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Assistant Professor
Department of Statistics
Athens University of Economics & Business

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Business Address

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Appointments

2009 – **Assistant Professor**, Athens University of Economics and Business, Dept. of Statistics
2007 – **Adjunct Assistant Professor**, University of Houston, Dept. of Computer Science
2003 – 2009 **Lecturer**, Athens University of Economics and Business, Dept. of Statistics
2001 – 2003 **Visiting Lecturer**, Athens Univ. of Economics and Business, Dept. of Statistics
2000 – 2001 **Military Service**, Greek Army (compulsory service)
1999 – 2000 **Visiting Assistant Professor**, University of Minnesota, School of Statistics
1999 – 1999 **Student Intern**, Honeywell Labs, Minneapolis, Minnesota
1998 – 2000 **Instructor**, University of Minnesota, School of Statistics

Degrees

University of Minnesota, School of Statistics, Twin Cities, Minnesota
Ph.D. in Statistics, 1997-2000.

Title: Bayesian Approach to Quality Control Problems. Advisor: Douglas M. Hawkins.
Committee: Seymour Geisser (Chair), Bradley P. Carlin, Charles Geyer.

University of Minnesota, School of Statistics, Twin Cities, Minnesota
M.Sc. in Statistics, 1995-1997

Aristotle University of Thessaloniki, Dept. of Mathematics, Thessaloniki, Greece
B.Sc. in Mathematics, 1990-1994

Research Interests

Bayesian Statistical Process Control
Statistical Aspects of Computer Vision Problems
Bayesian Statistics and its applications

Research Awards

1. Winner of the “Best Talk Award”, at the ENBIS 7 (European Network for Business and Industrial Statistics), Dortmund, Germany, September 2007.
2. Winner of the “Best Contributed Paper Award” of the American Statistical Association, Section of Risk Analysis, Indianapolis, August 2000 (<http://www.amstat.org/sections/srisk/paperaward.htm>)
3. Winner of the “Best Student Paper Award” of the American Statistical Association, Section of Risk Analysis, Indianapolis, August 2000 (<http://www.amstat.org/sections/srisk/studentaward.htm>).
4. Student Travel Award from the “Joint Research Conference on Statistics in Quality, Industry and Technology”, Seattle, June 2000.
5. University of Minnesota, School of Statistics, Spring Semester Fellowship, March 1996.

Publications

Book Contributions

- B04.** J. Dowdall, I. Pavlidis, and P. Tsiamyrtzis (2009), “Coalitional Tracker for Deception Detection in Thermal Imagery”, in Augmented Vision Perception in Infrared: Algorithms and Applied Systems, Series: Advances in Pattern Recognition, editor: Hammoud, R. I., Springer, Chapter 5, pp. 113-136.
- B03.** P. Tsiamyrtzis and D.M. Hawkins (2007), “Bayesian Statistical Process Control”, in Encyclopedia of Statistics in Quality and Reliability, editors: F. Ruggeri, F. Faltin and R. Kenett, John Wiley & Sons, Ltd.
- B02.** P. Tsiamyrtzis and D.M. Hawkins, (2006), “A Bayesian Approach to Statistical Process Control”, in Bayesian Monitoring, Control and Optimization, editors: B. M. Colosimo and E. Del Castillo, Chapman and Hall/CRC Press Inc. Chapter 3, pp. 87-107.
- B01.** I. Pavlidis, P. Tsiamyrtzis, C. Manohar, and P. Buddharaju, (2006), “Biometrics: face recognition in thermal infrared”, in Biomedical Engineering Handbook, editor: J. D. Bronzino, CRC Press, Chapter 29, pp. 1-16.

Papers in Refereed Journals

- J13.** I. Pavlidis, J. Levine, L. MacBride, Z. Zhu, and P. Tsiamyrtzis (2009), “Description and clinical studies of a device for the instantaneous detection of

- office-place stress”, in *WORK: A Journal of Prevention, Assessment, and Rehabilitation*, to appear.
- J12.** D. Shastri, A. Merla, P. Tsiamyrtzis, and I. Pavlidis (2009), “Imaging facial signs of neuro-physiological responses”, in *IEEE Transactions on Biomedical Engineering*, Volume 56, no. 2, pp. 477-84.
- J11.** P. Tsiamyrtzis and D. M. Hawkins (2008), “A Bayesian EWMA Method to Detect Jumps at the Start-Up Phase of a Process”, in *Quality and Reliability Engineering International*, Volume 24, Issue 4, pp. 721-735.
- J10.** K. D. Zamba, P. Tsiamyrtzis and D. M. Hawkins (2008), “A Sequential Bayesian Control Model for Influenza-Like-Illnesses and Early Detection of Intentional Outbreaks”, in *Quality Engineering*, Volume 20, Issue 4, pp. 495-507.
- J09.** D. Karlis and P. Tsiamyrtzis (2008), “Exact Bayesian modeling for bivariate Poisson data and extensions”, in *Statistics and Computing*, Volume 18, Issue 1, pp.27-40.
- J08.** P. Buddhharaju, I. Pavlidis, P. Tsiamyrtzis, and M. Bazakos, (2007), “Physiology-based face recognition in the thermal infrared spectrum”, in *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Volume 29, Issue 4, pp. 613-626.
- J07.** J. Dowdall, I. Pavlidis, and P. Tsiamyrtzis, (2007), “Coalitional tracking”, in *Computer Vision and Image Understanding*, Volume 106, Issue 2-3, pp. 205-219.
- J06.** P. Tsiamyrtzis, J. Dowdall, D. Shastri, I. Pavlidis, and M.G. Frank, (2007), “Imaging facial physiology for the detection of deceit”, in *International Journal of Computer Vision*, Volume 71, Issue 2, pp. 197-214.
- J05.** P. Tsiamyrtzis and D. M. Hawkins, (2005), “A Bayesian scheme to detect changes in the mean of a short run process”, in *Technometrics*, Volume 47, Issue 4, pp. 446-456.
- J04.** P. Tsiamyrtzis and D. Karlis, (2004), “Strategies for efficient computation of multivariate Poisson probabilities”, in *Communications in Statistics, Simulation and Computation*, Volume 33 Issue 2, pp.271-292.
- J03.** E. Katsanidis, D. Meyer, P. Adis, E. Yancey, M. Dikeman, P. Tsiamyrtzis, M. Pullen, (2003), “Vascular infusion as a means to improve the antioxidant – prooxidant ratio of beef”, *Journal of Food Science*, Volume 68 Issue 4, pp.1149 – 1154.
- J02.** V. Morellas, I. Pavlidis, and P. Tsiamyrtzis, (2003), “Deter: Detection of Events for Threat Evaluation and Recognition”, in *Machine Vision and Applications*, Volume 15, Issue 1 pp. 29-45.

- J01.** I. Pavlidis, V. Morellas, P. Tsiamyrtzis, and S. Harp, (2001), “Urban surveillance systems: From the laboratory to the commercial world”, in Proceedings of the IEEE, Volume 89, Issue 10, pp. 1478-97.

Papers at Refereed Conferences

- C14.** Y. Zhou, P. Tsiamyrtzis, and I. Pavlidis (2009), “Tissue tracking in thermo-physiological imagery through spatio-temporal smoothing”, Proceedings of International Conference on Medical Image Computing and Computer Assisted Intervention, London, United Kingdom, September, 2009.
- C13.** Y. Fujiki, P. Tsiamyrtzis, and I. Pavlidis (2009), “Making sense of accelerometer measurements in pervasive physical activity applications”, Ext. Abstract of the 2009 ACM Conference on Human Factors in Computing Systems (CHI), Boston, Massachusetts, April, 2009.
- C12.** Y. Zhou, P. Tsiamyrtzis, and I. Pavlidis (2008), “A probabilistic template update method for tracking facial tissue in thermal infrared”, Proceedings of the 5th IEEE International Conference on Advanced Video and Signal Based Surveillance, Santa Fe, New Mexico, USA, September 1-3, 2008.
- C11.** Z. Zhu, P. Tsiamyrtzis, and I. Pavlidis (2008), “The segmentation of the supraorbital vessels in thermal imagery”, Proceedings of the 5th IEEE International Conference on Advanced Video and Signal Based Surveillance, Santa Fe, New Mexico, USA, September 1-3, 2008.
- C10.** D. Shastri, P. Tsiamyrtzis, and I. Pavlidis (2008), “Periorbital thermal signal extraction and applications”, Proceedings of the 30th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Vancouver, British Columbia, pp. 102-5, August, 2008.
- C09.** D. Shastri, A. Merla, P. Tsiamyrtzis, and I. Pavlidis (2007), “Imaging facial signs of neuro-physiological responses”, Proceedings of the 10th International Conference on Medical Image Computing and Computer-Assisted Intervention-MICCAI, Brisbane, Australia, October 29 – November 2, 2007.
- C08.** Z. Zhu, P. Tsiamyrtzis, and I. Pavlidis (2007) “Forehead thermal signature extraction in lie detection”, Proceedings of the 29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, pp. 243-246, Lyon, France, August 23-26, 2007.
- C07.** P. Buddharaju, I. Pavlidis and P. Tsiamyrtzis, (2006) “Pose-invariant physiological face recognition in the thermal infrared spectrum”, Proceedings of the 2006 IEEE Conference on Computer Vision and Pattern Recognition, pp. 53-60, New York, June 17-22, 2006.

- C06.** J. Dowdall, I. Pavlidis, and P. Tsiamyrtzis, (2006), “Coalitional tracking in facial infrared imaging and beyond”, Proceedings of the 2006 IEEE Conference on Computer Vision and Pattern Recognition, pp. 134-141, New York, June 17-22, 2006.
- C05.** P. Buddharaju, I. Pavlidis, and P. Tsiamyrtzis, (2005), “Physiology-Based Face Recognition Using the Vascular Network Extracted from Thermal Facial Images: A Novel Approach”, in Proceedings of the IEEE International Conference on Advanced Video and Signal based Surveillance, pp. 354-359, Lake Como, Italy, September 15-16, 2005.
- C04.** P. Buddharaju, J. Dowdall, P. Tsiamyrtzis, D. Shastri, I. Pavlidis, and M. G. Frank, (2005), “Automatic THERmal MONitoring System (ATHEMOS) for Deception Detection”, in Video Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition, pp 53, San Diego, CA, June 20-25, 2005.
- C03.** P. Tsiamyrtzis, J. Dowdall, D. Shastri, I. Pavlidis, M.G. Frank, and P. Ekman, (2005), “Lie Detection - Recovery of the Periorbital Signal Through Tandem Tracking and Noise Suppression in Thermal Facial Video”, in Proceedings of SPIE Sensors, and Command, Control, Communications, and Intelligence (C3I) Technologies for Homeland Security and Homeland Defense IV, editor: E. M. Carapezza, Vol. 5778, pp. 555-566, Orlando, FL, March 29-31, 2005.
- C02.** R. Murthy, I. Pavlidis, and P. Tsiamyrtzis, (2004), “Touchless Monitoring of Breathing Function”, in Proceedings of the 26th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Vol. 2, pp. 1196-9, San Francisco, CA, September 1-5, 2004.
- C01.** P. Tsiamyrtzis, D. M. Hawkins and S. Tatini, (2000) “Statistical Analysis of Salmonellosis Outbreak Data”, in Proceedings of the American Statistical Association (ASA), Section on Statistics and the Environment, pp.62-67, Indianapolis, IN, August 13-17, 2000. (“First Prize of A.S.A. Student Paper Award” and “Best Contributed Paper Award”).

Papers at Abstract Based Conferences

- A3.** P. Tsiamyrtzis and D. M. Hawkins, (2005), “A Bayesian Method to Detect Early Mean Shifts in an Autoregressive Process”, in *Proceedings of the American Statistical Association (ASA), Section on Quality and Productivity*, pp. 1859-1863, Minneapolis, MN, August 7-11, 2005.
- A2.** R. Murthy, I. Pavlidis, and P. Tsiamyrtzis, (2005), “Touchless Monitoring of Breath Function”, in *Abstracts of the 22nd Annual Houston Conference on Biomedical Engineering Research*, Houston, TX, February 10-11, 2005.

- A1.** P. Tsiamyrtzis, J. Dowdall, D. Shastri, I. Pavlidis, M. G. Frank, and P. Ekman, "Lie detection: recovery of the periorbital signal through tandem tracking and noise suppression in thermal facial video", in *Abstracts of the 22nd Annual Houston Conference on Biomedical Engineering Research*, Houston, TX, February 10-11, 2005.

Citations

More than 150 citations (excluding self citations) found in the following search engines:

<http://www.scopus.com> <http://scholar.google.com> and <http://books.google.com>

Teaching Experience

- 1. 2002 – today:** Athens University of Economics and Business, Dept. of Statistics
Position: Lecturer
Undergraduate Courses:
 - Introduction to Linear Regression
 - Bayesian Statistics
 - Multivariate Statistical Methods
 - Introduction to Programming with R/Splus*M.Sc. Courses:*
 - Mathematical Statistics
 - Linear Models for Data Analysis I & II
 - Bayesian Statistics with applications to Medicine
 - Linear Regression
 - Analysis of Variance
 - Data Mining
- 2. 2003 – today:** Hellenic Open University, Dept. of Business Administration
Position: Counselor/Instructor (Distance Learning)
Undergraduate Course:
 - Quantitative Methods
- 3. 2004, 2006:** Joint M.Sc. Program in Biostatistics, National and Kapodistrian University of Athens (Medical School and Dept. of Mathematics) and University of Ioannina (Dept. of Mathematics)
Position: Lecturer
M.Sc. Course:
 - Bayesian Statistics
- 4. 2000:** University of Minnesota, School of Statistics, Twin Cities, U.S.A.
Position: Visiting Assistant Professor
Undergraduate Courses:

- Introduction to Statistics
 - Introduction to Probability and Statistics
- 5. 1999 – 2000:** University of Minnesota, School of Statistics, Twin Cities, U.S.A.
Position: Instructor
Undergraduate Course:
- Introduction to Statistical Analysis
- M.Sc. Course:*
- Applied Linear Regression
- 6. 1996 – 1999:** University of Minnesota, School of Statistics, Twin Cities, U.S.A.
Position: Teaching Assistant
Undergraduate Courses:
- Introduction to Statistics
 - Introduction to Statistical Analysis
 - Data Analysis
- M.Sc. Courses:*
- Applied Linear Regression
 - Design of Experiments
 - Statistical Methods for Quality Improvement

Participation in Grants as Senior Scientific Advisor

- 1. Grant:** “ATHEMOS – Advanced Technology Development”
Principal Investigator: Ioannis Pavlidis
Sponsor: Defense Academy for Credibility Assessment (DACA), Department of Defense, USA.
Description: The goal of this project was to perform research that would improve facial tissue tracking in thermal infrared, develop tracking error estimation methods, include novel psycho-physiological channels in lie detection, pursue an aggressive program of experimental investigation, and revamp the ATHEMOS software infrastructure.

- 2. Grant:** “Interacting with Human Physiology”
Principal Investigator: Ioannis Pavlidis
Sponsor: National Science Foundation (NSF), USA
Description: The project aims to add a new dimension in human-computer interaction (HCI), namely, to monitor the physiology of computer users on a continuous basis and take appropriate actions when warranted. The project aspires to use the abundant computing resources at home and the office in combination with novel sensing, algorithmic, and interface methods to enhance the user’s experience and at the same time create a new preventive medicine paradigm.

Synergistic Activities

1. Program Area Chair (Tracking), of the “5th IEEE International Conference on AVSS” (Advanced Video and Signal Based Surveillance), Santa Fe, New Mexico, USA, September 2008.
2. Member of the scientific committee of the 8th annual conference of the European Network for Business and Industrial Statistics (ENBIS), September 2008, Athens, Greece.
3. Member of the organizing committee of the 8th annual conference of the European Network for Business and Industrial Statistics (ENBIS), September 2008, Athens, Greece.
4. Member of the organizing committee of the 17th annual conference of the Hellenic Statistical Institute (HSI), April 2004, Lefkada, Greece.

Refereeing Service (alphabetic order)

1. Applied Optics
2. Communications in Statistics – Simulation and Computation
3. Computer Vision and Image Understanding (CVIU)
4. European Journal of Operational Research
5. Forensic Science International
6. IEEE Computer Society Workshop on Biometrics
7. IEEE International Conference on Advanced Video and Signal Based Surveillance
8. IEEE Transactions on Image Processing
9. IEEE Transactions on Pattern Analysis and Machine Intelligence
10. Journal of Quality Technology
11. Measurement Science and Technology – Institute of Physics
12. National Science Foundation
13. Quality Engineering
14. Statistics and Computing
15. Technometrics

Professional Memberships

1. Member of the American Statistical Association (ASA)
2. Member of the American Society for Quality (ASQ)
3. Member of the Institute of Mathematical Statistics (IMS)
4. Member of the International Society for Bayesian Analysis (ISBA)
5. Member of the International Statistical Institute (ISI)
6. Member of the European Network for Business and Industrial Statistics (ENBIS)
7. Member of the Hellenic Statistical Institute (HSI)

M.Sc. students

1. C. Seizi, “On Divergence between Distribution Functions”, Dept. of Statistics, Athens University of Economics and Business (Full Time). Completed.
2. E. Yiannopoulou, “A Bayesian approach in determining the optimal sample size for phase I data”, Dept. of Statistics, Athens University of Economics and Business (Full Time). Completed.
3. T. Nicolaou, “Spatial Statistics in Image Analysis”, Dept. of Statistics, Athens University of Economics and Business (Full Time). Completed.
4. S. Patrinos, “Bioterrorism Surveillance Systems: An application to gastrointestinal infections” Joint M.Sc. Program in Biostatistics, National and Kapodistrian University of Athens (Medical School and Dept. of Mathematics) and University of Ioannina (Dept. of Mathematics). Completed.
5. B. Papathanasiou, “A Bayesian Statistical Process Control in modeling epidemics”, Joint M.Sc. Program in Biostatistics, National and Kapodistrian University of Athens (Medical School and Dept. of Mathematics) and University of Ioannina (Dept. of Mathematics). Completed.
6. N. Mitsopoulos, “Bayesian Quality Control Charting”, Dept. of Statistics, Athens University of Economics and Business (Full Time).
7. S. Rafail, “Bayesian approach to Kalman Filter for applications to Meteorology”, Dept. of Statistics, Athens University of Economics and Business (Full Time).
8. G. Basta, “Biosurveillance Systems: A Bayesian Decision Making Approach”, Joint M.Sc. Program in Biostatistics, National and Kapodistrian University of Athens (Medical School and Dept. of Mathematics) and University of Ioannina (Dept. of Mathematics).
9. M. Douli, “Recommendation Systems: A Content Based Collaboration Filter Approach”, Dept. of Statistics, Athens University of Economics and Business (Part Time). Completed.

10. G. Vlassis, “A review of methods used to estimate the central subspace in studying the conditional distribution of $y|x$ in regression”, Dept. of Statistics, Athens University of Economics and Business (Part Time). Completed.
11. R. Christopoulou, “Discovering the structural dimension in regression problems”, Dept. of Statistics, Athens University of Economics and Business (Part Time). Completed.
12. P. Douva, “Linear Profiles for Phase I data: a review”, Dept. of Statistics, Athens University of Economics and Business (Part Time).

Ph.D. Thesis Committee Member

1. “Tracking Tissue in Thermal Infrared Video”, Jonathan Dowdall, Department of Computer Science, University of Houston, Advisor: Ioannis Pavlidis (completed Fall 2006).
2. “Measurement of Facial Physiology for Lie Detection”, Dvijesh Shastri, Department of Computer Science, University of Houston, Advisor: Ioannis Pavlidis (completed Spring 2007).
3. “Physiology-Based Face Recognition in the Thermal Infrared Spectrum”, Pradeep Buddharaju, Department of Computer Science, University of Houston, Advisor: Ioannis Pavlidis (completed Spring 2007).
4. “Breathing Computation through Thermal Imaging”, Jin Fei, Department of Computer Science, University of Houston, Advisor: Ioannis Pavlidis (completed Spring 2007).
5. “Applications of Thermal Imaging in Psychology and Medicine”, Zhen Zhu, Department of Computer Science, University of Houston, Advisor: Ioannis Pavlidis (completed Spring 2008).

M.Sc. Thesis Committee Member

1. N. Anastasiadis, “Rivalry of Two Statistical Paradigms in Psychoanalysis”, Dept. of Psychology, University of Salzburg.
2. E. Alexandrou, “Bayesian Model and Variable Selection using MCMC: A Review”, Dept. of Statistics, Athens University of Economics and Business (Full Time).
3. A. P. Matsioulas, “Random Effects Models for Binary Data”, Dept. of Statistics, Athens University of Economics and Business (Full Time).
4. C. I. Mitsakos, “Statistical Process Control Techniques on Water Data”, Dept. of Statistics, Athens University of Economics and Business (Full Time).
5. A. Manolesou, “Bayesian Hypothesis Testing in discrete Data” Joint M.Sc. Program in Biostatistics, National and Kapodistrian University of Athens (Medical School and Dept. of Mathematics) and University of Ioannina (Dept. of Mathematics).

6. A. Santourian, "Model Based Clustering with Non-Elliptically contoured distributions", Dept. of Statistics, Athens University of Economics and Business (Full Time).
7. A. Ikonou "Bayesian Latent Variable Models", Dept. of Statistics, Athens University of Economics and Business (Full Time).
8. I. Flakas, "Model selection for choosing the best model to describe soccer data", Dept. of Statistics, Athens University of Economics and Business (Full Time).