakovsky).

Columbia University (5/15/2007 - 6/30/2007), Department of Statistics, New York, NY, USA. (Invited by the department to teach a summer course in Sequential Change detection).

Columbia University (3/31/2003 - 4/14/2003), Department of Statistics, New York, NY, USA. (Invited by Prof. Karatzas).

University of Pennsylvania (8/1/1999 - 8/31/1999), Department of Electrical Engineering, Philadelphia, PA, USA. (Invited by Prof. S. Kassam).

Princeton University (8/1/1998 - 8/31/1998), Department of Electrical Engineering, Princeton, NJ, USA. (Invited by Prof. H.V. Poor).

Sabbaticals (support by the Greek Ministry of Education)

Columbia University (9/2011 - 1/2012), Department of Electrical Engineering, New York, NY, USA. (Invited by Prof. X. Wang).

Columbia University (7/19/2010 - 8/20/2010), Department of Electrical Engineering, New York, NY, USA. (Invited by Prof. X. Wang).

University of Pennsylvania (2/2000 - 7/2000), Department of Computer and Information Science, Philadelphia, PA, USA. (Invited by Prof. D. Metaxas).

Princeton University (10/1996 - 6/1997), Department of Electrical Engineering, Princeton, NJ, USA. (Invited by Prof. H.V. Poor).

R & D Projects

Quickest change detection techniques with signal processing applications (2015 - 2019, PI). Department of Computer Science, Rutgers University, USA. Financed by the National Science Foundation. Rutgers Budget: 467,186$ (Total Budget: 1,121,161$). Collaborative grant with Coordinated Science Lab, University of Illinois at Urbana-Champaign.

Event-triggered sampling: Application to decentralized detection and estimation (2011 - 2015, co-PI). Department of Electrical Engineering, Columbia University, USA. Financed by the National Science Foundation. Budget: 952,747$.

Adaptive signal processing algorithms for digital hearing aids (2008 - 2016, PI). Department of Electrical and Computer Engineering, University of Patras, Greece. Financed by Soundworld Solutions, USA. Budget: 20,000€/year.

Robust rapid change-point detection in multi-sensor data fusion and behavior research (2008 - 2010, co-PI). Georgia Institute of Technology, School of Industrial and Systems Engineering, Atlanta, GA, USA. Financed by Air Force Office of Scientific Research, AFOSR. Budget: 200,000$.

BER estimation in optical communication systems (2002 - 2003, PI). Institut National de Recherche en Informatique et en Automatique - INRIA, Rennes, France. Financed by ALCATEL-France. Budget: 50,000FF.

Adaptive techniques for wireless multiple-access communications (1998 - 1999). Department of Computer Engineering and Informatics, University of Patras, Greece. In collaboration with the Electrical Engineering departments of Princeton University and University of Pennsylvania, USA. NATO Scientific Exchange Program: Collaborative Research Grant. Budget: 12,000$.

Development and study of adaptive estimation algorithms for telecommunication applications (1995 - 1997, PI). Department of Computer Engineering and Informatics, University of Patras, Greece. Financed by the Greek General Secretariat for Research and Technology. Budget: 100,000Drh.

Automatic finite element model generation of objects using image processing techniques (1992 - 1995, PI). Computer Technology Institute, Patras, Greece. In collaboration with Agricultural University of Athens, Greece, University of Leuven, Belgium, University of Swansea, Great Britain and University of Ilmenau, Germany. Financed by the EU Programme: Human Capital and Mobility. Budget: 100,000 ECU.

Detection of visually evoked cortical potentials (1991 - 1992, PI). Department of Computer Engineering and Informatics, University of Patras, Greece. Bilateral program with University of Ilmenau, Germany. Financed by the Greek and German General Secretariat for Research and Technology. Budget: 20,000Drh.

Development of a PC based visual evoked potentials station for noninvasive medical diagnosis (1991 - 1992, PI). Department of Computer Engineering and Informatics, University of Patras, Greece. Financed by the Greek General Secretariat for Research and Technology. Budget: 20,000Drh.

Fast estimation algorithms for echo cancellation in communication channels (1989 - 1990), Department of Computer Engineering and Informatics, University of Patras, Greece. Financed by the Greek General Secretariat for Research and Technology. Budget: 20,000Drh.

Development of a DSP based bio-impedance monitoring station (1989 - 1990, PI). Computer Technology Institute, Patras, Greece. Bilateral program with University of Ilmenau, Germany. Financed by the Greek and German General Secretariat for Research and Technology. Budget: 20,000Drh.

Signal processing techniques for detecting and localizing fatigues in off-shore platforms (1983 - 1986). Institut National de Research en Informatique et en Automatique - INRIA, France. Financed by Elf-Aquitaine. Budget: 200,000FF.

Teaching

University of Patras, Greece

Department of Electrical and Computer Engineering
Undergraduate Level: Machine Learning Techniques, Digital Signal Processing, Digital Signal Processing Laboratory, Estimation Theory and Stochastic Control, Fuzzy and Neural Control.
Graduate Level: Machine Learning, Detection and Estimation.

MS Interdepartmental Program, Signal Processing and Communication Systems
Graduate Level: Machine Learning, Detection and Estimation.

Department of Computer Engineering and Informatics
Undergraduate Level: Linear Algebra, Electric Circuits, Signals and Systems, Digital Signal Processing, Digital Communications, Control Theory.
Graduate Level: Measure Theory (Lectures), Detection and Estimation.

University of Thessaly, Greece

Department of Computer and Communication Engineering
Undergraduate Level: Signals and Systems, Digital Signal Processing.
Graduate Level: Detection and Estimation.

Columbia University, USA

Department of Statistics
Graduate Level: Sequential Detection of Changes (Summer course, 2007).

Department of Electrical Engineering
Graduate Level: Detection and Estimation (Fall 2009, Fall 2012).

University of Illinois at Urbana-Champaign, USA

Department of Electrical and Computer Engineering
Undergraduate Level: Digital Signal Processing (Fall 2023).
Graduate Level: Data Driven Techniques (Fall 2023).

Coordinated Science Lab
Graduate Level: Optimal Stopping, Application to Sequential Detection (Fall 2014, series of 11 one-hour lectures).

Rutgers University, USA

Department of Management Science & Information Systems
Undergraduate Level: Optimization Modeling (Fall 2015).

Department of Electrical and Computer Engineering
Graduate Level: Digital Signals and Filters (Fall 2016).

Department of Computer Science
Graduate Level: Computer Vision (Fall 2017, Spring 2018), Foundations of Computer and Data Science (Spring 2018, Fall 2018, Fall 2019), Pattern Recognition: Theory and Applications (Fall 2018).

Advising

PhD Students

Tony Yaacoub (2018), Sequential interval estimation for Bernoulli trials, Department of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, GA, USA. (Participated in supervision, advisors: Yajun Mei and David Goldsman). With Amazon, Seattle, WA, USA.

Jonathan Ligo (2017), Detection of sparse mixtures: Fundamental limits and algorithms, Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, IL, USA. (Participated in supervision, advisor: Prof. V. Veeravalli). Researcher, Applied Physics Lab, Johns Hopkins University, Baltimore, MA, USA.

Yasin Yilmaz (2014), Event-triggered sampling for communications, Department of Electrical Engineering, Columbia University, New York, NY, USA. (Participated in supervision, advisor: Prof. X. Wang). Assistant Professor, Department of Electrical Engineering, University of South Florida, Tampa, FL, USA.

Georgios Fellouris (2010), Decentralized sequential decision making with asynchronous communication, (advisor), Statistics department, Columbia University, New York, NY, USA. Assistant Professor, Department of Statistics, University of Illinois at Urbana-Champaign, IL, USA.

Maben Rabi (2006), Packet based inference and control (Participated in supervision, advisor: J. Baras), Department of Electrical Engineering, University of Maryland, College Park, MD, USA. Professor with the department of Computer Science and Communication, Ostfold University College, Ostfold, Norway.

Olympia Hadjiliadis (2005), Change-point detection of two-sided alternatives in the Brownian motion model and its connection to the gambler's ruin problem with relative wealth perception (Participated in supervision, advisor: J. Vecer), Statistics department, Columbia University, New York, NY, USA. Professor with the department of Mathematics and Statistics, Hunter College, CUNY, New York, NY, USA.

Xenofon Doukopoulos (2004), Power techniques for blind channel estimation in wireless communication systems, (advisor), IRISA - INRIA, University of Rennes-1, Rennes, France. With Parrot S.A., Paris, France.

Emmanouil Psarakis (1991), Design of multidimensional FIR filters with the help of transformations, (advisor), Department of Computer Engineering and Informatics, University of Patras, Greece. Associate Professor, Computer Engineering and Informatics Department, University of Patras, Greece.

Jean-Luc Botto (1986), Study of the fast transversal algorithms: application to echo cancellation in audioconferencing (Participated in supervision, advisor: Dr. C. Samson), IRISA and University of Rennes-1, Rennes, France. Chief Architect, Purple Labs SA, Tresserve, France.

Postdoctoral Fellows

Sveinn Olaffson, PhD 2016, Statistics, Purdue University. (10/1/2017-12/31/2017), collaboration in Sequential detection of changes in continuous-time processes. Postdoc, Columbia University.

Taposh Banerjee, PhD 2014, ECE, UIUC. (9/1/2015-12/31/2015), collaboration in Sequential detection of changes using Bayesian techniques. Assistant professor, ECE, University of Texas at San Antonio

Visitors

Emmanouil Psarakis (9/2018-1/2019), Stochastic nonlinear modeling using Generative Networks, Associate Professor, Department of Computer Engineering and Informatics, University of Patras, Patras, Greece. Visiting Professor, Computer Science department, Rutgers University.

Master Students

Kalliopi Bassioti, (2017-2019), Likelihood ratio estimation, application to GANs and inverse problems, Computer Science, Rutgers University, New Brunswick, NJ, USA.

Feeby Salib (2018), Reinforcement learning techniques, Electrical and Computer Engineering, Rutgers University, New Brunswick, NJ, USA.

Zaharias Psarakis (2014), Robust techniques for optical flow estimation, MS inter-departmental program: Signal Processing & Communication Systems, University of Patras, Patras, Greece.

Nikoleta Garini (2009), Compression techniques for hearing aids, MS inter-departmental program: Signal Processing & Communication Systems, University of Patras, Patras, Greece.

Panagiotis Niavis (2009), Feedback cancellation algorithms, performance and stability analysis, MS inter-departmental program: Signal Processing & Communication Systems, University of Patras, Patras, Greece.

Charalambos Zarokostas (2009), Audio feedback cancellation in digital hearing aids, MS inter-departmental program: Signal Processing & Communication Systems, University of Patras, Patras, Greece.

Charalambos Stamatopoulos (2008), Detection of attacks in wireless networks, MS inter-departmental program: Signal Processing & Communication Systems, University of Patras, Patras, Greece.

Panagiota Matsuka (2007), Adaptive compression techniques for hearing aids, MS inter-departmental program: Signal Processing & Communication Systems, University of Patras, Patras, Greece.

Dimitrios Chatzoulis (2006), Turbo techniques for coding and equalization of telecommunication channels, Computer and Communication Engineering, University of Thessaly, Volos, Greece.

Amadou Dame Sall (2004), Bit Error Rate estimation in optical communication channels, DEA, University of Rennes-1, Rennes, France. (Co-advisor with Frederic Cerou).

Xenofon Doukopoulos (2001), Blind channel estimation in CDMA communication systems, MS inter-departmental program: Signal Processing & Communication Systems, University of Patras, Patras, Greece.

G.V. Moustakides has also advised numerous undergraduate students for their diploma thesis.

Service to University

Co-Director of Professional Master Program in Data Science (2017 - 2019), Department of Computer Science, Rutgers University, Piscataway, NJ, USA.

Director of MS and PhD Program (2004 - 2005), Department of Computer and Communication Engineering, University of Thessaly, Volos, Greece.

Co-Founder, Director and Vice Director of MS Inter-Departmental Program in Signal Processing and Communication Systems (1998 - 2001). Participating departments: Electrical & Computer Engineering, Computer Engineering & Informatics, Physics, University of Patras, Greece.

Head of Signal Processing & Communications Lab (1994 - 2001), Department of Computer Engineering and Informatics, University of Patras, Greece.

Director of Computer Center (1994 - 2001), Department of Computer Engineering and Informatics, University of Patras, Greece.

Research Interests

Statistical Machine Learning
Nonlinear statistical modeling (current activity)
Restoration and Classification with Generative models

Stochastic Optimization and Processing
Sequential change detection and Applications (current activity)
Stochastic optimization and Optimal stopping
Event-triggered sampling in stochastic control

Adaptive Signal Processing
Fair comparison methods of adaptive estimation algorithms
Stabilization of fast estimation algorithms
Low computational complexity estimation algorithms for echo cancellation and equalization

Medical Signal Processing
Signal processing for hearing aids
Detection techniques for noninvasive diagnostic methods

Physical Layer Communications
Detection of access layer misbehavior in Wireless Networks
Blind channel estimation in CDMA and OFDM systems
BER estimation in optical communication systems

Application of Probability and Statistics in Databases
Privacy preserving data mining, Database security

Hypothesis testing techniques for record matching

1-D and 2-D Filter Design Techniques
Design of two and multi-dimensional FIR filters using transformations and L_2 techniques
FIR and IIR polynomial predictive filters

Off-line detection and estimation
Detection and diagnosis of changes in physical structures
Local techniques for detecting changes
Robust detection and filtering of signals in dependent noise

Collaborations

University of Patras (2014 - 2022), Computer Engineering and Informatics Department, Patras, Greece. Collaboration with Prof. E. Psarakis on Machine learning problems and IIR filter design.

University of Illinois at Urbana-Champaign (2020 - 2023), Coordinated Science Lab, Department of Electrical and Computer Engineering. Collaboration with Prof. O. Milenkovic on the Secretary problem and its variants.

Georgia Institute of Technology (2017 - 2022), School of Industrial and Systems Engineering, Atlanta, GA, USA. Collaboration Prof. Y. Xie on Subspace change detection.

Georgia Institute of Technology (2016 - 2021), School of Industrial and Systems Engineering, Atlanta, GA, USA. Collaboration with Prof. Y. Mei on Sequential detection and estimation.

University of Illinois at Urbana-Champaign (2014 - 2023), Coordinated Science Lab, Department of Electrical and Computer Engineering. Collaboration with Prof. V. Veeravalli on Sequential and sparse signal detection.

University of Illinois at Urbana-Champaign (2013 - 2023), Statistics department, Collaboration with Prof. G. Fellouris on Sequential detection.

University of Southern California (2010 - 2012), Department of Mathematics, Los Angeles, CA, USA. Collaboration with Dr. G. Fellouris on Decentralized sequential detection.

Columbia University (2009 - 2013), Department of Electrical Engineering, New York, NY, USA. Collaboration with Prof. X. Wang on Application of event-triggered sampling to DSP.

SoundWorld Solutions (2008 - 2014), Park Ridge, IL, USA. Collaboration with Dr. S. Basseas (CEO) on Signal processing for hearing aids.

Georgia Institute of Technology (2008 - 2010), School of Industrial and Systems Engineering, Atlanta, GA, USA. Collaboration with Prof. Y. Mei on Sequential changepoint detection.

University of Southern California (2008 - 2014), Department of Mathematics, Los Angeles, CA, USA. Collaboration with Dr. A. Tartakovsky on Sequential changepoint detection.

Columbia University (2007 - 2010), Department of Statistics, New York, NY, USA. Collaboration with G. Fellouris on Sequential changepoint detection.

University of Maryland (2005 - 2006), Institute for System Research, College Park, MA, USA. Collaboration with Prof. J. Baras and Prof. M. Rabi on Event-triggered sampling.

University of Thessaly (2004 - 2010), Department of Electrical & Computer Engineering, Volos, Greece. Collaboration with Prof. V. Verykios on Statistical techniques for databases.

Princeton University (1997 - 1999), Department of Electrical Engineering, Princeton, NJ, USA. Collaboration with Prof. H.V. Poor on Multiuser communications.

Ilmenau Technical University (1990 - 1995), Institute of Biomedical Engineering and Informatics, Thuringen, Germany. Collaboration with Prof. G. Henning on Visual evoked potential.

Membership in Societies

Life Senior Member of IEEE
Member of Institute of Mathematical Statistics (IMS)

Reviewer

Mathematics - Statistics: Annals of Statistics; Applied Probability Journals; Automatica; Biometrika; Communications in Statistics - Theory and Methods; Journal of Multivariate Analysis; Journal of Statistical Planning

and Inference; Journal of the Bernoulli Society for Mathematical Statistics and Probability; Mathematics of Operations Research; Methodology and Computing in Applied Probability; Naval Research Logistics; Scandinavian Journal of Statistics; Sequential Analysis; SIAM Journal on Control and Optimization.

Engineering - IEEE: Communication Letters; Journal of Selected Areas in Communications; Signal Processing Letters; Transactions on Circuits and Systems I & II; Transactions on Communications; Transactions on Information Theory; Transactions on Neural Networks; Transactions on Signal Processing; Transactions on Systems Man and Cybernetics.

Engineering - Other: International Journal on Adaptive Control and Signal Processing; Journal of Sound and Vibration; Kuwait Journal of Science and Engineering; Wireless Communications and Mobile Computing; Signal Processing (Elsevier).

Research Organizations/Publishers: Army Research Office, USA; Binational Science Foundation USA-Israel; Greek General Secretariat for Research and Technology; Israel Science Foundation; National Science Foundation, USA; Mathematical Reviews (American Mathematical Society); Région Champagne Ardenne, France; Wiley Publishing Company (book reviewer).

Academic Service

International Conference: Stochastic Analysis, Statistics of Random Processes and Optimization, 2026, December, Tbilisi, Bakuriani, Georgia: Organizer of the session “Methods of Change Point Detection”.

International Workshop on Applied Probability, IWAP 2023, June, Thessaloniki, Greece: Co-organizer with V. Veeravalli of the invited session "Sequential Methods and Optimal Stopping-I,II".

IEEE International Symposium on Information Theory, ISIT 2020, 21-25 June, Los Angeles, USA: Technical program committee member.

IEEE Transactions on Information Theory, Inaugural Associate Editor for Sequential Methods, 2016-2018.

International Workshop on Applied Probability, IWAP 2018, 18-21 June, Budapest, Hungary: Co-organizer with V. Veeravalli of the invited session "Sequential Methods".

Conference on Information Sciences and Systems, CISS 2018, 21-23 March, Princeton, USA: Co-organizer with V. Veeravalli of the invited session "Sequential Methods for Signal Processing and Control".

Asilomar Conference on Signals, Systems, and Computers, 6-9 November 2016, Pacific Grove, CA, USA: Co-organizer with V. Veeravalli of the session "Sequential Signal Processing".

International Workshop in Sequential Methodologies, IWSM 2015, 22-24 June, Columbia University, NYC, USA: Co-organizer with A. Tartakovsky of the session "Tribute to Alexander Novikov: Sequential Tests and Estimation". Co-organizer with V. Veeravalli of the session "Sequential/Quickest Change Detection: Theory and Applications".

IEEE Transactions on Information Theory, Associate Editor for Detection and Estimation, 2011-2014.

International Workshop on Sequential Methods and their Applications, 4-8 June 2012, University of Rouen, France: Scientific Committee.

International Workshop in Sequential Methodologies, IWSM 2011, 14-16 June, Stanford University, Stanford, USA: Organizer of the session "Applications of Sequential Detection and Optimal Stopping".

International Workshop on Applied Probability, IWAP 2010, 5-8 July, Universidad Carlos III of Madrid, Colmenarejo Campus, Madrid, Spain: Co-organizer with I. Nikiforov and A. Tartakovsky of the invited session "Sequential Detection & Estimation I,II,III,IV".

International Workshop in Sequential Methodologies, IWSM 2009, 15-17 June, Université de Technologie de Troyes, Troyes, France: Steering committee, Program committee (Chair), Local organization committee, Co-organizer with A. Tartakovsky of the invited session "Sequential Testing and Optimal Stopping I,II,III" and with I. Nikiforov of the invited session " Sequential change-point detection and isolation".

International Workshop in Sequential Methodologies, IWSM 2007, 22-25 July, Auburn University, Auburn, Alabama, USA: Steering committee.

EURASIP Journal on Applied Signal Processing, vol. 2007, K. Berberidis, B. Champagne, G.V. Moustakides, H.V. Poor, P. Stoica, Special Issue on Advances in subspace-based techniques for Signal Processing and Communications: Guest editor.

European Signal Processing Conference, EUSIPCO 1998, 8-11 September, Rhode, Greece: Organizing committee (Tutorials).

Awards/Distinctions

Keynote speaker (9/2025), European Network for Business and Industrial Statistics (ENBIS 2025), Piraeus, Greece.

Nokia Foundation Fellowship (2/2022-6/2022), Support for visit and stay at Aalto University, Espoo, Finland.

Top 0.75% World Scientists (2026), Stanford list, Subfield: Network & Telecommunications (actually top 1%).

Plenary speaker (7/2019), IEEE International Symposium on Information Theory (ISIT 2019), Paris, France.

Plenary speaker (6/2018), International Workshop on Sequential Methodologies (IWSM), University of Rouen, Rouen, France.

Murray distinguished professorship (7/2016-1/2017), Computer Science, Rutgers University, NJ, USA.

Long-term distinguished lecturer (9/2014 - 12/2014), Coordinated Science Lab, University of Illinois, Urbana-Champaign, IL, USA.

Murray distinguished professorship (7/2013-1/2014), Computer Science, Rutgers University, NJ, USA.

Invited Talks (non-conference)

Designing optimal tests for sequential detection of changes (Sep. 2025), Keynote talk, European Network for Business and Industrial Statistics (ENBIS 2025), Piraeus, Greece.

Data driven estimation of conditional expectation, application to stochastic optimization (Apr. 2024), Probability Seminar, Institut de Mathématiques de Toulouse, Toulouse, France.

Data driven estimation of likelihood ratios with application to GANs (Feb. 2023), Centre Borelli, University of Paris-Saclay, Paris, France.

Machine learning for signal processing (Nov. 2022), tutorial presentation, University of Melbourne, Creswick campus, Australia.

Metrics and optimum tests in sequential detection of changes (Nov. 2022), keynote talk, mini-symposium on "Change-point analysis and analysis of structural changes in finance, economics and medicine", University of Melbourne, Creswick campus, Australia.

Machine learning methods for statistical decision making (Nov. 2022), two-hour lecture, MATRIX research program on Mathematics of risk, University of Melbourne, Creswick campus, Australia.

From statistical estimation and generative modeling to inverse problem (May 2022), series of three two-hour lectures, Department of Signal Processing and Acoustics, School of Electrical Engineering, Aalto University, Espoo, Finland.

Data-driven detection methods (May 2022), Nokia Foundation, Espoo, Finland.

Data-driven Bayesian and non-Bayesian parameter estimation (Feb. 2022), two-hour lecture, Department of Signal Processing and Acoustics, School of Electrical Engineering, Aalto University, Espoo, Finland.

Data-driven binary hypothesis testing (Feb. 2022), two-hour lecture, Department of Signal Processing and Acoustics, School of Electrical Engineering, Aalto University, Espoo, Finland.

Sequential detection of changes (May 2021), Institute of Mathematics, University of Toulouse 2 Jean Jaurès, Toulouse, France.

Neural network estimation of likelihood ratios for testing and detection (Nov. 2019), Industrial and Systems Engineering department, Georgia Tech, Atlanta, USA

Quickest detection of changes: Classical and modern formulations (July 2019), Plenary talk, IEEE International Symposium on Information Theory (ISIT 2019), Paris, France.

Detecting changes in Markov processes (June 2017), Plenary talk, International Workshop on Sequential Methodologies (IWSM), University of Rouen, Rouen, France.

Metrics and optimum tests in sequential change detection (Dec. 2016), Industrial and Systems Engineering department, Georgia Tech, Atlanta, USA.

Sequential detection of changes: Metrics and optimum tests (Oct. 2016), Statistics department, Wharton School, University of Pennsylvania, Philadelphia, USA.

Sequential detection of a first-entry-to-a-set (Apr. 2016), France Research Center, Huawei Technologies, Paris, France.

Adaptive algorithms (Jan. 2015), Digital Technology Center, Electrical and Computer Engineering, University of Minnesota, Minneapolis, MN, USA. (Two one-hour lectures).

Sequential detection of changes: An overview (Jan. 2015), Digital Technology Center, Electrical and Computer Engineering, University of Minnesota, Minneapolis, MN, USA.

Optimal stopping, application to sequential detection, mini-course of eleven one-hour lectures, (Fall 2014), Coordinated Science Lab, University of Illinois at Urbana-Champaign, USA.

Sequential detection of changes: Overview and recent results (Jan. 2014), Electrical Engineering, Princeton University, Princeton, NJ, USA.

Sequential change detection: Brief overview (Dec. 2013), Command, Control and Interoperability Center for Advanced Data Analysis, Rutgers University, New Brunswick, NJ, USA.

Sequential detection and system identification (Nov. 2013), Statistics Department, University of Connecticut, Storrs, CT, USA.

Optimal routing of autonomous vehicles in stochastic environments (Dec. 2012), Computational Biomedicine, Imaging and Modeling Center, Computer Science Department, Rutgers University, NJ, USA.

Sequential detection: Overview and open problems (Dec. 2011), Advanced Network Colloquium, Institute for Scientific Research (ISR), University of Maryland, College Park, MA, USA.

Optimum joint detection and estimation, application to MIMO radar (Jan. 2011), Department of Electrical Engineering, University of Southern California (USC), Los Angeles, CA, USA.

Sequential rate change detection in Poisson processes (Jan. 2011), Department of Statistics and Applied Probability, University of California, Santa Barbara, USA.

Joint detection and estimation, application to MIMO radar (Sep. 2010), Department of Electrical Engineering, Bilkent University, Ankara, Turkey.

Optimum GLR tests (Jan. 2009), Probability & Statistics seminar, Department of Mathematics, University of Southern California (USC), Los Angeles, CA, USA.

Finite sample size optimality of GLR tests (Sep. 2008), Electrical Engineering department, Columbia University, New York, NY, USA.

Finite sample size optimality of GLR tests (Aug. 2008), Statistics seminar, School of Industrial and Systems Engineering, Georgia Institute of Technology (GA Tech), Atlanta, GA, USA.

Asynchronous random sampling for decentralized detection (Feb. 2008), Applied Math seminar, Department of Mathematics, University of Southern California (USC), Los Angeles, CA, USA.

Change time models and performance criteria for the problem of change detection (Feb. 2008), Probability & Statistics seminar, Department of Mathematics, University of Southern California (USC), Los Angeles, CA, USA.

Decentralized sequential hypothesis testing and change detection (Jan. 2008), Laboratoire de Modélisation et de Sûreté de Systèmes, Université de Technologie de Troyes, Troyes, France.

Sequential techniques for hypothesis testing and change detection (Oct. 2007), School of Electrical Engineering, The Royal Institute of Technology (KTH), Stockholm, Sweden.

Sequential detection of changes, mini-course of nine lectures, (May-June 2007), Department of Statistics, Columbia University, New York, NY, USA.

The Poisson disorder problem (Feb. 2006), Department of Operations Research and Financial Engineering, Princeton University, Princeton, NJ, USA.

Performance evaluation of CUSUM tests (March 2003), Department of Statistics, Columbia University, New York, NY, USA.

Optimum CUSUM tests for detecting changes in continuous time processes (March 2003), 11-th Annual Applied Probability Day, The Center for Applied Probability, Columbia University, New York, NY, USA (only six speakers were invited to this annual event).

Optimum sequential procedures for detecting changes in processes (Dec. 2002), Université du Maine, Faculté des Sciences, Laboratoire de Statistique et Processus, Le Mans, France.

Adaptive algorithms for blind separation of dependent sources (Jan. 2002), Department of Mathematics, Université Joseph Fourier - Grenoble I, Grenoble, France.

Optimum adaptive algorithms for blind source separation (April 2001), Institut d'informatique, Université de Neuchâtel, Neuchâtel, Switzerland.

Decision directed algorithms for multiuser detection (Nov. 2000), Institut de Recherche en Informatique et en Automatique INRIA - IRISA, Rennes, France.

Adaptive algorithms for blind source separation (July 2000), Signal Processing Lab., Department of Electrical Engineering, University of Pennsylvania (UPENN), Philadelphia, PA, USA.

Optimum adaptive signal processing algorithms (June 1999), Laboratoire de Modélisation et de Sûreté de Systèmes, Université de Technologie de Troyes, Troyes, France.

New developments in sequential analysis (March 1998), Department of Statistics, Hebrew University of Jerusalem, Jerusalem, Israel.

Language Skills

Greek (native), English (fluent), French (very good).

List of Publications

Books/Book Chapters

[B5] G.V. Moustakides, Basic Techniques in Digital Signal Processing, 2nd Edition (in Greek), Editions Tziola, Greece, Oct. 2022.

[B4] Y. Yilmaz, G.V. Moustakides, X. Wang, A. Hero, Event-based statistical signal processing, Chapter 20 in Event-Based Control and Signal Processing, pp. 457-485, M. Miskowicz (editor), CRC Press, Taylor & Francis, 2016.

[B3] G.V. Moustakides, Basic Techniques in Digital Signal Processing (in Greek), Editions Tziola, Greece, Oct. 2003.

[B2] G.V. Moustakides, Constrained adaptive linear multiuser detection schemes, chapter in the book: Signal Processing for Wireless Communications Systems, H.V. Poor and L. Tong (eds), Springer, March 2002, (same as [J34]).

[B1] M. Basseville, A. Benveniste, G.V Moustakides, The local method applied to the robust detection of changes in the poles of a pole-zero system, Lecture Notes in Control and Information Sciences, vol. LNCIS-77, pp. 259-274, Springer, Berlin, 1986.

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[J63] L. Xie, Y. Xie, G.V. Moustakides, Sequential subspace changepoint detection, Sequential Analysis, vol. 39, no. 3, pp. 307-335, 2020. Also, finalist for best student paper award (4 papers out of 38) in Informs, Section: Quality, Statistics & Reliability, 2019.

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[J59] W. Zhang, G.V. Moustakides, H.V. Poor, Opportunistic detection rules: Finite and asymptotic analysis, IEEE Transactions on Information Theory, vol. 62, no. 4, pp. 1-16, April 2016.

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Conferences

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