

George M. Dimakos

Associate Professor

Department of Primary Education

National & Kapodistrian University of Athens

Navarinou 13A, 1st floor, Athens

Tel. +302102103688068, +302103688065

Fax: +302103688068

e-mail: gdimakos@primedu.uoa.gr

Academic Qualification

1996: Doctoral Dissertation, entitled "Education, Productivity, Social & Economic Development of Greece for the period 1961-1991", Dept. of Primary Education, National Kapodistrian University of Athens

1978: Full-time Postgraduate Certificate in Management, Athens University of Economics & Business.

1970: BSc in Mathematics, Department of Mathematics, National Kapodistrian University of Athens

Publications in peer reviewed international scientific journals

G. Dimakos, E. Nikoloudakis, S. Ferentinos, E. Choustoulakis, "The role of examples in Cognitive Apprenticeship", *Quaderni di Ricerca in Didattica Matematica (QRDM)*, Issue 20, (p.161-173), 2010.

G. Dimakos, E. Nikoloudakis, "Analyzing the Role of Shapes in the Process of Writing Proofs in Model of p-m Combinations". *The Teaching of Mathematics*, Volume 12, Issue 1, (p.15-24), 2009.

G. Dimakos, A. Karantzi, "Optimal Stopping Time for Stochastic Processes in Continuous Time: An Application to the Employer's Profile Formation Option". *Advances in Nonlinear Variational Inequalities*, Volume 12, Issue 1, (p.1-16), 2009.

G. Dimakos, E. Nikoloudakis, "Teaching Euclidean Geometry Using a Synthesis by Two Well Known Theories: Van Hiele's Theory and Cognitive Apprenticeship". *Far East Journal of Mathematical Education*, Volume 2, Issue 2, (p.187 – 217), 2008.

G. Dimakos, A. Karantzi, "Numerical Procedure of Addressing the Optimal Stopping Time of Employer's Profile Formation Option". *Far East Journal of Applied Mathematics*, Volume 33, Issue 1, (p. 121 – 140), 2008.

G. Dimakos, A. Karantzi, "Optimal Stopping Time for Stochastic Processes: An Application to the Employee's Profile Formation Option". *Panamerican Mathematical Journal*, Volume 18, Issue 3, (p.1-13), 2008.

G. Dimakos, "Derivation of LA-groups from finite groups". *Far East Journal of Mathematical Sciences (FJMS)*, Volume 26, Issue 1, (p. 155 – 167), July 2007

G. Dimakos, E. Nikoloudakis, S. Ferentinos, E. Choustoulakis. "Developing a Proof-Writing Tool for Novice Lyceum Geometry Students". *The Teaching of Mathematics*, Vol. 10, Issue 2, (p. 87 -106), 2007.

Publications in International Conferences

G. Dimakos, E. Choustoulakis, Measuring Motivational Characteristics of Courses in Economic Education: Applying ARCS Model to a Web-Based Course in Financial Mathematics", International Scientific Conference "eRA-5", The SynEnergy Forum, Piraeus, Greece, 2010.

G. Dimakos, E. Choustoulakis, Critical points on the use of Cost-Effectiveness analysis to assess the role of ICT in modern education, Workshop on Informatics in Education (WIE) 2010 in conjunction with the 14th Panhellenic Conference on Informatics (PCI) 2010, Department of Informatics, Ionian University, Department of Informatics, University of Piraeus, and the Greek Computer Society, Tripolis, Greece, 2010.

G. Dimakos, N. Zaranis, S. Tsikopoulou, "Developing appropriate technologies in teaching axial symmetry in compulsory education", Workshop on Informatics in Education (WIE) 2010 in conjunction with the 14th Panhellenic Conference on Informatics (PCI) 2010, Department of Informatics, Ionian University, Department of Informatics, University of Piraeus, and the Greek Computer Society, Tripolis, Greece, 2010.

D. Dimakos, C. Chomata, "The application of over-education on the job of greek economists", Workshop on Informatics in Education (WIE) 2010 in conjunction with the 14th Panhellenic Conference on Informatics (PCI) 2010, Department of Informatics, Ionian University, Department of Informatics, University of Piraeus, and the Greek Computer Society, Tripolis, Greece, 2010.

G. Dimakos, E. Nikoloudakis, "Teaching Euclidean Geometry using Learning Objects", Workshop on Informatics in Education (WIE) 2009 in conjunction with the 13th Panhellenic Conference on Informatics (PCI) 2009, Department of Informatics, Ionian University and Department of Informatics, University of Piraeus, Corfu Island, Greece, 2009.

G. Dimakos, C. Chomata, "Effects of Unemployment on Wages and Overeducation", Workshop on Informatics in Education (WIE) 2009 in conjunction with the 13th Panhellenic Conference on Informatics (PCI) 2009, Department of Informatics, Ionian University, and Department of Informatics, University of Piraeus, Corfu Island, Greece, 2009.

G. Dimakos "The Integer Programming", accepted in the Proceedings of the Scientific Conference RU "Angel kanchev", 2007

A. Dounavis, G. Dimakos, "Intuitive Difficulties of the Concept of Irrational Numbers in the Secondary Education", Proceedings of the 5th Mediterranean conference on Mathematics Education, (p. 607-624), Rhodes, 2007.

G. Dimakos, A. Tsigoni, "A History of statistics in the last 100 years", Proceedings of the 34th Conference of the Bulgarian Mathematical Union "Mathematics and Education in Mathematics", (σελ. 219-226), Sofia, 2005.

E. Deliyianni, A. Gagatsis, G. Dimakos, "The interaction between conceptual and figural components of geometrical figures", Proceedings of the 4th Mediterranean conference on Mathematics Education, (p. 175-186), Palermo, 2005.

C. Tsamadias, G. Dimakos, "Mathematical Capital: An Economic Approach", Proceedings of the 33rd Conference of the Bulgarian Mathematical Union: "Mathematics and Education in Mathematics", (σελ. 114-119), Sofia, 2004.

Chapters in books

G. Dimakos, A mathematical model for the initial digit of random numbers, Volume in honour of Prof. Theodoros Exarhakos, (pp. 615-621), Athens, 2006.

G. Dimakos, The reciprocal interaction of theory and practice: the scientific work of Leonid Vitalievitch Kantorovitch", Volume in honour for Prof. G. Leotsinis, Athens, 2007.

F. Paraskeva, G. Dimakos, ICT in Education: Active Learning and Practice Communities, in book "Themes of introductory education for in-service teachers, Editor E. Makri, YPEPTH, Pedagogical Institute, pp. 15-23, Athens, 2007.

Books

G. Dimakos, K. Brouhoutas, Methodology of Arithemtical Problem Solving, for the students of Department of Primary Education, Athens, 2005.

G. Dimakos, Economics of Education, for the students of Department of Primary Education, Athens, 2004.

Euclides Elements, vol. I & II, Number Theory, books VII, VIII, IX, X, Co-ordinator of 3rd workgroup with P. Vlamos, G. Baralis, A. Dounavis, 2001.

History of Greek Mathematicians, Volume I & II, Editorship and commenting in Greek of the foundational work, "A History of greek Mathematics" vol I - II by Sr Thomas Heath, . 2001.

Textbook of Geometry for the 2nd class of Lyceum, Co-authors: A. Alibinisis, P. Drakopoulos, A. Kyriazis, A. Tassopoulos, 1990-91.

Textbook of Geometry for the 1st class of Lyceum. Co-authors: A. Alibinisis, T. Exarhakos, D. Kontogiannis, N. Dounavis, G. Tassopoulos, . 1989-90.

G. Dimakos, N. Dounavis, "Plain Geometry", Athens, 1976.

Research Interests

Research interests include Mathematics, focusing on mathematical modelling, mathematical problem solving methods, and application of economic models in education. He has worked on the optimal stopping time for stochastic processes in continuous time and their applications in mathematics and education. He has also investigated the role of modern instructional theories and learning approaches in the Didactics of Mathematics. In particular, he has worked on the implications of modern educational technologies and ICT on the teaching and learning of proof, on the intuitive difficulties of the concept of irrational numbers in secondary education, and on the development of appropriate technologies in teaching axial symmetry. He has also investigated the contribution of education in economic growth, focusing on the aspects of economic growth, productivity, economic evaluation, cost-effectiveness analysis, and overeducation. He is also supervisor of Doctoral dissertations, whose main research interests are on the field of Mathematics, and Economics of Education. Also, he has participated as educational and researcher consultant in numerous research projects and studies.

Teaching Experience

Mathematics I, Mathematics II, Economics of Education. Mathematical Models, Productivity, Development of Education, Economic Growth and Social Prosperity, Dept. of Primary Education, National & Kapodistrian University of Athens, 2002-2007.

Historical Evolution of Mathematical analysis from the ancient times till today", Postgraduate Programme, Dept. of Primary Education, National & Kapodistrian University of Athens, 2002 till now..

Human Resources Development, Postgraduate Programme "Educational Technology & HRD", Dept. of Primary Education, National & Kapodistrian University of Athens in conjunction with Dept. of General Mathematics, TEI of Piraeus, Spring semester, 2008-2009.

Formal Rational and Axiomatic Foundation, Postgraduate Programme, Dept. of Primary Education, National & Kapodistrian University of Athens, 1998-2002.

Academic Positions

Associate Professor, Postgraduate Programme, Dept. of Primary Education, National & Kapodistrian University of Athens, 2009 till now.

Assistant Professor, Dept. of Primary Education, National & Kapodistrian University of Athens, 2002-2009.

Lecturer, Dept. of Primary Education, National & Kapodistrian University of Athens, 1998-2002.

Teacher in Secondary Education, 1985-1998

Director of post-secondary educational institutes of Elefsina. and Ag. Demetrios, 1982-1986.

Participation in Research & Educational Projects

“Teaching of Proof in students of first class of Lyceum”, Project funded by University of Athens.

Member of the Committee for the coordination of Program of Postgraduate Studies in “Educational Technology and Human Resources Development”, offered by the Dept. of Primary Education, University of Athens in collaboration with the general Department of Mathematics of TEI of Piraeus.

"Archimides", TEI of Athens, Person in charge of scientific committee for the configuration of mathematic model of evaluation of Technological Institutions, 2004-2007.

Scientific coordinator on behalf of HMS in "Evdoxos", EPEAEK, Distance learning of educators in secondary education, Participating partners: University of Piraeus, Aegean University, Hellenic Mathematical Society.

“Mathematics using Multimedia”, EPEAEK,

Supervisor of Doctoral Dissertations

Emmanouil Nikoloudakis, “Instructional models and the ways of interaction of professor and students in the Teaching of Mathematics”

Athina Karantzi, "Optimal stopping times and applications in educational mathematical models”.

Antonis Dounavis, " The role of asymmetry and irrationality in the growth of more appropriate scientific knowledge and its contribution to the content and the teaching of Mathematics in Secondary Education "

Stami Tsikopoulou, “The comprehension of geometric notions: mediations, representations in a historical retroaction”

Citations

Sami H. Ali , Sabiha Q. Merchant, "Kinetics of the esterification of acetic acid with 2-propanol: Impact of different acidic cation exchange resins on reaction mechanism", International journal of chemical kinetics, vol. 38, p.593-612, 2006.

Hamid R. Radfarnia, Cyrus Ghotbi, Vahid Taghikhani and Georgios M. Kontogeorgis, "A modified free-volume-based model for predicting vapor–liquid and solid–liquid equilibria for size asymmetric systems", *Fluid Phase Equilibria*, Vol. 234, No.1-2, p.94-100, 2005.

Nuno Pedrosa, Jun Gao, Isabel M. Marrucho, João A. P. Coutinho "Orrelation Of Solvent Activities In Polymer Solutions: A Comparison Of Models", *Fluid Phase Equilibria*, Vol. 219, Issue 2, p.129-138, 28 May 2004.

Irene Kouskoumvekaki, "A Predictive Equation of State for Paints", *Graduate School Yearbook* , p.71, 2003

Reviewer of Scientific Journals

Member of the Editorial Board of International Scientific Journal “Mediterranean Journal for research in Mathematics Education” published by the Cypriot Mathematical Society .

Member of Editorial Advisory Board of International Scientific Journal “The Teaching of Mathematics”, published by the Mathematical Society of Servia.

President of the Editorial Board of school mathematical journal for primary education “Mikros Eykleidis”, published by Hellenic Mathematical Society

Member of the Editorial Board of journal “Eykleidis C”, Μέλος της Συντακτικής Επιτροπής του περιοδικού της Ε.Μ.Ε., Ευκλείδης Γ’, published by Hellenic Mathematical Society

Member of the Editorial Board of journal “Mathematical Review”, published by Hellenic Mathematical Society”.

Member of Scientific Committee of Conferences

Member of the Scientific and Organizing Committee of more than 20 conferences held in Greece by Hellenic Mathematical Society, and other Scientific Organizations.

Academic & Social Activity

Official Representative of Greece in International Commission on Mathematical Instruction (ICMI), suggested by the former President of Academy of Athens, Professor an Academic Mr. Nicolaos Artemiadis, 2009-2011

General Secretary of Mathematical Society of South Eastern Europe (M.A.S.E.E), 2002-2006.

Member of the Committee of Pedagogical Institute for the design of the Framework of National Curriculum of Mathematics

President of the Scientific and Organizing Committee of the Student Mathematical Contest “Mathematics and Play”, for students of primary school

Member of HMS since 1970

General Secretary of Board of HMS, 1985-1987, 1987-1989.

Vice-president of Board of HMS, 1989-1991, 1993-1995, 1995-1997, 1997-1999, 2001-2003, 2003-2005, 2005-2007.

President and Vice-president of the Research Centre for the Assessment and Education of HMS aiming at: Teachers Education, Didactics of Mathematics, European Funded Programmes, Mathematics in Primary School, 1994-2007.

Vice-president of the 45th International Mathematical Olympiad (45th IMO), Athens, July, 4-18, 2004.