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## **PROFILE**

Undergraduate Studies in Mathematics at the Aristotelian University of Thessaloniki, Greece (B.A. Department of Mathematics, Faculty of Sciences, 1973). Graduate studies in Didactic of Mathematics at the University Louis Pasteur of Strasbourg, France (Department of Mathematics), (DEA Didactics of Mathematics, 1980, Ph.D. Didactics of Mathematics, 1982). Postdoctoral research at the same University (1982-83). Lecturer and Assistant Professor in Didactics of Mathematics at the University of Thessaloniki, Department of Mathematics (1983-1996). Associate Professor (1996-2002) and Professor (2002-today) in Didactics of Mathematics at the University of Cyprus. Dean of the Faculty of Social Sciences and Education, University of Cyprus (2006-2010). Vice-Rector of Academic Affairs, University of Cyprus (2010-today) and also, visiting Fellow at European Universities.

Member of the Editorial Board of International Journals in Didactics of Mathematics, such as Educational Studies in Mathematics, Scientia Paedagogica Experimentalis, La matematica e la sua didattica, Annales de Didactique de Mathématiques.

Research Interests: representations in the learning of mathematics, the role of pictures in problem solving, representations in the understanding of functions, History of Mathematics Education, epistemological - didactical and ontogenetic obstacles in the learning of mathematics, transition from elementary to secondary education with respect to mathematics learning.

## ○ **EDUCATION**

Thèse de Doctorat en Didactique des Mathématiques, Louis Pasteur de Strasbourg, France (Department of Mathematics), 1982 (French government scholarship)

DEA en Didactique des Mathématiques, Louis Pasteur de Strasbourg, France (Department of Mathematics), 1980 (Aristotle University Scholarship)

Degree in Mathematics, Aristotle University of Thessaloniki, Greece, 1973 (Greek government scholarship) (Class: Excellent)

Secondary School Leaving Certificate, 1968 (Grade: Excellent)

## ○ **PROFESSIONAL EXPERIENCE**

### **Academic positions held**

**2002-today** Professor of Mathematics Education, Department of Education, University of Cyprus, Cyprus

**1999-2001** Associate Fellow, Faculty of Education, Brunel University, Great Britain

**1998-2005** Visiting Fellow, Faculty of Education, University of Warwick, Great Britain

**1996-2002** Associate Professor, Department of Education, University of Cyprus, Cyprus

**1993** Visiting Fellow, Faculty of Education, University of Veliko Tirnovo, Bulgaria

**1992-1996** Visiting Fellow, Faculty of Education, Roehampton Institute, London, Great Britain

**1983-1996** Lecturer, Assistant Professor, Department of Mathematics, Aristotle University, Thessaloniki, Greece

**1982-1983** Postdoctoral Researcher, Louis Pasteur de Strasbourg, France (French government scholarship)

**1975-1983** Research and Teaching Assistant, Department of Mathematics, Aristotle University, Thessaloniki, Greece

### **Administration and other positions held**

**2010 – Today** Vice-Rector of Academic Affairs, University of Cyprus

**2008-Today** President of the Scientific Council of the Cyprus Pedagogical Institute

**2007-Today** Interim Chairman of the Department of Law

**2006-2010** Dean of the Faculty of Social Sciences and Sciences of Education, University of Cyprus

**2006, 2005, 2001** Leader of the Cypriot Olympic Team of 12-13 year-old pupil in International Mathematics Competition at Bali, Indonesia, 2006, in Philippines, 2005 (PEMIC. Philippine Elementary Mathematics International Contest 2005) and Hong-Kong, 2001.

**2001-Today** Vice President of the Cyprus Mathematical Society, Cyprus

**2000-2004** Chairman of the Department of Education, University of Cyprus

**2000-2004** President of the Cyprus Pedagogical Association

**1996-2000** Vice-chairman of the Department of Education, University of Cyprus

## ○ RESEARCH

### Research programs

#### ▪ **Spatial Ability and Geometrical Thinking Development.**

Medium Size Research Project, University of Cyprus, (Cyprus), Funding: University of Cyprus (Principal Investigator) (2010-2012).

#### ▪ **Representation: The role of representation in learning functions and geometry in the concept of the shift from the lower secondary education (gymnasium) to the upper second education (lyceum).**

A research project of the IPE (Institute of Research – Cyprus). (Principal Investigator) (2008-2011).

#### ▪ **The functioning of representations in mathematics education with respect to the shift from elementary to secondary education**

Medium Size Research Project, University of Cyprus, (Cyprus), Funding: University of Cyprus (Principal Investigator) (2007-2009).

#### ▪ **The development of students' problem solving ability and their ability to self-regulate their cognitive performance**

Program of Distinguished Scientists: with Erik De Corte, University of Cyprus (Cyprus), Funding: Research Promotion Foundation (Member of the research team) (2006- 2008).

#### ▪ **History of Mathematics Education in Cyprus 1878-1960**

University of Cyprus (Cyprus), Centre of Scientific Research of the Ministry of Education and Culture (Principal Investigator) (2005-2010).

#### ▪ **Identification, motivation and support of mathematical talents in European schools (MATEU).**

Intercollege (Cyprus), Funding: European Commission (Comenius 2.1) (Member of the research team) (2004 -2006).

#### ▪ **Reform of mathematics curriculum and evaluation of mathematics textbooks.**

University of Cyprus, Ministry of Education and Culture (Cyprus), Funding: UNESCO (Principal Investigator) (2003-2004).

#### ▪ **Investigation of the role of representations in the first three grades of primary school.**

University of Cyprus (Cyprus), Funding: Cyprus Research Promotion Foundation (Cyprus) (Principal Investigator) (2002-2004).

#### ▪ **The development of a digital portfolio for teachers: Tool for their Self Performance and their evaluation.**

Intercollege (Cyprus), Funding: Cyprus Research Promotion Foundation, (Cyprus) (Member of the research team) (2001-2003).

### Educational Programs

Coordinator of the following educational programmes:

ERASMUS	ICP-91-G-0027/11	GREECE,	ERASMUS	ICP-92-G-2011/11	GREECE,
ERASMUS	ICP-93-G-2011/11	GREECE,	ERASMUS	ICP-94-G-2011/11	GREECE,
ERASMUS	ICP-95-G-2011/11	GREECE,	ERASMUS	ICP-96-G-2011/11	GREECE,

○ **TEACHING**

**Teaching at the University of Cyprus**

- 1996-2007      EDU 171 Basic Concepts in Mathematics I (Undergraduate)  
                  EDU 272 Topics from Modern Mathematics (Undergraduate)  
                  EDU 331 Mathematics Education (Undergraduate)  
                  EDU 471 Special issues in Mathematics Education (Undergraduate)  
                  EDU 170 Pre-maths concepts (Undergraduate)  
                  EDU 332 Mathematical concepts in the Kindergarten school (Undergraduate)  
                  EDU 671 Cognitive Analysis of Mathematics learning (Postgraduate)  
                  EDU 675 Contemporary trends in research in Mathematics education (Postgraduate)  
                  EDU 677 Theories of Representation and Educational Teaching (Postgraduate)  
                  EDU 678 Affect and Mathematics Learning (Postgraduate)  
                  EDU 684 Space, Visualization and Reasoning in Geometry (Postgraduate)  
                  EDU 672 History and Philosophy of Mathematics (Postgraduate)

**Teaching at Other Institutions and Universities**

- 2004-Today    Representations and Learning in Mathematics, Postgraduate Program in Mathematics and Mathematics Education, Department of Mathematics, University of Athens, Greece.
- 2000-2007    Educational Assessment to prospective teachers in the framework of the Cyprus Pedagogical Institute preservice training programme
- 1992-1996    Research on Mathematics Education, Faculty of Education, Roehampton Institute, London, Great Britain
- 1993          Research on Mathematics Education, Faculty of Education, University of Veliko Tirnovo, Bulgaria
- 1983-1996    Mathematics Education and History of Mathematics Teaching Department of Mathematics, Aristotle University of Thessaloniki, Greece.  
                  Medical Statistics and Educational Statistics, Departments of Medicine and Kindergarten Education, Aristotle University of Thessaloniki, Greece.  
                  Mathematics for the Pre-school age, Department of Kindergarten Education, Aristotle University of Thessaloniki, Greece.  
                  Mathematics Education, Centre for in-service education of teachers (in different cities of Greece).
- 1975-1979    Mathematics, Department of Mathematics, Aristotle University of Thessaloniki
- 1974-1975    Secondary School Mathematics

○ PUBLICATIONS

● JOURNALS

**International Referee Journals (English, French, Italian, Bulgarian and German)**

1. Michael– Chrysanthou, P., Gagatsis, A. (in press). Ambiguity in the way of looking at a geometrical figure. *Revista Latinoamericana de Investigación en Matemática Educativa – Relime*.
2. Xistouri, X., Pitta-Pantazi, D. & Gagatsis, A. (in press). Primary school students' structure and levels of abilities in transformational geometry. *Revista Latinoamericana de Investigación en Matemática Educativa – Relime*.
3. Deliyianni, E., & Gagatsis, A. (in press). Investigating the development of fraction-addition understanding: the perspective of representations. *Revista Latinoamericana de Investigación en Matemática Educativa – Relime*.
4. Gagatsis, A. & Panaoura, A. (2014). A multidimensional approach to explore the understanding of the notion of absolute value. *International Journal of Mathematical Education in Science and Technology*, 45 (2), 159–173.
5. Elia, I., Gagatsis, A. & van den Heuvel-Panhuizen, (2014). The role of gestures in making connections between space and shape aspects and their verbal representations in the early years: Findings from a case study. *Mathematics Education Research Journal*. DOI:10.1007/s13394-013-0104-5.
6. Michael – Chrysanthou, P., Gagatsis, A. (2013). Geometrical figures in task solving: an obstacle or a heuristic tool? *Acta Didactica Universitatis Comenianae – Mathematics*, 13, 17-30.
7. Gagatsis, A., Christodoulou, T. & Elia, I. (2013). How young students deal with recognition and conversion tasks of graphs. *Acta Didactica Universitatis Comenianae – Mathematics*, 13, 1-16.
8. Gagatsis, A., & Monoyiou, A. (2013). Les stratégies des futurs instituteurs dans la résolution de tâches sur les fonctions. Approche ponctuelle ou approche coordonnée? *Annales de didactique et de sciences cognitives*, 18, 115 – 138.
9. Modestou, M., & Gagatsis, A. (2013). Didactical Situation for the Enhancement of Meta-Analogical Awareness. *Journal of Mathematical Behavior*, 32, 160– 172.
10. Deliyianni, E., & Gagatsis, A. (2013). Tracing the development of representational flexibility and problem solving in fraction addition: A longitudinal study. *Educational Psychology: An International Journal of Experimental Educational Psychology*, 33 (4), 427 – 442.
11. Kalogirou, P. & Gagatsis, A. (2012). The relationship between students' spatial ability and geometrical figure apprehension. *Mediterranean Journal for Research in Mathematics Education*, 11 (1-2), 133-146.
12. Kuzniak, A., Richard, P. & Gagatsis, A. (2012). CERME7 Working Group 4: Geometry teaching and learning. *Research in Mathematics Education*, 14 (2), 191-192.
13. Kalogirou, P. & Gagatsis, A. (2011). A first insight of the relationship between students' spatial ability and geometrical figure apprehension. *Acta Didactica Universitatis Comenianae – Mathematics*, 11, 25 –38.

14. Michael, P., Gagatsis, A., Avgerinos, E. & Kuzniak, A. (2011). Middle and High school students' operative apprehension of geometrical figures. *Acta Didactica Universitatis Comenianae – Mathematics*, 11, 45–55.
15. Gagatsis, A., Deliyianni, E., Elia, I. & Panaoura, A. (2011). Explorer la flexibilité : le cas du domaine numérique. *Annales de didactique et de sciences cognitives*, 16, 21-38.
16. Monoyiou, A., & Gagatsis, A. (2010). Pre-service teachers' approaches in function problem solving: A comparative study between Cyprus and Italy. *Quaderni di Ricerca in Didattica Matematica*, N.20, *Supplemento 1*, 245-262.
17. Michael, P., Elia, I., Gagatsis, A. & Kalogirou, P. (2010). Primary school students' operative apprehension of geometrical figures. *Quaderni di Ricerca in Didattica Matematica*, N.20, *Supplemento 1*, 225-243.
18. Panaoura, A., Gagatsis, A., Deliyianni, E., & Elia, I. (2010). A model on the cognitive and affective factors for the use of representations at the learning of decimals. *Educational Psychology*, 30(6), 713-734.
19. Gagatsis, A., Agathangelou, S., & Papakosta, V. (2010). Conceptualizing the role of pictures in problem solving by using the implicative statistical analysis. *Acta Didactica Universitatis Comenianae – Mathematics*, 10, 19-34.
20. Fernández, C., Llinares, S., Modestou, M., & Gagatsis, A., (2010). Proportional reasoning: How task variables influence the development of students' strategies from primary to secondary school. *Acta Didactica Universitatis Comenianae – Mathematics*, 10, 1-18.
21. Gagatsis, A., Monoyiou, A., Deliyianni, E., Elia, I., Michael, P., Kalogirou, P., Panaoura, A., & Philippou, A. (2010). One way of assessing the understanding of a geometrical figure. *Acta Didactica Universitatis Comenianae – Mathematics*, 10, 35-50.
22. Gagatsis, A., Monoyiou, A., Deliyianni, E., & Philippou, A. (2010). Tracing 10th and 11th graders approaches in function tasks. *Acta Didactica Universitatis Comenianae – Mathematics*, 10, 51-67.
23. Gagatsis, A., Deliyianni, E., Elia, I., & Panaoura, A. (2010). Tracing primary and secondary school students' representational flexibility profiles in decimals. *Mediterranean Journal for Research in Mathematics Education*, 9, 211-222.
24. Modestou, M., & Gagatsis, A. (2010). Cognitive and metacognitive aspects of proportional reasoning. *Mathematical Thinking and Learning*, 12, 36-53.
25. Panaoura, A., Gagatsis, A., Deliyianni E., & Elia, I. (2009). The structure of students' beliefs about the use of representations and their performance on the learning of fractions. *Educational Psychology*, 29(6), 713-728.
26. Elia, I., Gagatsis, A., Panaoura, A., Zachariades, T., & Zoulinaki, F. (2009). Geometric and algebraic approaches in the concept of limit and the impact of the "didactic contract". *International Journal of Science and Mathematics Education*, 7(4), 765-790.
27. Deliyianni, E. & Gagatsis, A. (2009). La comprensione dell'addizione di frazioni nella scuola primaria: Il ruolo delle rappresentazioni multiple. *La Matematica e la sua Didattica*, 23(3), 299-318.
28. Gagatsis, A., Modestou, M., Elia, I., & Spanoudes, G. (2009). Structural modelling of developmental shifts in grasping proportional relations underlying problem solving in area and volume. *Acta Didactica Universitatis Comenianae – Mathematics*, 9, 9-23.
29. Modestou, M., & Gagatsis, A. (2009). Proportional reasoning: The strategies behind the percentages. *Acta Didactica Universitatis Comenianae – Mathematics*, 9, 25-40.

30. Panaoura, A., Gagatsis, A., & Demetriou, A. (2009). An intervention to the metacognitive performance: Self-regulation in mathematics and mathematical modeling. *Acta Didactica Universitatis Comenianae – Mathematics*, 9, 63-79.
31. Pantziara, M., Gagatsis, A., & Elia, I. (2009). Using diagrams as tools for the solution of non-routine mathematical problems. *Educational Studies in Mathematics*, 72, 39-60.
32. Elia, I., Panaoura, A., Gagatsis, A., Gravvani, K., & Spyrou, P. (2008). Exploring different aspects of the understanding of function: Toward a four-facet model. *Canadian Journal of Science, Mathematics and Technology Education*, 8(1), 49-69.
33. Modestou, M., Elia, I., Gagatsis, A., & Spanoudis, G. (2008). Behind the scenes of pseudo-proportionality. *International Journal of Mathematical Education in Science and Technology*, 39(3), 313-324.
34. Elia, I., Gagatsis, A., & Demetriou, A. (2007). The effects of different modes of representation on the solution of one-step additive problems. *Learning and Instruction*, 17, 658-672.
35. Elia, I., Panaoura, A., Eracleous, A., & Gagatsis, A. (2007). Relations between secondary pupils' conceptions about functions and problem solving in different representations. *International Journal of Science and Mathematics Education*, 5, 533-556.
36. Modestou, M., & Gagatsis, A. (2007). Students' improper proportional reasoning: A result of the epistemological obstacle of "linearity". *Educational Psychology*, 27(1), 75-92.
37. Modestou, M., & Gagatsis, A. (2007). Le difficoltà degli studenti nel ragionamento proporzionale costituiscono un ostacolo didattico, di sviluppo o epistemologico? *La matematica e la sua didattica*, 21(2), 143-162.
38. Gagatsis, A., Elia, I., & Mousoulides, N. (2006). Are registers of representations and problem solving processes on functions compartmentalized in students' thinking? *Revista Latinoamericana de Educacion Matematica, Special Volume*, 105-132.
39. Gagatsis, A., Sriraman, B., Elia, I., & Modestou, M. (2006). Exploring young children's geometrical strategies. *Nordic Studies in Mathematics Education*, 11(2), 23-50.
40. Elia, I., Gagatsis, A., & Gras, R. (2006). La « magie » et le pouvoir de l'image pour les petits enfants : application dans la résolution des problèmes du type additif. *Scientia Paedagogica Experimentalis*, 43, 89-114.
41. Panaoura, A., Elia, I., Gagatsis, A., & Giatilis, G.P. (2006). Geometric and algebraic approaches in the concept of complex numbers. *International Journal of Mathematical Education in Science and Technology*, 37(6), 681-706.
42. Panaoura, G., & Gagatsis, A. (2006). Confronto di risultati nel problem solving geometrico nel caso di studenti di scuola primaria e di scuola secondaria. *La matematica e la sua didattica*, 20(3), 425-441.
43. Xistouri, X., Pitta-Pantazi, D., & Gagatsis, A. (2006). A dyslexic child's mental representations and strategies in elementary arithmetic. *Curriculum and Teaching*, 21(1), 71-94.
44. Gagatsis, A., & Elia, I. (2005). Il concetto di funzione e le sue rappresentazioni nell'educazione secondaria. *Bollettino dei Docenti di Matematica*, 50, 41-54.
45. Anastasiadou, S., Gagatsis, A., & Elia, I. (2005). The relation between the perceived math ability and the feelings about mathematics and statistics. *Scientia Paedagogica Experimentalis*, 42, 351-364.
46. Michaelidou, E., & Gagatsis, A. (2005). The geometrical model of number line as a representation of equivalence and addition of fractions. *Scientia Paedagogica Experimentalis*, 42, 185-204.

47. Shiakalli, M., & Gagatsis, A. (2005). The geometrical model of the number line in the teaching of whole number addition and subtraction. *Scientia Paedagogica Experimentalis*, 42, 167-184.
48. Gagatsis, A., Christou, C., & Elia, I. (2004). The nature of multiple representations in developing mathematical relationships. *Quaderni di Ricerca in Didattica*, 14, 150-159.
49. Gagatsis, A., Kyriakides, L., & Panaoura, A. (2004). Assessing the cross-cultural applicability of number line in conducting arithmetic operations using structural equation modeling: A comparative study between Cypriot, Italian and Greek primary pupils. *World Studies in Education*, 5(1), 85-101.
50. Gagatsis, A., & Shiakalli, M. (2004). Translation ability from one representation of the concept of function to another and mathematical problem solving. *Educational Psychology, An International Journal of Experimental Educational Psychology*, 24(5), 645-657.
51. Theodoulou, R., Gagatsis, A., & Theodoulou A. (2004). Un'immagine vale più di mille parole...Ma che tipo di immagine risulta più efficace nelle attività di problem solving matematico degli studenti? *La matematica e la sua didattica*, 2, 4-32.
52. Gagatsis, A., Shiakalli, M., & Panaoura, A. (2003). La droite arithmétique comme modèle géométrique de l'addition et de la soustraction des nombres entiers. *Annales de didactique et de sciences cognitives*, 8, 95-112.
53. Elia, I., & Gagatsis, A. (2003). Young Children's Understanding of Geometric Shapes: The Role of Geometric Models. *European Early Childhood Education Research Journal*, 11(2), 43-65.
54. Koutselini, M., & Gagatsis, A. (2003). Curriculum Development for Differentiation in Mathematics. *World Studies in Education*, 4(1), 45-65.
55. Kyriakides, L., & Gagatsis, A. (2003). Assessing Student Problem-Solving Skills. *Structural Equation Modeling: A Multidisciplinary Journal*, 10(4), 609-621.
56. Markou, A., & Gagatsis, A. (2003). Rappresentazioni e apprendimento matematico: applicazioni nel campo delle frazioni. *La matematica e la sua didattica*, 2, 124-138.
57. Gagatsis, A., & Christou, C. (2002). The structure of translations among representations in functions. *Scientia Paedagogica Experimentalis*, 39(1), 39-58.
58. Gagatsis, A., Elia, I., & Mougi, A. (2002). The nature of multiple representations in developing mathematical relations. *Scientia Paedagogica Experimentalis*, 39(1) 9-24.
59. Gagatsis, A., & Michaelidou, E. (2002). Le relazioni tra le diverse rappresentazioni del concetto di funzione e la comprensione del concetto stesso. Una ricerca riferita a gli studenti della scuola secondaria superiore. *La matematica e la sua didattica*, 4, 411-429.
60. Christou, C., Gagatsis, A., & Zachariadis, T. (2002). The Difficulty Level of Representations in Mathematical Relationships. *Scientia Paedagogica Experimentalis*, 39(1), 25-38.
61. Gagatsis, A., & Demetriadou, H. (2001). Classical versus vector geometry in problem solving: An empirical research among Greek secondary students. *International Journal of Mathematical Education in Sciences and Technology*, 32(1), 105-125.
62. Gagatsis, A., & Pitta-Pantazi, D. (2001). Difficoltà di apprendimento in aritmetica: Esame di un caso. *La matematica e la sua didattica*, 1, 57-74.
63. Pitta-Pantazi, D., & Gagatsis, A. (2001). Exploring a high achiever's and a low achiever's strategies and images in early number arithmetic. *Early Child Development and Care*, 166, 63-79.
64. Gagatsis, A. (2000). Processi di traduzione ed il concetto di funzione. *Quaderni di Ricerca in Didattica, G.R.I.M.*, 9, 1-24.



65. Gagatsis, A., & Christou, C. (2000). Investigating students' understanding of multiplication and division by analysing their textual Eigne productions. *Scientia Paedagogica Experimentalis*, 37(2), 219-240.
66. Gagatsis, A., & Kyriakides, L. (2000). Teachers' attitudes towards their pupils' mathematical errors. *Educational Research and Evaluation*, 6(1), 24-58.
67. Gagatsis, A., & Panaoura, G. (2000). Rappresentazioni semiotiche e apprendimento in matematica. Un esempio: la linea aritmetica. *Bolletino dei Docenti di Matematica*, 41, 25-58.
68. Christou, C., Gagatsis, A., & Panaoura, A. (2000). Analisi di una ricerca sulla moltiplicazione e divisione per mezzo del metodo implicativo di Regis Gras. *La matematica e la sua didattica*, 3, 292 – 303.
69. Kyriakides, L., Campbell, J., & Gagatsis, A. (2000). The significance of the classroom effect in primary schools: An application of Creemer's comprehensive model of educational effectiveness. *School effectiveness and School Improvement*, 11(4), 501-529.
70. Gagatsis, A. (1999). Communicative interaction situations between children with symptoms of dyslexia constructing geometrical figures. *Early Child Development and Care*, 151, 29-40.
71. Gagatsis, A., Demetriou A., Afantiti, T., Michaelidou, E., Panaoura, R., Shiakalli, M., & Christoforides, M. (1999). L' influenza delle rappresentazioni semiotiche. nella risoluzione de problemi additivi. *La matematica e la sua didattica*, 3, 382-403.
72. Gagatsis, A., Ganchev, I., & Lalchev, Z. (1999). The influence of Greek mathematics teaching on mathematical culture of Bulgarians during 18th-19th century. *Pedagogika*, 5, 103-110 (in Bulgarian).
73. Gagatsis, A., Patronis, T., & Spanos, D. (1999). Readability formulae and semantic width of terms and expressions. *Scientia Paedagogica Experimentalis*, 36(2), 207-223.
74. Gagatsis, A. (1998). Solving methods in problems of proportions by Greek students in secondary education, ages 13-16. *Scientia Paedagogica Experimentalis*, 35(1), 241-262.
75. Gagatsis, A. (1997). Problemi di Interpretazione Connessi Con il Concetto di Funzione. *La matematica e la sua didattica*, 4, 400-425.
76. Gagatsis A., Anastasiadou S., & Bora-Senta E. (1997). Errori commessi da studenti greci di Matematica in questioni di probabilità. *Bolletino dei Docenti di Matematica*, 35, 87-102.
77. Gagatsis, A., & Christou, C. (1997). Errors in Mathematics: A multidimensional approach. *Scientia Paedagogica Experimentalis*, 34, 89-116.
78. Dimarakis, I., & Gagatsis, A. (1997). Alcune difficoltà nella comprensione del concetto di limite. *La matematica e la sua didattica*, 2, 132-149.
79. Gagatsis, A., Lambis, St., & Ntziachristos, E. (1996). Metodi risolutivi per i problemi di proporzionalità impiegati dagli studenti greci nella scuola secondaria. *La matematica e la sua didattica*, 3, 270 - 281.
80. Gagatsis, A. (1995). Modi di valutazione della leggibilità dei testi matematici. *La matematica e la sua didattica* 2, 136 - 146.
81. Gagatsis, A., & Thomaidis, I. (1995). Eine Studie zur historischen Entwicklung und didaktischen Transposition des Begriffs "absoluter Betrag". *Journal für Mathematik-Didaktik*, 16, 3 - 46.
82. Demetriadou, H., & Gagatsis, A. (1995). Problemi di insegnamento del concetto di vettore in Grecia. *La matematica e la sua didattica*, 16-32.

83. Gagatsis, A. (1994). Mathematics Textbooks: Tendencies and problems. *Matematika et Informatika*, 2, 9-15 (in Bulgarian).
84. Gagatsis, A. (1994). The theory of additive structures of Gérard Vergnaud. *L'Education Primaire* 5, 52-61 (in Bulgarian).
85. Gagatsis, A. (1994). Histoire dell'enseignement de la géométrie en Grèce: L'influence des géomètres français de 1830 à 1884. *Repères IREM*, 17, 47-69.
86. Patronis, T., Spanos, D., & Gagatsis, A. (1994). A notion of semantic distance between terms and expressions and its application in the case of mathematical terms used in the classroom. *International Journal of Mathematical Education in Science and Technology*, 25(1), 31-43.
87. Gagatsis, A. (1993). Su alcuni problemi dell'insegnamento della geometria in Grecia: un esempio: la simmetria ortogonale. *La matematica e la sua didattica*, 3, 244-260 (in Italian).
88. Gagatsis, A., & Patronis, T. (1990). Using geometrical models in a process of reflective thinking in learning and teaching mathematics. *Educational Studies in Mathematics*, 21(1), 29-54.
89. Gagatsis, A., & Patronis, T. (1990). Understanding of mathematical texts: Cloze test - Readability formulae. *Scientia Paedagogica Experimentalis XXVII* (2), 251-265.
90. Duval, R., Gagatsis, A., & Pluinage, F. (1987). Evaluation multimensionnelle de l'activité de lecture. *Scientia Paedagogica Experimentalis*, XIV (1).
91. Gagatsis, A. (1985). Questions soulevées par le test de closure. *Revue Française de Pédagogie*, 70, 41-50.
92. Gagatsis, A. (1984). Préalables à une mesure de la compréhension. *Recherches en Didactique des Mathématiques*, 5(1), 43-80.

### **Other International Journals**

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94. Gagatsis, A., & Kaldrimidou, M. (1991). Résumé des Actes du Symposium en Didactique des Mathématiques. *Cahiers de Didactique des Mathématiques*, 9, Thessaloniki, 11-33 and 101-124 (in Greek and French).
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574. Elia, I., Gagatsis, A., Modestou, M., Pachiti, S., & Deliyianni, E. (2003). How students perceive geometric shapes: The role of geometrical models. In T. Triantafyllides, K. Hadjikyriakou, P. Politi & A. Chronaki (Eds.), *Proceedings of the 6<sup>th</sup> Greek Conference on the Didactics of Mathematics and Informatics in Education* (pp. 191-198). Volos: University of Thessaly (in Greek).
575. Elia, I., & Gagatsis, A. (2003). The compatibility of the descriptive language for the concept of set and young children's natural language. *Proceedings of the 20<sup>th</sup> Greek Conference of Mathematics Education: The child's progression in mathematics from pre-primary age to adulthood* (pp. 341-359). Veria: Greek Mathematical Society (in Greek).
576. Gagatsis, A. (2002). The challenges of globalization for new educational identities. In A. Gagatsis, L. Kyriakides, N. Tsangaridou, E. Phtiaka & M. Koutsoulis (Eds.), *Proceedings of the VII Conference of the Pedagogical Society in Cyprus: Educational Research in the Age of Globalization: Vol. A* (pp. 3-13). Nicosia: Cypriot Pedagogical Society (in Greek).
577. Gagatsis, A., & Markou, A. (2002). Representations and learning of Mathematics: Two sides of the same phenomenon? In A. Gagatsis, L. Kyriakides, N. Tsangaridou, E. Phtiaka & M. Koutsoulis (Eds.), *Proceedings of the VII Conference of the Pedagogical Society in Cyprus: Educational Research in the Age of Globalization: Vol. B* (pp.263-287). Nicosia: Cypriot Pedagogical Society (in Greek).
578. Gagatsis, A., Michaelidou, E., & Shiakalli, M. (2002). Semiotic representations and the concept of function: Applications to Lyceum students and University students. In M. Tzekaki

- (Ed.), *Proceedings of the Fifth Greek Conference for the Didactics of Mathematics and Informatics in Education* (pp. 330-336). Thessaloniki: Aristotle University (in Greek).
579. Markou, A., & Gagatsis, A. (2002). Representations and the learning of mathematical concepts: An application in fractions. In M. Tzekaki (Ed.), *Proceedings of the 5<sup>th</sup> Greek Conference on Didactics of Mathematics and Informatics in Education* (pp. 324-329). Thessaloniki: Aristotle University (in Greek).
580. Pitta-Pantazi, D., & Gagatsis, A. (2002). Strategies and mental representations in arithmetic: Two study cases. In M. Tzekaki (Ed.), *Proceedings of the 5<sup>th</sup> Greek Conference on Didactics of Mathematics and Informatics in Education* (pp. 317-323). Thessaloniki: Aristotle University (in Greek).
581. Gagatsis, A., Elia, I., & Makrides, G. (2002). Relations between the History of Mathematics and the Didactics of Mathematics. *Proceedings of the 20<sup>th</sup> Greek Conference of Mathematics Education: Mathematics as a Diachronic Factor of Civilization* (pp. 269-283). Komotini: Greek Mathematical Society (in Greek).
582. Gagatsis, A., Chrisanthou, A., & Christodoulides, M. (2002). The effect of the didactical contract and the implicit intuitive models in the modeling and the solution of arithmetical verbal problems of multiplication and division. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the 5<sup>th</sup> Cypriot Conference on Mathematics Education and 2<sup>nd</sup> Symposium of Astronautics and Space* (pp. 315-328). Nicosia: Cyprus Mathematical Society, Department of Education-University of Cyprus (in Greek).
583. Gagatsis, A., †Dinas, A., & Pieros, G. (2002). Greek students' and teachers' perceptions of the axonic symmetry. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the 5<sup>th</sup> Cypriot Conference on Mathematics Education and 2<sup>nd</sup> Symposium of Astronautics and Space* (pp. 147-156). Nicosia: Cyprus Mathematical Society, Department of Education-University of Cyprus (in Greek).
584. Gagatsis, A., Giasoumi, N., & Philippou, A. (2002). Application of the concepts and methods of the didactics and history of mathematics in the concept of absolute value. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the 5<sup>th</sup> Cypriot Conference on Mathematics Education and 2<sup>nd</sup> Symposium of Astronautics and Space* (pp. 135-146). Nicosia: Cyprus Mathematical Society, Department of Education-University of Cyprus (in Greek).
585. Gagatsis, A., Palaichorou, Ch., & Charalambous, Ch. (2002). Aiming at the breach of the didactical contract: The results of two interventions. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the 5<sup>th</sup> Cypriot Conference on Mathematics Education and 2<sup>nd</sup> Symposium of Astronautics and Space* (pp. 383-398). Nicosia: Cyprus Mathematical Society, Department of Education-University of Cyprus (in Greek).
586. Gagatsis, A., Pieridou-Shimitra, M., & Magou-Parpetta, P. (2002). Fourth grade students' behavior in solving "routine" and "non-routine" verbal problems. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the 5<sup>th</sup> Cypriot Conference on Mathematics Education and 2<sup>nd</sup> Symposium of Astronautics and Space* (pp. 421-430). Nicosia: Cyprus Mathematical Society, Department of Education-University of Cyprus (in Greek).
587. Antoniadis, M., Gagatsis, A., & Makrides, G. (2002). The ability of students of the University of Cyprus to solve problems of functional type. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the 5<sup>th</sup> Cypriot Conference on Mathematics Education and 2<sup>nd</sup> Symposium of Astronautics and Space* (pp. 123-133). Nicosia: Cyprus Mathematical Society, Department of Education-University of Cyprus (in Greek).

588. Christoforides, M., Savva, A., Gagatsis, A., & Kyriakides, L. (2002). Developmental evaluation of primary school students in recognizing patterns. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the 5<sup>th</sup> Cypriot Conference on Mathematics Education and 2<sup>nd</sup> Symposium of Astronautics and Space* (pp. 341-353). Nicosia: Cyprus Mathematical Society, Department of Education-University of Cyprus (in Greek)
589. Elia, I., & Gagatsis, A. (2002). Choosing among unusual problems according to given answers. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the 5<sup>th</sup> Cypriot Conference on Mathematics Education and 2<sup>nd</sup> Symposium of Astronautics and Space* (pp. 443-456). Nicosia: Cyprus Mathematical Society, Department of Education-University of Cyprus (in Greek).
590. Giasoumi, N., & Gagatsis, A. (2002). Representations and the concept of function in First Grade of Comprehensive Lyceum. In A. Gagatsis & G. Makrides, (Eds.), *Proceedings of the 5<sup>th</sup> Cypriot Conference on Mathematics Education and 2<sup>nd</sup> Symposium of Astronautics and Space* (pp.109-122). Nicosia: Cyprus Mathematical Society (in Greek).
591. Ioannou, I., Gagatsis, A., & Constantinou, C.P. (2002). A study of the role of representations in the understanding of the concept of vector. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the 5<sup>th</sup> Cypriot Conference on Mathematics Education and 2<sup>nd</sup> Symposium of Astronautics and Space* (pp. 191-202). Nicosia: Cyprus Mathematical Society, Department of Education-University of Cyprus (in Greek).
592. Markou, A., & Gagatsis, A. (2002). “Didactical Contract” and verbal problems: Effects and breach of the Contract in primary school students. In A. Gagatsis & G. Makrides, (Eds.), *Proceedings of the 5<sup>th</sup> Cypriot Conference on Mathematics Education and 2<sup>nd</sup> Symposium of Astronautics and Space* (pp.211-226). Nicosia: Cyprus Mathematical Society (in Greek).
593. Markou, A., & Gagatsis, A. (2002). Representations and the learning of mathematical concepts: An application in fractions. In A. Gagatsis & G. Makrides, (Eds.), *Proceedings of the 5<sup>th</sup> Cypriot Conference on Mathematics Education and 2<sup>nd</sup> Symposium of Astronautics and Space* (pp.329-340). Nicosia: Cyprus Mathematical Society (in Greek).
594. Vourgias, Ch., Vourgia, S., & Gagatsis, A. (2002). Didactics of Mathematics and mathematical problem. In A. Gagatsis & G. Makrides, (Eds.), *Proceedings of the 5<sup>th</sup> Cypriot Conference on Mathematics Education and 2<sup>nd</sup> Symposium of Astronautics and Space* (pp.399-408). Nicosia: Cyprus Mathematical Society (in Greek).
595. Gagatsis, A., & Demarakis, I. (2001). Some difficulties in understanding the concept of limit. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the fourth Pancyprian Congress on Mathematics Education and Symposium of Astronautics and Space* (pp. 15-24). Nicosia: Cyprus Mathematical Society (in Greek).
596. Gagatsis, A., Ioannou, I., & Demakos, G. (2001). The role of representations in curriculum in mathematics. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the fourth Pancyprian Congress on Mathematics Education and Symposium of Astronautics and Space* (pp. 37-48). Nicosia: Cyprus Mathematical Society (in Greek).
597. Gagatsis, A., & Panaoura, A. (2001). A model of redaction projects for students of Grade 10 in mathematics - Examples. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the fourth Pancyprian Congress on Mathematics Education and Symposium of Astronautics and Space* (pp. 25-36). Nicosia: Cyprus Mathematical Society (in Greek).
598. Gagatsis, A., Philippou, A., Makrides, G., & Demarakis, I. (2001). Concepts and methods of Didactics of Mathematics. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the fourth Pancyprian Congress on Mathematics Education and Symposium of Astronautics and Space* (pp. 3-14). Nicosia: Cyprus Mathematical Society (in Greek).

599. Markou, A., Kazakou, P., & Gagatsis, A. (2001). Concrete representations and the procedural proportional theory. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the fourth Pancyprian Congress on Mathematics Education and Symposium of Astronautics and Space* (pp. 189-200). Nicosia: Cyprus Mathematical Society (in Greek).
600. Papadopoulos, G., & Gagatsis, A. (2001). Teaching Euclidean and non-Euclidean geometry in secondary schools. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the fourth Pancyprian Congress on Mathematics Education and Symposium of Astronautics and Space* (pp. 105-116). Nicosia: Cyprus Mathematical Society (in Greek).
601. Papadopoulos, G., Gagatsis, A., Makrides, G., & Fotiades, P. (2001). Intuitive model of arithmetic operations and multiplication and division problem solving. In A. Gagatsis & G. Makrides (Eds.), *Proceedings of the fourth Pancyprian Congress on Mathematics Education and Symposium of Astronautics and Space* (pp. 299-308). Nicosia: Cyprus Mathematical Society (in Greek).
602. Kyriakides, L., Gagatsis, A., & Antoniou, P. (2001). Exploring language minority - based differential item functioning on primary teachers tests in mathematics: Implications for the development of assessment policy. *Proceedings of the Congress: Education of Language Minorities: Language and Mathematics Teaching*. Thessaloniki: Department of Primary Education, Aristotle University (in Greek).
603. Gagatsis, A., Kyriakides, L., Michaelidou, E., & Shiakalli, M. (2000). The interplay of translation between the different fields of representation of the concept of function to the learning of the concept. In S. Georgiou, C. Christou & L. Kyriakides (Eds.), *Proceedings of the 6<sup>th</sup> Conference of the Cyprus Pedagogical Association: Contemporary Research in Educational Sciences* (pp. 361-368). Nicosia: University of Cyprus (in Greek).
604. Gagatsis, A., & Mougi, A. (2000). Aptitude of primary school students in formulation of algebraic relations in a context of translation tasks. In S. Georgiou, C. Christou & L. Kyriakides (Eds.), *Proceedings of the 6<sup>th</sup> Conference of the Cyprus Pedagogical Association: Contemporary Research in Educational Sciences* (pp. 337-347). Nicosia: University of Cyprus (in Greek).
605. Gagatsis, A., & Panaoura, G. (2000). The interplay of the arithmetic line in the resolution of addition and subtraction tasks. In S. Georgiou, C. Christou & L. Kyriakides (Eds.), *Proceedings of the 6<sup>th</sup> Conference of the Cyprus Pedagogical Association: Contemporary Research in Educational Sciences* (pp. 348-359). Nicosia: University of Cyprus (in Greek).
606. Gagatsis, A., & Michaelidou, E. (2000). The capability of translation of the Cypriot Lyceum students: Application of the implicative statistical analysis method - CHIC. *Proceedings of the 17<sup>th</sup> Panhellenic Conference of Mathematics Education* (pp. 622-632). Athens: Greek Mathematical Society (in Greek).
607. Gagatsis, A., & Mougi, A. (2000). The contribution of the implicative statistical analysis to the elaboration of data in Didactics of Mathematics: Application to the translation between representations. *Proceedings of the 17<sup>th</sup> Panhellenic Conference of Mathematics Education* (pp. 210-221). Athens: Greek Mathematical Society (in Greek).
608. Gagatsis A., & Shiakalli M. (2000). CHIC: A program of statistical analysis for elaboration of data related to Didactics of Mathematics-Application to the representations of functions. *Proceedings of the 17<sup>th</sup> Panhellenic Conference of Mathematics Education* (pp. 602-612). Athens: Greek Mathematical Society (in Greek).
609. Gagatsis, A., Demetriou A., Afantiti, T., Michaelidou, E., Panaoura, R., Shiakalli, M., & Christoforides, M. (1999). The influence of semiotic representations in the solution of addition

- problems. In A. Kollias, A. Margetousaki & P. Michaelides (Eds.), *Proceedings of the 4<sup>th</sup> Panhellenic Conference on Didactics of Mathematics and Informatics in Education* (pp. 514-521). Rhethymno: University of Crete (in Greek).
610. Gagatsis, A. (1998). Dyslexia and Mathematics. In Gr. Makrides (Ed.), *Proceedings of the Second Cypriot Conference in Mathematics Education* (pp. 14-22). Nicosia: Cyprus Mathematical Society (in Greek).
611. Gagatsis, A., & Demetriadou, E. (1997). The controversy of the Euclidean and vector method in the solving of geometrical problems - an empirical research between third class Lyceum students. *Proceedings of the 14th Panhellenic Conference of Mathematics Education* (pp. 389 - 399). Athens: Greek Mathematical Society (in Greek).
612. Dimarakis, I., & Gagatsis, A. (1997). Some difficulties of understanding of the limit concept. In T. Patronis, & P. Pintelas (Eds.), *Proceedings of the Second Greek Congress on Didactics of Mathematics and Informatics* (pp. 91-101). Athens: Pnevmatikos.
613. Gagatsis, A., & Lambis, S. (1996). Greek pupils' difficulties on additive structure problems. *Proceedings of the First Greek Congress "Mathematics in Education and the Society"* (pp. 277-289). Athens: University of Athens - Centre of Research of the Science of Education (K.E.E.P.E.K.) (in Greek).
614. Gagatsis, A., Lambis, S., & Ntziachristos, E. (1996). Greek secondary pupils' resolution methods of proportion problems. *Proceedings of the First Greek Congress "Mathematics in Education and the Society"* (pp. 277-289). Athens: Department of Primary Education, University of Athens (in Greek).
615. Gagatsis, A., & Lambis, S. (1996). Mathematics Curriculum and Dyslexia. *Proceedings of the 13th Congress of the Greek Mathematical Society* (pp. 85- 101). Athens: Greek Mathematical Society (in Greek).
616. Gagatsis, A., & Bora-Senta, E. (1995). Problems of understanding of statistical tests by University students of Mathematics. In G. Philippou & A. Kakas (Eds.), *Proceedings of the Second Greek Congress on Didactics of Mathematics and Informatics* (pp. 365 – 382). Nicosia: University of Cyprus (in Greek).
617. Gagatsis, A., & Demetriadou, H. (1995). Comparison between the conceptions of Greek and Cypriot students related to the concept of vector. In G. Philippou & A. Kakas (Eds.), *Proceedings of the Second Greek Congress on Didactics of Mathematics and Informatics* (pp. 353 – 364). Nicosia: University of Cyprus (in Greek).
618. Asvesta, A., & Gagatsis, A. (1995). Problems of Interpretation related to the concept of function. In G. Philippou & A. Kakas (Eds.), *Proceedings of the Second Greek Congress on Didactics of Mathematics and Informatics* (pp. 323 – 336). Nicosia: University of Cyprus (in Greek).
619. Gagatsis, A., Katsoulou, M., & Marketos, A. (1987). A proposition concerning a Taxonomy of Didactical Exercises in Mathematics. *Proceedings of the 4<sup>th</sup> Panhellenic Conference of the Greek Mathematical Society* (pp. 16-29). Athens: Greek Mathematical Society (in Greek).
620. Gagatsis, A. (1986). Application of cloze test in Greek texts. *Proceedings of the Seventh Congress of the Linguistic Section of the Faculty of Philosophy* (pp. 337-353). Thessaloniki: Aristotle University (in Greek).

## ○ CONFERENCE PRESENTATIONS

Selected participations in international, Greek and Cyprus conferences on Mathematics Education

- Presentation of a number of studies at the 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, 12<sup>th</sup>, 13<sup>th</sup>, 14<sup>th</sup>, 15<sup>th</sup>, 16<sup>th</sup> Cyprus Conferences of Mathematics Education and Symposiums of Astronautics and Space, Cyprus Mathematical Society, 2001, 2002, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014.
- Participation and presentation in the colloquium La didactique des mathématiques: approches et enjeux – Hommage à Michèle Artigue (International Colloquium The Didactics of Mathematics: Approaches and Issues. A Hommage to Michèle Artigue), May 31 to June 1, 2012, Paris - <http://www.colloqueartigue2012.fr/>
- Invited speaker at the International Conference La Matematica e la sua didattica, quarant'anni di impegno Mathematics and its didactics, forty years of commitment, In occasion of the 65 years of Bruno D'Amore, 8 October 2011, Bologna.
- Participation at the 2nd Conference of five cities in Mathematics Education, May 2011, Rhodes.
- Participation at the 35<sup>th</sup> Conference of the International Group for the Psychology of Mathematics Education, July 2011, Ankara: Turkey.
- Participation at the 34<sup>th</sup> Conference of the International Group for the Psychology of Mathematics Education, July 2010, Belo Horizonte, Brazil.
- Invited speaker at the 1<sup>st</sup> Conference of the Pedagogical Institute: Educational Research and Educators' Training in Cyprus, 6-7 November 2009, Nicosia.
- Presentation of a number of studies at the 6<sup>th</sup> Mediterranean Conference on Mathematics Education, 22-26 April 2009, Plovdiv, Bulgaria. Chair of the scientific committee and editor of the proceedings in collaboration.
- Participation at CERME 6 (The 6<sup>th</sup> Conference of the European Society for Research in Mathematics Education) and presentation of six studies in collaboration with postgraduate students, 28/1/2009-1/2/2009, Lyon, France.
- Participation and presentation of a number of studies in collaboration with postgraduate students at the 11<sup>th</sup> Cyprus Conference of Mathematics Education and Symposium of Astronautics and Space, Cyprus Mathematical Society. President of the scientific committee and editor of the proceedings in collaboration, 6-8 February, 2009, Cyprus.
- President of the scientific and organizational committee, editor of the proceedings and presentation of studies in collaboration with postgraduate students at the "1<sup>st</sup> Conference of Five Cities: Nicosia, Rhodes, Bologna, Palermo, Locarno-Research in Mathematics Education", 13-14 September, 2008, Nicosia.
- Participation and presentation of a number of studies in collaboration with postgraduate students at the 11<sup>th</sup> International Congress of Mathematics Education. Member of the organizational team of the Topic Study Group 20: Visualization in the teaching and learning of mathematics, 6-13 July, 2008, Monterrey, Mexico.
- Participation and presentation of a number of studies in collaboration with postgraduate students at the 10<sup>th</sup> Cyprus Conference of Mathematics Education and Symposium of Astronautics and Space, Cyprus Mathematical Society. President of the scientific committee and editor of the proceedings in collaboration, February, 2008, Cyprus.
- Participation and presentation of two studies at the conference for the Statistical Implicative Analysis, 5<sup>th</sup> International Conference A.S.I. - Implicative Statistical Analysis, 18-21 October 2007, at Castelló, Spain.
- Participation and presentation of two studies at the symposia about "Assessment that feeds the development of potentials for learning", and "The development of children's reasoning on linear



and non-linear situations” respectively, at the 12<sup>th</sup> Biennial Conference for Research on Learning and Instruction (EARLI), Budapest, Hungary, August 28-September 1, 2007.

- Invited speaker at the 5<sup>th</sup> Mediterranean Conference on Mathematics Education, Rhodes, April 2007.
- Participation and presentation of four studies at the 5<sup>th</sup> European Congress in Mathematics Education (CERME, European Society for Research in Mathematics Education), in two working groups, WG1: The role of metaphors and images in the learning and understanding of mathematics and WG7: Geometrical Thinking, Larnaca, Cyprus, 22-26 February 2007.
- Participation and presentation of a study at the PREMA international workshop “Gender-Sensitivity and Pluralism in Mathematics Education” in Barcelona, Spain, 25-26 January 2007.
- Presentation of a number of studies at the 2<sup>nd</sup>-5<sup>th</sup> Mediterranean Conference on Mathematics Education, 2000, 2003, 2005, 2007.
- Invited speaker at the international conference “La Matematica e la Sua Didattica, vent’anni di impegno”, Castel S. Pietro Terme, Italy, 23 September 2006.
- Participation and presentation of six studies in collaboration with postgraduate students at the 30<sup>th</sup> International Conference for “Psychology of Mathematics Education”, Prague, Czech Republic, 16-21 July 2006.
- Participation and presentation of a number of studies in collaboration with postgraduate students at MASSE International Congress on Mathematics MICOM 2006, Pafos, Cyprus, 31 May-4 June, 2006.
- Participation and presentation of 11 studies at the 4<sup>th</sup> Mediterranean Conference on Mathematics Education, 27-30 January 2005, Palermo, Italy.
- Presentation of a number of studies at the 9<sup>th</sup> Cyprus Conference of the Cyprus Pedagogical Society: Contemporary educational research in Cyprus, Nicosia, Cyprus, June 2006.
- Participation and presentation of a study at the 4<sup>th</sup> European Congress in Mathematics Education (CERME, European Society for Research in Mathematics Education) in Sant Feliu de Guixols, Spain, Cyprus, 17-21 February 2005.
- Invited speaker at the Greek Conference of Pantio University “Psychology and Society”, May, 2005.
- Presentation of two studies at the Mathematics Education symposium on “Routine versus adaptive use of representations and models in mathematical problem solving”, at the 11<sup>th</sup> Biennial Conference for Research on Learning and Instruction (EARLI), University of Cyprus, Nicosia, Cyprus, 22-27 August 2005.
- Invited speaker (presentation of two studies) at the International Conference on Mathematics Education, Svishtov, Bulgaria, 3-5 June 2005.
- Participation and presentation of three studies at the Third International Conference A.S.I. - Implicative Statistical Analysis, 6-8 October 2005, Palermo, Italy.
- Presentation of two studies in collaboration with postgraduate students at the 21<sup>st</sup> Greek Conference of Mathematics Education: The curriculum and the teaching approaches of mathematics in primary and secondary education, Greek Mathematical Society, Trikala, 19-21 November 2004.
- Participation and presentation of six studies in collaboration with postgraduate students at the 28<sup>th</sup> International Conference for “Psychology of Mathematics Education”, Bergen, Norway, 14-19 July 2004.

- Presentation of two studies at the working group on “New Developments and Trends in Secondary Mathematics Education” at the 10th International Congress on Mathematical Education (ICME-10), in collaboration with D. De Bock, M. Isoda, J. A. Garcia Cruz και E. Simmt, Copenhagen, 3-11 July 2004.
- Invited speaker at the conference for the 20 years of the Pedagogical Department of Elementary Education, University of Athens, May 2004.
- Invited speaker at the International and CASTME Europe Conference: Linking Science, Mathematics and Technology Education and their Social Relevance, Nicosia, 15-18 April 2004.
- Presentation of three studies at the 8<sup>th</sup> Cyprus Conference of the Cyprus Pedagogical Society: Contemporary trends in educational research and practice, Nicosia, Cyprus, May 2004.
- Invited speaker at the 17<sup>th</sup> Conference of Mathematics Education: “La didattica della matematica in aula”, Bologna, Italy, November 2003.
- Participation and presentation of two studies in collaboration with postgraduate students at the 6<sup>th</sup> Greek Conference of the Didactics of Mathematics and Informatics in Education, University of Thessaly, Volos, October 2003.
- Participation and presentation of two studies at the 27<sup>th</sup> International Conference for “Psychology of Mathematics Education”, Honolulu, Hawai'i, 13-18 July 2003.
- Invited speaker at the 2<sup>nd</sup> Conference on Mathematics of Secondary Education, University of Athens-Department of Education, Athens, Greece, April 2003.
- Invited speaker at the international conference “V Simposio de Educacion Matematica”, Buenos Aires, Argentina, 10-17 May 2003.
- Invited speaker at the 3<sup>rd</sup> Mediterranean Conference on Mathematics Education, Athens, 3-5 January 2003. Co-editor of the conference proceedings in English.
- Participation and presentation of two studies at the 7<sup>th</sup> Cyprus Conference of the Cyprus Pedagogical Society: Educational research in the period of globalization. Nicosia, Cyprus, 2002.
- Invited speaker at the Congresso Nazionale Mathesis: La matematica fra tradizione e innovazione –Un confronto Europeo”, Bergamo, Italy, 2002.
- Presentation of two studies at the International conference: The Humanistic Renaissance in Mathematics Education “The Mathematics Education into the 21<sup>st</sup> Century Project”, Palermo, Italy, 2002.
- Presentation of a study at Argomentum, 2002, Strasbourg, France.
- Invited speaker at the 3<sup>rd</sup> Conference of the Greek Pedagogical Society, Athens, Greece, 2002.
- Invited speaker at the First Congress on the Perspectives of the Departments of Education, Aegean University, Rhodes, Greece, 2001.
- Presentation of three Research Papers at the Fifth Panhellenic Conference on Didactics of Mathematics and Informatics in Education, Aristotle University of Thessaloniki, Thessaloniki, 2001.
- Invited speaker at the 11<sup>th</sup> Conference “Didattica della Matematica e realta scolastica, Incontri con la Matematica”, Castel San Pietro, 1997.

## ○ EDITORIAL AND REVIEW BOARDS

- Mathematics and Informatics, Bulgarian Journal of Educational Research and Practice (Member of the Editorial Board)
- Avances de Investigación en Educación Matemática (AIEM) (Member of the Editorial Board), Spain, Sociedad Española de Investigación en Educación Matemática (SEIEM).
- Annales de Didactique de Mathématiques (Member of the Editorial Board), France, IREM de Strasbourg
- Cahiers de Didactique de Mathématiques (Editor), Greece, Institut Français de Thessalonique
- Educational Studies in Mathematics (Member of the Editorial Board), Netherlands, Springer Publishers
- Euclides  $\gamma$  (Member of the Scientific Committee), Greece, Greek Mathematical Society
- La matematica e la sua didattica (Member of the Scientific Committee), Italy, Pitagora Editrice Bologna
- Mediterranean Journal for Research in Mathematics Education (Chief Editor), Cyprus, Cyprus Mathematical Society
- Quaderni di Ricerca in Didattica (Member of the Scientific Committee), Italy, G.R.I.M. University of Palermo
- Tecne, Episteme y Didaxis (Member of the Scientific Committee), Colombia, Facultad Ciencia y Tecnología-Universidad Pedagógica Nacional
- Scientia Paedagogica Experimentalis (Guest Editor), Belgium, University of Cent
- Acta Didactica Universitatis Comenianae (Member of the Editorial Board)
- Journal of Research of Mathematics Teaching (Reviewer)
- Educational Psychology (Reviewer)
- Co-editor of the proceedings at the 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, 12<sup>th</sup> Cyprus Conferences of Mathematics Education and Symposiums of Astronautics and Space, Cyprus Mathematical Society, 2001, 2002, 2004, 2005, 2006, 2007, 2008, 2009, 2010.
- Co-editor of the proceedings of the 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> Mediterranean Conference on Mathematics Education, 2000, 2003, 2005 and 2007.
- Co-editor of the proceedings of the 7<sup>th</sup>, 8<sup>th</sup>, and 9<sup>th</sup> Conference of the Cyprus Pedagogical Society, 2002, 2004 and 2006.
- Co-editor of the proceedings of the working group on “New Developments and Trends in Secondary Mathematics Education” at the 10th International Congress on Mathematical Education, in collaboration with D. De Bock, M. Isoda, J. A. Garcia Cruz και E. Simmt, Copenhagen, 3-11 July 2004.
- Co-editor of the proceedings of the CASTME International and CASTME Europe Conference: Linking Science, Mathematics and Technology Education and their social relevance, Nicosia 2004.

## ○ **AWARDS**

### Distinctions/ Scholarships

- Collaboration with the elementary school teachers Eleni Michaelidou and Niki Michaelidou as a principal investigator of the project “MERA”, which has received an award (the third prize), 2005.
- Supervision of the undergraduate research study by Constantinos Constantinou and Georgia Tanou of the Department of Education, University of Cyprus (2005), which has received an award by the Cyprus Research Promotion Foundation.
- Granted the title of Expert on the Didactics of Mathematics by UNESCO. Organization of seminars (8<sup>th</sup> November-8<sup>th</sup> December 2003) for 100 primary school teachers in collaboration with the Ministry of Education and Culture and editing of a book on the Didactics of Mathematics (Fund 9000 USD).
- Honorary member of the Italian Pedagogical Society MATHESIS for 10 years.
- Award by the senate of the University of Lujan of Buenos Aires at the conference “V Simposio de Educacion Matematica”, 10-17 May, 2003, Argentina. Granted the title of Distinguished Visiting Fellow according to a Senate decree.
- French government scholarship for the PhD studies, 1980-1982
- Aristotle University Scholarship for the Master’s studies, 1978-1980
- Greek government scholarship for the undergraduate studies, 1969-1973

## ○ **PROFESSIONAL MEMBERSHIPS**

Greek Mathematical Society, Greece; ARDM Association de Recherche en Didactique de Mathématiques, France; MATHESIS, Italy (Honorary Member); International Group for the Psychology of Mathematics Education (PME); European Association for Research on Learning and Instruction (EARLI)

## ○ **SUPERVISION OF STUDENT RESEARCH**

### ○ **Undergraduate**

Supervision of the undergraduate research study by Constantinos Constantinou and Georgia Tanou of the Department of Education, University of Cyprus, which has received an award by the Cyprus Research Promotion Foundation (2005).

### ○ **Graduate**

- Supervisor of Doctoral Dissertations on Mathematics Education at the Department of Education, University of Cyprus. A number of the dissertations were completed over the last academic years (Eleni Michaelidou and Myria Shiakalli in 2003-2004, Iliada Elia in 2005-2006, Modestina Modestou in 2006-2007, Georgia Panaoura 2006-2007, Eleni Deliyianni 2008-2009, Annita Monoyiou 2006-2010, Paraskevi Michael 2012-2013) while others are in progress or expected to be completed in the current academic year (Andreas Philippou, Panayiota Kalogirou).
- Coordinator or member of scientific committees of numerous doctoral dissertations and master theses at Universities in Greece (Athens, Thessaloniki, Crete, Patra).

– **Supervisor of Doctoral Dissertations of:**

- Panagiota Kalogirou, 2013-2014, Department of Education, University of Cyprus, (“Spatial ability and geometrical figure apprehension of students 10-13 years old” – in Greek).
- Paraskevi Michael, 2012-2013, Department of Education, University of Cyprus, (“Geometrical figure apprehension: Cognitive processes and structure” – in English).
- Annita Monoyiou, 2009-2010, Department of Education, University of Cyprus (“Conceptual and Representational understanding related to the concept of function: A comparative study between Cyprus and Italy” – in English).
- Vassiliki Alexandrou – Leonidou, 2009-2010, Department of Education, University of Cyprus, (“Introduction in the Primary school’s Algebra: The concept of equity and the treatment of tasks with a different type of representation, syntax and structure” – in Greek).
- Eleni Deliyianni, 2008-2009, Department of Education, University of Cyprus (“The change of the primary and secondary school students’ representational abilities in fractions” – in Greek).
- Modestina Modestou, 2006-2007, Department of Education, University of Cyprus, (“Mathematical analogical thinking: A multidimensional cognitive and metacognitive model” – in Greek).
- Georgia Panaoura, 2006-2007, Department of Education, University of Cyprus, (“The geometrical knowledge and abilities of the students at the end of primary education: comparing the geometrical thinking of primary and secondary school students” – in Greek).
- Iliada Elia, 2005-2006, Department of Education, University of Cyprus (“Multiple representations and Mathematical Problem Solving” – in Greek).
- Eleni Michaelidou, 2003-2004, Department of Education, University of Cyprus (“The use of the geometrical model of number line for representing the equity and the addition of fractions: an examination with the 5<sup>th</sup> graders” – in Greek).
- Myria Shiakalli, 2003-2004, Department of Education, University of Cyprus (“The number line as a geometrical model for the teaching of addition and subtraction of integers: an examination with the 1<sup>st</sup> and 2<sup>nd</sup> graders” – in Greek).
- Ioannis Thomaidis, 1994, Department of Mathematics, Aristotle University of Thessaloniki (“The historical survey and the didactical transposition of the concept of absolute value” – in Greek).

– **Member of the scientific committee of the Doctoral Dissertation of:**

**European Universities**

- Aggeliki Kolovou, 2011, Freudenthal Institute for Science and Mathematics Education, Utrecht University, Holland (“Mathematical Problem Solving in Primary School”).

- Raquel Barrera, 2012, Université Paris 7 Diderot, France (“Etude des significations de la multiplication pour différents ensembles de nombres dans un contexte de géométrisation”).
- Ceneida Fernández, 2010, University Alicante, Spain (“Características Del Desarrollo Del Razonamiento Proporcional. Estrategias Y Mecanismos Constructivos”).
- Andri Marcou, 2007, SouthBank University of London, U.K (“Teaching mathematical word-problem solving: Can primary school students become self-regulated problem solvers?”).
- Sylvia Sbaragli, 2006, Comenius University, Bratislava, Slovakia.

### **Greek Universities**

- Chara Bouta, 2013, University of Piraeus (“Design, Development, Implementation and Assessment of a 3D iconic environment of cooperative learning for the teaching of Mathematics in Primary Education”).
- **Supervisor of Master Dissertation on Mathematics Education of students from the Department of Mathematics of the University of Athens**
  - I. Mixelarakis, 2012, “The conceptual understanding of geometrical figures
  - C. Kalatha, 2012, “A multidimensional study of the learning of the concept of proportionality: the phenomenon of pseudo-proportionality.
- **Member of the scientific committee of Supervisor of Master Dissertation on Mathematics Education**
  - F. Zoulinaki, 2009, University of Athens, Greece (“Geometric and algebraic approaches in the concept of limit and the impact of the "didactic contract" in Greek”).
  - K. Gravvani, 2008, University of Athens, Greece (“Exploring different aspects of the understanding of function: Toward a four-facet model” – in Greek”).

### ○ **COMMITTEES**

#### ○ **Public**

Committee of Reform of the Ministry of Education and Culture, Cyprus. Proposal for educational reform in Cyprus.

- **International**

Committee of the Ministry of Education of Greece for the establishment of the new curricula of Mathematics in Greece, 1987-1989.

- **Scientific**

Committee for the establishment of national standards in mathematics education, Cyprus, Vice-chairman of the Group of Secondary Mathematics Education for establishing the national standards in mathematics. Pedagogical Institute and University of Cyprus.

Chair of the scientific Committees of Conferences of the Mathematical Society, the Pedagogical Society in Cyprus and of the Mediterranean Conferences on Mathematics Education.

- **University**

International relations committee.

- **Departmental**

Committee for the organization of seminars, Department of Education.

Chair of the committee for the teaching practice program (practicum).

Chair of the committee for Postgraduate Studies, 2000-2002.

- **OTHER PROFESSIONAL ACTIVITIES**

- Member of the organizing committee of CERME 5, 2007 in Cyprus.
- Co-organisation of the Working Group 7: Geometrical thinking at the 5<sup>th</sup> European Congress in Mathematics Education (CERME5, European Society for Research in Mathematics Education, 2007)
- Organization of the symposium “The role of representations and modelling in the learning of mathematics and problem solving” in the MASSEE International Congress on Mathematics (MICOM 2006)
- Participation in the International Mathematics Competition at Bali, Indonesia, 2006, in Philippines, 2005 (PEMIC: Philippine Elementary Mathematics International Contest 2005) and Hong-Kong, 2001, as a leader of the Cypriot Olympic Team of 12-13 year-old pupils.
- Co-organization of the Mediterranean Conference on Mathematics Education in Palermo, 2005, Athens, 2003 and Cyprus 2001.
- Co-organization of the symposium “Routine versus adaptive use of representations and models in mathematical problem solving” in the International Conference for Research on Learning and Instruction (EARLI), 2005.
- Co-organization of the Topic Study Group 2: “New Developments and Trends in Secondary Mathematics Education” in the International Congress on Mathematical Education (ICME 10), 2004.
- Organization of seminars on the Didactics of Mathematics at the Mathematics Department of the Kristiansand University, Norway, November 2004.
- Collaboration with the Mathematics Department, University of Athens in the framework of the postgraduate programme of Didactics and Methodology of Mathematics (2003-2005, 2006-2007).

- Collaboration with the Mathematics Department, University of Patra in the framework of the postgraduate programme of Didactics of Mathematics.
- Collaboration with the Mathematics Department, University of Palermo, Italy in the framework of the International Group of Language and Mathematics.
- Collaboration with the Mathematics Department, University of Palermo, Italy and participation in the International Committee of the PhD Programme on the Didactics and History of Mathematics an Sciences.
- Co-organization of the Working Group 7: “Language and communication in the mathematics classroom” in the International Congress on Mathematical Education (ICME 7, 1992)