

**Curriculum Vitae**

**Dr. TRYFON DARAS**

**Assistant Professor**

**Department of Environmental Engineering**

**Division: Environmental Management**

**Section of Mathematics**

**Technical University of Crete**

Research area

**«Probability-Statistics»**

## PERSONAL INFORMATION

**Name:** TRYFON DARAS  
**Currently employed:** Assistant Professor  
School of Environmental Engineering, Section  
Environmental Management, Technical University of Crete

**Address:**

	<b>Work</b>	<b>Home</b>
	Sch. of Environmental Engineering Technical University of Crete Kounoupidiana 73100, Chania, Crete.	11 St. Onoufrios str. (Aggelakis Condos) Kounoupidiana
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## STUDIES

- **B.S. in Mathematics**, Dept of Mathematics, University of Patras, October 1984. Diploma grade 8.42
- **M.Sc. Probability-Statistics**, certificate of a 2-year graduate studies program, Dept of Mathematics, University of Patras, July 1987.
- **M.Sc. Probability-Statistics**, Dept of Mathematics, Case Western Reserve University, Cleveland Ohio, U.S.A. July 1990.
- **Ph.D. Probability-Statistics**, Dept of Mathematics, Case Western Reserve University, Cleveland Ohio, U.S.A. July 1995.

Dissertation title “*Some Large and Moderate Deviations results for Exchangeable sequences*”. Advisor: Alejandro de Acosta.

## RESEARCH INTERESTS

My research interests are in the area of Probability Theory and Mathematical Statistics. More precisely in.

- **Large Deviations Theory:** asymptotic computation of “small” probabilities of exponential scale. Generalization of the theory in the case of exchangeable sequences of r.v.s.
- **Stochastic Calculus:** Generalization of theorems in the case of Stochastic Differential Equations and their applications in
  - Finance.
  - Medicine
- **Combinatorics** and their applications e.g balls-ballot problems and application to cluster of disease cases.

## WORKING EXPERIENCE – ACADEMIA

### Technical University of Crete

- **August 2009 – today:** Assistant Professor, School of Environmental Engineering, Section of Environmental management, (*Probability-Statistics*).
- **December 2003-August 2009** Lecturer, Department of Sciences, Section of Mathematics (*Probability-Statistics*).
- **September 2001-December 2003:** Instructor, Department of Sciences, Section of Mathematics.
- **March 1999-August 2001:** Instructor, Department of Sciences, Section of Mathematics.

### Greek Open University

- **September 2017 - today:** Department. of Sciences and Technology: Undergraduates Studies Program “*Information Theory*” teaching instructor, course title “*Mathematics for Information Theory I*”.
- **September 2013 - September 2017:** Department. of Sciences and Technology (a) Graduates Studies Program “*Quality Control*” teaching instructor, course title “Basic principles of Quality Control”. Also, (b) Graduates Studies “*Quality Control*”: thesis supervising.
- **September 2010- today:** Department of Sciences and Technology) Graduates Studies Program: “*Graduate Studies in Mathematics*”, thesis supervising.
- **July 2000-August 2012:** Lecturer, Department. of Sciences and Technology, Undergraduate studies Program “*Studies in Sciences*”.

### Mediterranean Agronomic Institute of Chania (M.A.I.CH.)

- **Acad. years 2011-12, 2012-13, 2013-14, 2014-15:** Visiting Professor, Departments ( $\alpha$ ) Environmental Engineering, ( $\beta$ ) Food Quality Management and Chemistry of Natural Products.
- **Acad. years 2008-9, 2009-10, 2010-11:** Visiting Professor, Department Environmental Engineering.

### Department of Political Sciences, University of Crete

- **March 2000-August 2000:** Instructor, Dept of Political Sciences.

### **S.E.L.E.T.E (preparatory college for teaching in technological education)**

- **September 2000-February 2001:** Visiting Professor, Dept of Electronics..
- **September 1999-February 2000:** Visiting Professor, Dept of Electronics.
- **September 1998- February 1999:** Visiting Professor, Dept of Engineering.

### **Technological Educational Institute of Athens**

- **September 1998- August 1999:** Visiting Professor, Dept of Mathematics.
- **March 1999- August 1999:** Visiting Professor, Dept of Information Technology.

### **Sivitanidios public institute (I.E.K.).**

- **September 1999- February 2000:** Instructor, Finance course.
- **September 1998- August 1999:** Instructor, Taxation course.

### **Department of Mathematics, Case Western Reserve University, Cleveland, Ohio, U.S.A.**

- **August 1995- August 1997:** Lecturer.
- **June 1987- August 1994:** Instructor, (Summer semesters: June, July, August).

### **OTHER WORKING EXPERIENCE**

- **March 1999-July 1999:** Instructor, Nurses School, St. Sophia Children's Hospital (General Mathematics).
- **September 1987- June 1988:** Instructor, Greek-American School, Cleveland Heights, Ohio, U.S.A. (Teaching Math to high school students).

### **TEACHING EXPERIENCE**

#### **Technical University of Crete**

- **School of Production Engineering and Management, graduate courses**
  - **MULTIVARIABLE STATISTICS**, graduate course/ mandatory, graduate program «*Applied Mathematics for Engineering Science*», (3 hours/ week), spring semester, acad. year 2014-15 , 2015-16, 2016-17, 2017-18.
  - **STOCHASTIC FINANCE**, graduate course/ elective, graduate program «*Applied Mathematics for Engineering Science*», (3 hours/ week), spring semester, acad. year 2014-15, 2017-18.

- **School of Environmental Engineering, semester courses**

- **STATISTICS**, mandatory course, (3 hours/week), fall semester, acad. years 2013-14, 2014-15, 2015-16, 2016-17, 2017-18.
- **ORDINARY DIFFERENTIAL EQUATIONS**, mandatory course, (3 hours/week), fall semester, acad. years 2013-14, 2014-15, 2015-16, 2016-17, 2017-18 .
- **STOCHASTIC PROCESSES**, graduate course/ elective, (3 hours/week, graduate program “*Environmental Engineering*” , fall semester, acad. year 2013-2014, 2016-17, 2017-18 .
- **STOCHASTIC BEHAVIOR AND TIME SERIES ANALYSIS** graduate course/elective (Ph.D level), (3 hours/week, graduate program “*Environmental Engineering*” , spring semester, acad. year 2015-16, 2016-17, 2017-18 .

- **Department of Sciences, Technical University of Crete, semester courses.**

- **PROBABILITY THEORY, STATISTICS**, Dept of Electronic and Computer Engineering (4 hrs/wk), fall semester academic yrs 2000-01, 2001-02, 2002-03, 2003-04, 2004-05, 2005-06, 2006-07, 2007-08, 2008-09, 2009-10, 2010-11, 2011-12, 2012-13.
- **STATISTICS**, Environmental Engineering Dept (3 hrs/wk), spring semester academic yrs 1999-2000, 2000-01, 2001-02, 2002-03, 2003-04, 2004-05, 2005-06, 2006-07, 2007-08, 2008-09, 2009-10, 2010-11, 2011-12, 2012-13.
- **STOCHASTIC PROCESSES – QUEUING THEORY**, Dept of Electronic and Computer Engineering (4 hrs/wk), fall semester academic yrs 1999-2000, 2000-01, 2001-02, 2002-03, 2003-04.
- **PROBABILITY, STOCHASTIC PROCESSES**, graduate course, *Applied and Computational Mathematics* Graduate Program, Dept of Sciences, Section of Mathematics, Technical University of Crete (3 hrs/wk), fall semester academic yrs 2005-06, 2007-08, 2008-09, 2009-10, 2011-12.
- **SPECIAL TOPICS IN PROBABILITY**, graduate course, *Applied and Computational Mathematics* Graduate Program, Dept of Sciences, Section of Mathematics, Technical University of Crete (3 hrs/wk), spring semester academic yrs 2005-06, 2008-09, 2009-10.
- **QUALITATIVE METHODS FOR SOCIAL SCIENCES**, graduate course *Social and Technological Development* Graduate Program, Section of Political Sciences, (3 hrs/wk), fall semester, yrs 2001-02, 2003-04, spring semester acad. yrs 2006-07, 2007-08, 2010-11, 2011-12.

- **Greek Open University,**

- **MATHEMATICS FOR INFORMATION THEORY I**, undergraduate course,  $\sigma\tau\omicron$  undergraduate program “*Information Technology*»: acad. year 2017-18.

- **MATHEMATICS I**, undergraduate course, academic yrs 2000-01, 2001-02, 2002-03, 2003-04, 2004-05, 2005-06, 2006-07, 2007-08, 2008-09, 2009-10, 2010-11, 2011-2012.
- **BASIC TOOLS AND METHODS FOR QUALITY CONTROL**, graduate course, academic yrs 2013-14, 2014-15, 2015-16, 2016-17.

### **Mediterranean Agronomic Institute of Chania (M.A.I.CH.)**

- **SPATIAL STATISTICS**, graduate course, Dept of Environmental Engineering for students coming from 14 different countries of the Mediterranean region October 2008, 2009, 2010, 2011, 2012, 2013, 2014.
- **STATISTICS**, graduate course, Dept of Environmental Engineering and Dept. of Food Quality Management and Chemistry of Natural Products, for students coming from 14 different countries of the Mediterranean region October 2011, 2012, 2013, 2014.

### **Department of Political Sciences, University of Crete.**

- **STATISTICS FOR THE SOCIAL SCIENCES**, (4 hrs/ wk), spring semester, academic yr 1999-2000.

### **Department of Electronics, S.E.L.E.T.E.**

- **MATHEMATICS III** (Differential Equations), (4 hrs/wk), fall semester, academic yrs 1999-2000, 2000-01.

### **Department of Engineering, S.E.L.E.T.E.**

- **NUMERICAL ANALYSIS** , (4 hrs/wk), fall semester, acad. yrs. 1998-1999.

### **Department of Mathematics, T.E.I. Athens.**

- **PROBABILITY-STATISTICS**, Dept of Information Technology (2 hrs/wk) academic yrs. 1998-1999.

### **Department of Information Technology, T.E.I. Athens.**

- **STATISTICS WITH THE USE OF S.P.S.S.**, Dept of Information Technology (3 hrs/wk), spring semester, academic yr. 1998-1999.

### **Department of Taxation, Sivitanidios institute (I.E.K.),**

- **MATHEMATICS OF FINANCE**, (3 hrs/wk), academic yr. 1999-2000.

### **Department of Finance, Sivitanidios institute (I.E.K.),**

- **STATISTICS**, (3 hrs/wk), fall semester, academic yr 1999-2000.

**Department of Mathematics, Case Western Reserve University, Cleveland Ohio, U.S.A., (4 hrs/wk)**

- **LINEAR ALGEBRA.**
- **MATHEMATICS OF FINANCE I & II**
- **CALCULUS FOR SCIENCE AND ENGINEERING I, IV**
- **MULTIVARIABLE CALCULUS.**
- **DIFFERENTIAL EQUATIONS**
- **PROBABILITY**
- **STATISTICS I.**
- **BASIC STATISTICS FOR THE SOCIAL SCIENCES**
- **MATHEMATICS I, II**

**Department of Mathematics, Case Western Reserve University, Cleveland Ohio, U.S.A.**

- **Computer Lab Assistant:** Teaching “Mathematica”, to undergraduate students, for the use in Calculus courses, Graduate School, Case Western Reserve University, academic yr **1992-93**.
- **Math Lab Assistant:** weekly tutoring to University’s undergraduate students. Graduate School, Case Western Reserve University, academic yr **1992-93**.
- **Tutor:** Tutoring Undergraduate students, Educational Support Services, Case Western Reserve University, academic yrs **1991-92**.

**Graduate Studies, Department of Mathematics, University of Patras. Tutoring (3 hrs/wk) on the following courses:**

- **SET THEORY**
- **OPERATIONAL RESEARCH**
- **STATISTICS**
- **STOCHASTIC PROCESSES**

during the academic years 1985-1986, 1986-1987.

**ACADEMIC ACTIVITIES**

1. Member of the organizing committee and referee of the 33<sup>rd</sup> Hellenic Conference on Mathematical Education, (Greek Mathematical Society) Chania, November 4-6 **2016**.
2. Member of a Ph.D dissertation (examination) committee, thesis title: «*Development of new geostatistical methods for spatial analysis and applications in reserves*»

*estimation and quality characteristics of coal deposits*», School of Mineral Resources (2016).

3. Member of entrance examinations committee, Technical University Of Crete, Departments of Environmental Engineering, Computer Science, Mineral Resources, Production and Management, acad. years **2008-09, 2009-10, 2010-11, 2011-12, 2012-13**.
4. Member of the electoral committee and the electoral body for electing the newly appointed professors among candidates, in the rank of Assistant Professor, in the cognitive objects of “Probability-Statistics”, Department Of Statistics and Actuarial Mathematics, University of Aegean (2010).
5. President of local organization committee and member of the organization committee of the 22<sup>nd</sup> Panhellenic (National) Statistics conference “*Statistics in Health*”, Chania, Crete **2009**.
6. Scientific advisor in the research “*Imprintings of cancer characteristics in Crete*” in cooperation with the Associate Professor of the Medical school of the University of Crete C. Lioni, the Assistant Professor of the Technical University of Crete D. Manousaki, and the Visiting Professor I. Apostolakis, of the National Public Health Institute. (2009).
7. Scientific advisor for the quantitative research “*Investigating the parameters of Academic and social function of the Technical University of Crete*”. The research was conducted in cooperation with I. Apostolakis, Visiting Professor of the National Public Health Institute. (2009).
8. Scientific advisor for the research “*Examination of parameters for the energy performance of school buildings in the region of Chania*” in cooperation with the Assistant Professor E. Maria of the Technical University of Crete, the Assistant Professor D. Kolokotsa of the Technical Educational Institute of Crete, and the Visiting Professor I. Apostolakis, of the National Public Health Institute. (2009 - 2010).
9. Organizer and main speaker of a series of lectures in the Seminar of the Dept of Sciences of the Technical University of Crete, titled “*Statistical analysis of data with the use of statistical packs*” for undergraduate and graduate students of the Technical University as well as for the members of the Academic community aiming at educating them on the usage of Statistical packs (SPSS and others.). Joint effort with I. Apostolaki, spring semester **2008**.
10. Substitute member of the electoral body for electing the newly appointed professors among candidates, in the rank of Lecturer, in the cognitive objects:
  - «Statistics»
  - «Probability»
  - «Actuarial Mathematics»

Dept of Statistics and Actuarial Mathematics, University of Piraeus (2008).

11. Organizer of weekly seminars for postgraduate students of the Dept of Mathematics, Case Western Reserve University, Academic yrs **1991-1993**.
12. One of the organizers and member of a 9 month seminar in “*Statistics for Mathematicians*”, Dept. of Mathematics. University of Patras, Academic yrs **1986-1987**.



## M.S. // Ph.D Thesis supervising

### Technical University of Crete – Department of Sciences/ Section of Mathematics

#### M.S. Thesis supervising -- Applied and Computational Mathematics Graduate Program

1. **A. Palieraki**, «*Applied Martingale Theory: 1. Random walks 2. Branching chains*», 2005-06.
2. **Kontakis Christos** “*Health Services in the metropolitan region of Municipality of Chania. Present situation and prospects*”, 2007-08.
3. **Viziraki Georgia** “*Assessment of banking institutions and their services in the Prefecture of Chania*”, 2007- 09.
4. **Strilakos Athanasios** “*Queuing theory: theory and real life problems*”, 2007-09.
5. **Rouvali Efi** “*Stochastic analysis and Finance*”, 2007-09.
6. **Manioudaki Katerina**, “*Discrete Stochastic Analysis: the pricing of options*”, 2008-09.
7. **Fasoula Eleni**, “*Open distance learning for health care professionals*”, 2008-10.
8. **Pantoula Vasiliki**, “*Examination of parameters for the energy performance of school buildings in the region of Chania*”, 2009-10.
9. **Vardoulaki Maria**, “*Stochastic models for the data analysis of survival*”, 2010-11.
10. **Verdi Dimitra** “*Stochastic models in Finance*”, 2010-11.
11. **Chalkiadakis Michalis** “*Analysis of random signals*”, 2012-13.
12. **Papadopoulou Georgia** “*Time series Analysis*”, 2012-13.

### Technical University of Crete – School of Production Engineering and Management

#### M.S. Thesis supervising

1. **Tsiligianni Anastasia** “*Statistical analysis of Greek child cancer registry*”, 2016- 17.
2. **Papadaki Angeliki** “*Landscape notions among Greek university students*”, 2016 -17.
3. **Kataki Fani** “*Stochastic differential equations in finance*”, 2016-17.
4. **Saricaki Argyro** “*Linear algebra and principal component analysis*”, 2017-2018.

5. **Milousi Maria**, “*Stochastic life cycle assessment and cost analysis in renewable energy systems*”, 2017- 18.
6. **Stratinakis Nikos**, “*Applied cluster Analysis*”, 2017-18 (in progress).

## **Technical university of Crete– School of Environmental Engineering**

### **A. Ph.D dissertation.**

1. **Pantoula Vasiliki**, “*Stochastic models of tumor growth*”, Ph.D thesis, 2014-2015 (in progress).
2. **Koniditsiotis Tasos**, «*Stochastic meteorology models*», Ph.D thesis, 2014-2015 (in progress).

### **B. Thesis supervising (undergraduate)**

1. **Kontos Zois** “*African dust*”, 2015-16.
2. **Xanthidou Chrisovalantou**, “*Noise: definition, sources and study of its effects to the human life*”, 2016-17 (in progress).
3. **Larashi, Loren**: “*Statistical Analysis of Atmospheric pollution data in the wider area of Athens*”, 2017-18.
4. **Tsiami, Maria**, “*Statistical analysis on hygiene and safety conditions of Greek enterprises: trends, perspectives and proposals*”, 2017-18.

C. Member of thesis examination committee for more than 30 graduate students: Department of Sciences, School Of Environmental Engineering, School Of Production Engineering and Management, Greek Open University.

## **Greek Open University**

### **M.S. Thesis supervising**

**A. Graduate Program: “Graduate studies in Mathematics”**. Dept. of Science and Technology

1. **Simitsis Christos**: “*Introduction to stochastic analysis of Finance: Black-Scholes formula*”, 2010-11.
2. **Sarafidi Evangelia** “*Probability distributions: examples, applications and relations between the distributions*”, 2010-11.
3. **Psaroudaki Eftihia** “*Brownian motion: theory and applications*”, 2011-12.
4. **Pefanis Pantelis** “*Derivatives – options’ strategies*”, 2012-13.

5. **Zafiri Anastasia:** *“Pricing options: the binomial model”*, 2012-13.
6. **Marougas Christos:** *«The mathematics of financial derivatives»*, 2013-14.
7. **Efstathiou Petros:** *«Financial Analysis and derivatives»*, 2013-14.
8. **Micha Eleni:** *«Futures and forwards: pricing and hedging»*, 2015-16.
9. **Touzopoulou Anastasia** *“Basic principles of signal and image processing”*, 2015-16.
10. **Stathatou Aikaterini** *“Introduction to stochastic integration in finance”*, 2016-17.
11. **Ledaki Maria**, *“Stochastic time series: theory and applications”*, 2017-18 (in progress).
12. **Laurentakis Antonios**, *“Stochastic integration and stochastic differential equations”*, 2017-18 (in progress).

#### **B. Graduate Program: “Quality Control”**

1. **Giannoukou Eleni:** *«Statistical analysis and efficiency indices on data of the production section of a pharmaceutical company»*, 2014-2015.
2. **Diolatzis Grigoris:** *«Statistical analysis on pilot’s training data»*, 2014-2015.
3. **Margoni Niki:** *«Statistical analysis in production of microwave radio systems»*, 2015-2016.
4. **Gitziri Evagelia:** *«An essay on the impact of social media on student’s behavior and character»*, 2015-2016.
5. **Karakatsanis Georgios:** *«The effect of local government’s financial management to the perceived quality of services provided to their citizens»*, 2015-2016.
6. **Skoura Penelopi:** *«ABC pricing: theory and applications»*, 2016-17 (in progress) .
7. **Demesoukas Ioannis** *“Samaria National Park: trends, interventions, and prospects”*, 2016-17.
8. **Dimou Panagiotis** *“Technology transfer of a pharmaceutical product”* , 2016-17.
9. **Tsilimbari Irimi** *“Development of a QA/QC system for air pollution monitoring station. Technical assessment according to ELOT EN ISO 17025”*, 2016-17.

## SCHOLARSHIPS/AWARDS

- **Exceptional Teaching Award of undergraduate students:** C.W.R.U.'s Greek System, Faculty Member of the month, Case Western Reserve University, Cleveland Ohio, U.S.A, November 1996.
- **Scholarship: Institution of Greek Government Scholarships (I.K.Y):** graduate studies (exceptional graduate progress) , acad. Yrs :  
1985-1986 και 1986-1987.
- **Scholarship: Institution of Greek Government Scholarships (I.K.Y):** Undergraduate studies (exceptional undergraduate progress), academic yrs  
1980-1981 (rank 9<sup>th</sup>),  
1981-1982 (rank 4<sup>th</sup>),  
1982-1983 (rank 1<sup>st</sup>),  
1983-1984 (rank 1<sup>st</sup>).

## PUBLICATIONS

### I. Published papers (in journals)

1. **I. Petidis, M. Aryblia, T. Daras, T. Tsoutsos**, “Energy saving and thermal comfort interventions based on occupants’ needs. A students’ residence building case”, *Energy and Buildings*, **174 (2018), 347-364**.
2. **M. Valavanides, T. Daras** “Definition and Counting of Configurational Microstates in Steady-State Two-Phase Flows in Pore Networks”, *Entropy* (2016), **18(2), 54**.
3. **T. Daras, M. Valavanides**, “Number of microstates and configurational entropy for steady state two-phase flows in pore networks”, *American Institute of Physics*, (2015), **V. 1641, pp. 147-154**.
4. **M. Tsitoura, T. Tsoutsos, T. Daras**, “Evaluation of comfort conditions in urban open spaces. Application in the island of Crete”, *Energy Conversion and Management*, (2014), **Vol 86, pp 250-258**.
5. **T. Daras**: “Large and moderate deviations for projective systems and projective limits”, *Applied Mathematics, Special issue: “Probability and its applications”*, (2012), **Vol. 3, No 12A, 2041-2047**.
6. **A. Chatzimichali, A. Zoumpouli, M. Metaxari, I. Apostolakis, T. Daras, N. Tzanakis, H. Askitopoulou**: “Heart Rate Variability May Identify Patients Who Will Develop Severe Bradycardia During Spinal Anesthesia”, *Acta Anaesthesiologica Scandinavica*, **1, (2010), 1-8**.
7. **T. Daras**: “Kolmogorov’s inequality for exchangeable r.v.’s”, *Far East Journal Of Theoretical Statistics*, **26, issue 2, (2008), 193-206**.
8. **T. Daras**: “Hoeffding type inequalities and their applications in Statistics and Operations Research”, *American Institute of Physics*, (2007), **936, 140-146**.
9. **T. Daras**: “Large Deviations for the Empirical Process of a Symmetric Measure”. *Statistics and Probability Letters*, **66, (2004) 197-204**.

10. **T. Daras:** “Large and Moderate Deviations for the Empirical Measure of an Exchangeable sequence”, *Statistics and Probability Letters*, **39**, (1998) **287-304**.
11. **T. Daras:** “Large and Moderate Deviations for the Trajectories of an Exchangeable sequence”, *Statistics and Probability Letters*, **36**, (1997) **91-100**.

## II. Papers in conference proceedings (refereed)

1. **Sarikaki A, Daras T. :** “Principal component analysis” , *31<sup>st</sup> Annual Conference, Greek Statistical Institute, (2018)*, May 4-6, Lamia – Greece.
2. **T. Daras, M. Valavanides :** “Number of microstates and configurational entropy for steady state two-phase flows in pore networks”, *MAXENT (2014)*, Amboise France.
3. **A. Tsouchlaraki, T. Daras, I. Apostolakis, V. Mantadaki** «Statistical investigation of the environmental quality parameters of the Municipality of Chania urban streets”, *Proceedings of the 3rd International CEMEPE & SECOTOX Conference Skiathos, June 19-24, 2011, ISBN 978-960-6865-43-5*
4. **T. Daras, D. Kolokotsa, E. Maria, I. Apostolakis :** “*Examination of parameters for the energy performance of school buildings in the region of Chania*”, 3rd International Conference on Passive and Low Energy Cooling for the Built Environment (PALENC 2010), Rhodes.
5. **T. Daras, M.A. Stamouli, I. Apostolakis:** “*Attitudes and behaviours of hospital administrative personnel for distance learning*”, Proceedings 5<sup>th</sup> International Conference in Open & Distance Learning, (2009), volume C, part A, 58-68, Athens
6. **A. Chantzimichali, I. Apostolakis,, T. Daras, E Askitopoulou:** “*Heart Rate Variability May Identify Patients Who Will Develop Severe Bradycardia During Spinal Anesthesia*” Part B, Proceedings, 11<sup>th</sup> National Conference in Management of Health and Social care Services (2009), Georgioupolis, Chania, pp. 52.
7. **G. Viziraki, T. Daras, I. Apostolakis:** “*Assessment of banking institutions and their services in the Prefecture of Chania*”, Proceedings, 22<sup>nd</sup> Annual Conference, Greek Statistical Institute, (2009), 65-74, Chania.
8. **A. Chantzimichali,, A. Zoumpouli, I. Apostolakis, T. Daras, E Askitopoulou:** “*Heart Rate Variability and Severe Bradycardia During Spinal Anesthesia*”, Proceedings, 22<sup>nd</sup> Annual Conference, Greek Statistical Institute, (2009), 259-268, Technical university of Crete, Chania.
9. **T. Daras:** “*Bernstein’s inequality and its applications*”, Proceedings, 12<sup>th</sup> Mathematical Analysis conference (2008), Dept of Mathematics, University of Athens.
10. **I. Apostolakis, T. Daras:** “*Electronic Trade Services in enterprises of Municipality of Chania*”, 21<sup>st</sup> Annual Conference, Greek Statistical Institute, Proceedings, (2008), University of Aegean, Samos.

11. **T. Daras, A. Palieraki** : “*Probability of extinction and branching chains*”, 20<sup>th</sup> Annual Conference, Greek Statistical Institute Proceedings (2007), 137-146, University of Cyprus.
12. **T. Daras**: “*Exponential type inequalities and Martingales*”, Proceedings, 11<sup>th</sup> Annual Mathematical Analysis conference (2006), Dept. Of Mathematics, University of Thessaloniki..
13. **T. Daras, A. Palieraki**: “*Branching chains and their applications*”, Proceedings, 22<sup>nd</sup> Annual conference, Greek Mathematical Society (2005), T.E.I. Lamia .
14. **T. Daras**: “*Martingales and exchangeable sequences of r.v.s*”, 18<sup>th</sup> Annual Conference, Greek Statistical Institute Proceedings, (2005), 89-98, University of Aegean,, Rhodes.
15. **T. Daras**: “*Projective systems, projective limits, large and moderate deviations*”, Proceedings, 10th Mathematical Analysis conference, (2004), 41-48, Athens.

### III. Papers in progress

**E. Maria, T.Daras**:: “*Landscape notion among Greek university students*”, (to be published).

### IV. Published books

1. **T. Daras - P. Sypsas**: “*Stochastic Processes - Theory and Applications*”, Ziti Publ. , 2003
2. **I. Apostolakis - T. Daras – M.A. Stamouli**: “*Computational Statistics problems for health Sciences, Multivariable models*”, book B, Papazisis Publ., February 2009.
3. **T. Daras – P. Sypsas**: “*Probability and Statistics: Theory and Applications*”, Ziti Publ. , 2010.

### VI. Alternative forms of teaching material.

1. **T. Daras**: “*Statistics*” Book in the form of webcast, Graduate program “Graduate Studies in Mathematics”, Greek Open University, (February 2008). Material for the graduate course “*Basic theories and methods in Mathematics*”.
2. **T. Daras**: “*Probability Theory – Statistics*” Book in the form of hypertext, Graduate program “Graduate Studies in Mathematics”, Greek Open University (August 2007). Material for the graduate course “*Basic theories and methods in Mathematics*”.

### VII. Undergraduate teaching notes

1. “*Probability – Statistics* ” Dept of Electronic and Computer Engineering, Technical University of Crete, October 2000.

2. “*Statistics*” Dept. of Political Science , University of Crete, May **2000**.
3. “*Statistics*” Dept of Environmental Engineering, Technical University of Crete, April **2000**.
4. “*Stochastic Processes – Queuing theory*” Dept of Electronic and Computer Engineering, Technical University of Crete, (**2000**).
5. “*Mathematics*”, Dept of Electronics, S.E.L.E.T.E , October **1999**.
6. “*Statistics*” Dept of Finance, Sivitanidios institute (I.E.K.), Fall **1999**.
7. “*Statistics*” , Dept of Information Technology, T.E.I. Athens, Fall **1998**.
8. “*Mathematics of Finance*” Dept of Taxation, Sivitanidios institute (I.E.K.), Fall **1998**.

### **Participation in Research projects**

1. ΕΣΠΑ 2014-2020, Interreg MED, Compose, code 81336, Testing, Activity 3.11 Biomass potential in rural island communities (Case of Anogia- Crete) (**2017 και 2018**).
2. Archimedes III, participation in -«*ImproDeProF*: Two-Phase Flow in Pore Network Systems, M Valavanides, Assistant Professor, Department of Civil Infrastructure, Ref. No. TEI-Athens 23.59.6.
3. ΕΠΕΑΕΚ II (European community program), “*Reformation of the undergraduate program of the Technical university of Crete*”. Reformation of the content, way of teaching e.t.c. of the undergraduate course “*Probability*”, use of e-class e.t.c., (**2008**), Dept. of Sciences, Technical University of Crete.
4. ΕΠΕΑΕΚ II (European community program), “*Reformation of the undergraduate program of the Technical university of Crete*”. Reformation of the content, way of teaching e.t.c. of the undergraduate course “*Statistics*”, use of e-class e.t.c., (**2008**), Dept. of Sciences, Technical University of Crete.
5. **T. Daras**: “*Statistics*” Book in the form of webcast, Graduate program “Graduate Studies in Mathematics”, Greek Open University, (**February 2008**). Material for the graduate course “*Basic theories and methods in Mathematics*”. ΕΠΕΑΕΚ (European community program)
6. **T. Daras**: “*Probability Theory – Statistics*” Book in the form of hypertext, Graduate program “Graduate Studies in Mathematics”, Greek Open University (**August 2007**). Material for the graduate course “*Basic theories and methods in Mathematics*”. ΕΠΕΑΕΚ (European community program)

### **GRADUATE PROGRAM EVALUATION**

Member of an evaluation committee (Cyprus Ministry of Education), for the graduate programs:

1. Environmental Impacts Assessment and Sustainability Management - Neapolis University Pafos.
2. Master of Science in Environmental Management and Environmental Education - University of Nicosia.

Cyprus, 2017.

## **SEMINAR LECTURES**

### **Department of Sciences Seminars** (Dept. of Sciences, Technical University of Crete)

(2001) “Convolution of measures and its applications”.

(2000) “Large deviations theory, law of large numbers, and its applications in Statistics”.

### **Probability and Stochastic Processes Seminar** (Case Western Reserve University)

(1997) “Large Deviations for the Empirical Process of a Symmetric Measure”.

(1994) “Moderate Deviations for the Trajectories of an Exchangeable sequence”.

(1993) “Large Deviations for the Trajectories of an Exchangeable sequence”.

(1993) “Moderate Deviations for the Empirical Measure of an Exchangeable sequence”.

(1993) “Large Deviations for the Empirical Measure of an Exchangeable sequence”.

(1992) “Large Deviations for Stationary Gaussian Processes”.

### **Analysis Seminar** (Case Western Reserve University)

(1995) “Exchangeability and related topics”

### **Analysis on Groups Seminar** (Case Western Reserve University)

(1992) “Isomorphism theorems (ergodic theory), Entropy”.

### **Nonstandard Analysis Seminar** (Hall University, Hall England)

(1986) “Boolean Ultrapowers”.

### **Mathematics Seminar** (Department of Mathematics, University of Patras)

(1987) “Introduction to Non-Standard Analysis and some generalizations”.

(1986) “Markov chains and Music”.

(1986) “Boolean Powers”.

### **Greek Mathematical Society Seminars** (Patras’ section)

(1987) “Non-Standard Analysis and its applications”.

## **OTHER SEMINAR LECTURES –PARTICIPATION**

1. “Number of microstates and configurational entropy for steady state two-phase flows in pore networks”, *MAXENT* (2014), Amboisse France.



2. «*Examination of parameters for the energy performance of school buildings in the region of Chania*», 3rd International Conference on Passive and Low Energy Cooling for the Built Environment (PALENC 2010), Rhodes.
3. “*Attitudes and behaviours of hospital administrative personnel for distance learning*”, 5<sup>th</sup> International Conference in Open & Distance Learning, (2009), Athens.
4. “*Bernstein’s inequality and its applications*”, 12<sup>th</sup> Mathematical Analysis conference (2008), University of Athens.
5. “*Electronic Trade Services in enterprises of Municipality of Chania*”, 21<sup>st</sup> Annual Conference, Greek Statistical Institute, (2008), University of Aegean, Samos.
6. “*Probability of extinction and branching chains*”, 20<sup>th</sup> Annual Conference, Greek Statistical Institute (2007), University of Cyprus.
7. “*Exponential type inequalities and Martingales*”, 11<sup>th</sup> Annual Mathematical Analysis conference (2006), Dept. Of Mathematics, University of Thessaloniki..
8. “*Branching chains and their applications*”, 22<sup>nd</sup> Annual Conference Greek Mathematical Society, (2005), Lamia.
9. “*Martingales and exchangeable sequences of r.v.s*”, 18<sup>th</sup> Annual Conference, Greek Statistical Institute (2005), University of Aegean, Rhodes.
10. “*Large and moderate deviations for projective systems and projective limits*”, 10<sup>th</sup> Mathematical Analysis conference, (2004), Athens.
11. American Mathematical Society Annual Meeting, University of Wisconsin, WI, USA (1993)
12. Midwest Probability Colloquium, Northwestern University, Evanston IL, USA (yrs 1989-1996).
13. Nonstandard Analysis Conference, \_Hall University, Hall England) (1986).

## **FOREIGN LANGUAGES**

Excellent command of the English language

## **CITATIONS (part)**

- **Definition and Counting of Configurational Microstates in Steady-State Two-Phase Flows in Pore Networks**
  1. Savani I., Berdaux D., e.t.c., “Ensemble distribution for immiscible two phase flow in porous media”, Savani I., Berdaux D., e.t.c., Physical review, E95, 2017.
  2. Savani I., Berdaux D., e.t.c., “Ensemble distribution for immiscible two phase flow in two-dimensional networks” , Physical review, E95, 2017.

3. M. Valavanides, “Oil fragmentation, interfacial surface transport and flow structure maps for two-phase flow in model pore networks: predictions based on DeProF model situations”, *Oil and Gas science and Technology*, 2018
  4. M. Valavanides, “Review of two steady-state two phase flow in porous media: independent variables, universal energy efficiency map, critical flow conditions, effective characterization of flow and pore network”, *Transport in Porous Media*, 2018.
- **Evaluation of comfort conditions in urban open spaces: applications in the island of Crete.**
    1. R.F Rupp, N.G. Vásquez, R Lamberts, “A review of human thermal comfort in the built environment”, *Energy and Buildings*, 2015.
    2. F Salata, I Golasi, A de Lieto Vollaro, “How high albedo and traditional buildings' materials and vegetation affect the quality of urban microclimate. A case study”, *Energy and Buildings*, 2015.
    3. S Cocco, J Kämpf, JL Scartezzini, D Pearlmutter, “Outdoor human comfort and thermal stress: A comprehensive review on models and standards”, *Urban Climate*, 2016.
    4. N Kántor, A Kovács, Á Takács, “Seasonal differences in the subjective assessment of outdoor thermal conditions and the impact of analysis techniques on the obtained results”, *International journal of biometeorology*, 2016.
    5. A Abbasi, C Alalouch, G Bramley, “Open space quality in deprived urban areas: user perspective and use pattern”, *Procedia-Social and Behavioral Sciences*, 2016.
    6. M Tsitoura, M Michailidou, T Tsoutsos, “Achieving sustainability through the management of microclimate parameters in Mediterranean urban environments during summer”, *Sustainable Cities and Society*, 2016.
    7. S Lenzholzer, W Klemm, C Vasilikou, “Qualitative methods to explore thermo-spatial perception in outdoor urban spaces”, *Urban Climate*, 2016.
    8. M Tsitoura, M Michailidou, T Tsoutsos, “A bioclimatic outdoor design tool in urban open space design”, *Energy and Buildings*, 2017.
    9. M Tsitoura, M Michailidou, T Tsoutsos, “Achieving sustainability through the management of microclimate parameters in Mediterranean urban environments during summer”, *Sustainable Cities and Society*, 2016 .
    10. P Ampatzidis, “From building unit to building block-Measures to improve energy efficiency in a typical urban residential built environment”, *International Hellenic University repository*, 2017.
    11. S Lenzholzer, W Klemm, C Vasilikou, “Qualitative methods to explore thermo-spatial perception in outdoor urban spaces”, *Urban Climate*, 2016
    12. O Potchter, P Cohen, TP Lin, A. Matzarakis, “Outdoor human thermal perception in various climates: A comprehensive review of approaches, methods and quantification”, *Science of The Total Environment*, 2018.
    13. M Makropoulou, A Gospodini, “Urban Form and Microclimatic Conditions in Urban Open Spaces at the Densely Built Centre of a Greek City”, *Journal of Sustainable Development*, 2016.

14. I Golasi, F Salata, E de Lieto Vollaro, M Coppi, “Complying with the demand of standardization in outdoor thermal comfort: A first approach to the Global Outdoor Comfort Index (GOCI)”, *Building and Environment*, 2017.
  15. S Mumcu, S Yilmaz, “Seating Furniture in Open Spaces and Their Contribution to the Social Life”, *Environmental Sustainability and .....*, 2016.
- **Heart rate variability may identify patients who will develop severe bradycardia during spinal anesthesia**
    1. Francesco Riganello, “Heart Rate Variability and the Two-way Interaction Between Cns and the Central Autonomic Network”, *Exp Clin Cardiol*, Vol 20, 5584-5595 / 2014.
    2. Bidaki R, Mirhosseni H and Avare R, “ Breakneck Bradycardia Pursuant to Spinal Anesthesia: A Report of Two Cases”, *Anesthesia and Clinical research*, 2011 .
    3. A. T. Mazzeo, E. La Monaca, R. Di Leo, G.Vita, L. B. Santamaria, “Heart rate variability: a diagnostic and prognostic tool in anesthesia and intensive care”, *Acta Anaesthesiol Scand* 2011; 55: 797–811.
    4. Ivana I. Vranic, “Signaling prodromes of sudden cardiac death”, *Bosnian journal of basic medical sciences*, 13(1):44-9, 2013.
    5. Lei Sun, Chao Huang, Yan Shen, Hang Chen, “Pulse Transit Time Variability Predicts Severe Hypotension after Spinal Anesthesia for Elective Cesarean Delivery” , *Advanced Material Research*, 2013, 2208-2213.
    6. Gernot Ernst, “Perioperative Care”, Chapter, January 2014, In book: *Heart Rate Variability*, pp.207-216.
    7. Alia S Dabbous, Mabelle C Baissari, Patricia W Nehme, Ahmad M Abu Leila “Perioperative reflex bradycardia and cardiac arrest”, *Middle East journal of anaesthesiology* 22(4):353-60, 2014.
    8. Alia S Dabbous, Mabelle C Baissari, Patricia W Nehme “Perioperative Reflex Bradycardia and Cardiac Arrest”, *International Journal of Clinical Pharmacy*, MEJA 22(4) 353-362, 2014 .
    9. Su Hyun Lee, Dong Hoon Lee, Dong Hoon Ha, Young Jun Oh, “Dynamics of heart rate variability in patients with type 2 diabetes mellitus during spinal anaesthesia: Prospective observational study”, *BMC Anesthesiology* 15(1), 2015.
    10. Maowei GongMaowei GongYuanyuan ManYuanyuan ManQiang FuQiang Fu, “Incidence of bradycardia in pediatric patients receiving dexmedetomidine anesthesia: a meta-analysis”, *International Journal of Clinical Pharmacy*, 2017, V39, 139-147.

- ***Large and moderate deviations for the empirical measures of an exchangeable sequence***
  1. Eichelsbacher P., Schmock U. “Exponential approximations in completely regular topological spaces and extensions of Sanov’s theorem”, *Stochastic Processes and their Applications*, V2 (1998), pp 233-251.
  2. Eichelsbacher P., Schmock U. “Large deviations for products of empirical measures of dependent sequences”, *Markov Processes and related fields*, Vol. 7, No 3 (2001), pp 435-468.
  3. Chen J., “Large deviations for exchangeable observations with Applications”, *International Journal of Mathematics and Mathematical Sciences*, V55 (2004), pp 2947-2958.
  4. Wu L., “Large deviation principle for exchangeable sequences: necessary and sufficient condition”, *Journal of Theoretical Probability*, V 17, No 4 (2004), pp 967-978.
  5. Ma Y., Song Q., Wu L., “Large deviation principle with respect to the  $\tau$ -topology for exchangeable sequences: necessary and sufficient condition”, *Statistics and Probability Letters*, V77, No 3, (2007), pp 239-246.
  6. Efficient Monte Carlo For Neural Networks With Langevin Samplers, L. A. Breyer, M. Piccioni, Jan 2001 · *Stochastic Processes and their Applications*.
  7. Large Deviation Principle for Exchangeable Sequences: Necessary and Sufficient Condition, L. Wu, *Journal of Theoretical Probability* 17(4):967-978 · October 2004.
- ***Large deviations for the empirical process of a symmetric measure: a lower bound***
  1. Ma Y., Song Q., Wu L., “Large deviation principle with respect to the  $\tau$ -topology for exchangeable sequences: necessary and sufficient condition”, *Statistics and Probability Letters*, V77, No 3, (2007), pp 239-246.
  2. Large Deviation Principle for Exchangeable Sequences: Necessary and Sufficient Condition, L. Wu, *Statistics and Probability Letters* 77(3):239-246 · February 2007.
- ***Trajectories of exchangeable sequences: Large and moderate deviations results***

Chen J., “Large deviations for exchangeable observations with Applications”, *International Journal of Mathematics and Mathematical Sciences*, V55 (2004), pp 2947-2958.