

DIMITRIOS KODOKOSTAS - CURRICULUM VITAE

Lecturer

National Technical University, Department of Mathematics
Zografou polytechnic campus, 15780 Athens, Greece.

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Citizenship: greek.

Family status: married, father of 3.

Date of birth: September 25, 1970.

Military service: fulfilled (May 25, 1999 - November 25, 2000)

RESEARCH INTERESTS

Projective, Euclidean and Differential Geometry. Geometric representation methods. Low dimensional geometric topology, knot theory.

EDUCATION

1999 Ph.D. in Mathematics.

University of Notre Dame, Department of Mathematics, Indiana, U.S.A.

Advisor: Professor Lawrence Taylor.

GPA: 3.95 out of 4.

1995 Master of Science in Mathematics.

University of Notre Dame, Department of Mathematics, Indiana, U.S.A.

Advisor: Professor William Dwyer.

1992 Bachelor in Mathematics.

University of Ioannina, Ioannina, Greece.

GPA: 9.49 out of 10.

ACADEMIC POSITIONS

2014- Lecturer National Technical University, Department of Mathematics, School of Applied Mathematics and Physical Sciences, Athens, Greece.

PUBLICATIONS

PhD thesis

- [P1] Dimitrios Kodokostas. *Knot exterior embeddings in B^4 and sliceness of Alexander Polynomial 1 knots*. Ph.D. thesis, University of Notre Dame, Department of Mathematics, Indiana, USA, December 1998.

In refereed journals

- [P2] Dimitrios Kodokostas. *A computational approach to the unwrappings of the developable surfaces*. Springer Verlag volume: Contributions in Mathematics and Engineering in Honor of Constantin Caratheodory. 2016. (accepted for publication).
- [P3] Dimitrios Kodokostas. *Proving and generalizing Desargues' two-triangle Theorem in 3-dimensional Projective Space*. Geometry, vol. 2014, Article ID 276108, 7 pages, 2014. doi:10.1155/2014/276108
<http://www.hindawi.com/journals/geometry/2014/276108>
<http://dx.doi.org/10.1155/2014/276108>
- [P4] A. Malamou, C. Pandis, P. Frangos, P. Stefaneas, A. Karakasiliotis, D. Kodokostas. *Application of the Modified Fractal Signature Method for Terrain Classification from Synthetic Aperture Radar Images*. Elektronika ir Electrotechnika, vol. 20., no. 6, pp. 118-121, 2014.
<http://www.eejournal.ktu.lt/index.php/elt/article/view/7281/3699>
<http://arxiv.org/abs/1401.2899>

- [P5] A. Malamou, C. Pandis, A. Karakasiliotis, P. Stefaneas, D. Kodokostas and P. Frangos, *Application of an autofocus algorithm for SAR image quality improvement and application of the modified fractal signature (MFS) method for SAR image classification for the case of real radar data*. Journal of Applied Electromagnetism, vol. 16, no. 1, pp. 46-53, 2014. (Selected from CEMA13 Conference)
<http://jae.ece.ntua.gr/archive>
- [P6] Dimitrios Kodokostas. *Centers of Curvature for Unwrappings of Plane Intersections of Tame Developable Surfaces*. International Electronic Journal of Geometry, vol. 6, no. 1, pp. 112-128, 2013.
<http://www.iejgeo.com/matder/dosyalar/makale-129/2013-v6-n1-10.pdf>
- [P7] Dimitrios Kodokostas. *Infinitely many Gerretsen-Blundon style quadratic inequalities, all strongest in Blundon's sense*. Journal of Geometry, Vol. 103, Issue 3 (2012), pp. 505-513.
- [P8] Dimitrios Kodokostas. *A Geometric Condition for a 4-Manifold to be Spinable*. Octogon, Vol. 18, No. 1, pp. 3-9, 2010.
- [P9] Dimitrios Kodokostas. *Triangle Equalizers*. Mathematics Magazine, Vol. 83, pp. 141-146, 2010.
- [P10] Dimitrios Kodokostas. *Knot Parallels as Elements of π_1 of the Knot's Complement*. Bulletin of the Greek Mathematical Society, Vol. 52, pp. 119-124, 2006.
- [P11] C. Hartonas, D. Kodokostas and K. Kokkinos. *Petri Net Semantics for Communicating Agents*. Annals of Mathematics, Computing and Teleinformatics, Vol. 1, No 4, pp 31-40, 2006.
- [P12] Dimitrios Kodokostas. *How to Define the Area of a Self-Intersected Polygon*. Gazeta Matematica, Seria A, No. 4, pp. 256-270, 2006.
- [P13] Dimitrios Kodokostas. *A Rational Integral and a Polynomial Decomposition*. The Pentagon, National Math Honor Society KME, Vol. 65, pp. 19-26, Fall 2005.
- [P14] Dimitrios Kodokostas. *A Really Elementary Proof of Thebault's Theorem*. Pi Mu Epsilon, National Honorary Mathematics Society, Vol.12, No. 1, pp. 405-412, 2004.
- [P15] Dimitrios Kodokostas. *Projected Rotating Polygons*. Mathematics Magazine, Vol. 77, pp. 388-390, 2004.
- [P16] Dimitrios Kodokostas. *Polygonal Areas in Regular and Distorted Lattices*. Bulletin of the Irish Mathematical Society, Vol. 52, pp. 31-81, Fall 2003.
- [P17] Dimitrios Kodokostas. *A Nice Inequality*. Australian Mathematical Society Gazette, Vol. 30, pp. 202-203, 2003.

In refereed conferences

- [P18] A. Malamou, C. Pandis, A. Karakasiliotis, P. Stefaneas, D. Kodokostas and P. Frangos. *Application of an Autofocusing Algorithm for SAR Image Quality Improvement and Application of the Modified Fractal Signature (MFS) Method for SAR Image Classification for the case of Real Radar Data*. Proceedings Communications, Electromagnetics and Medical Applications (CEMA) 13, Sofia, Bulgaria, October 2013.
- [P19] Crysafis Hartonas, Dimitrios Kodokostas, Christos Nikolaidis, Paraskevi Tsoutsas, George Adam and Georgia Garani. *A "Dynamic" Extension of the "Logic of Information Flow"*. Proceedings IPSI'05, Amsterdam, Holland, September 2005 .
- [P20] C. Hartonas, D. Kodokostas and Ch. Nicolaidis. *Reasoning about Actions and Agent Capabilities: A Variant and Extension of the KARO Framework*. Proceedings IPSI'04, Stockholm, Sweden, September 2004.

OTHER WRITING ACTIVITIES

Books

- [W1] Anargyros Fellouris, Giannis Tirlis, Dimitrios Kodokostas, Eftratis Rappos, Evangelos Psyxas. *International Mathematical Olympiads, vol. B'* (in Greek). Greek Mathematical Society, ISBN:978-960-7341-31-0, Athens, Greece 2008.

Conferences

- [W2] Dimitrios Kodokostas. *Bezier Curves, a drawing resort* (in Greek). Scientific Symposium of Geometry: from science to application, Technological Education Institute of Peireaus, Greece, pp. 247-264 June 2012.
- [W3] Dimitrios Kodokostas. *Checking Hypothesis in Mathematics* (in Greek). Proceedings of the Greek Mathematical Society Conference, pp. 45-55, 2004.

University Lecture Notes

- [W4] Dimitrios Kodokostas. *1. Descriptive Geometry of one plane, 2. Descriptive Geometry of two planes, 3. Conic sections, 4. Perspective and homology, 5. Stereometry*. National Technical University, Athens, Greece, 2013-14, <https://mycourses.ntua.gr>
- [W5] Dimitrios Kodokostas. *Discriptive Geomerty and Stereometry*. University of Thessaly, Volos, Greece, 2003-2014, <http://eclass.uth.gr/eclass/modules/document/document.php?course=MHXC150&openDir=/513fb787eocd>
- [W6] Dimitrios Kodokostas. *Mathematics (Geometry)* (in Greek). Technological Education Institute of Larisa, Department of Building Restoration, Trikala, Greece, February 2006.
- [W7] Dimitrios Kodokostas. *Mathematics (Analysis)*. Technological Education Institute of Larisa, Department of Building Restoration, Karditsa, Greece, March 2006.

On Mathematical Education

- [W8] Dimitrios Kodokostas. *Jordan's Theorem* (in Greek). The ϕ (a Greek journal), Vol. 6, pp. 78-88, 2009.
- [W9] Dimitrios Kodokostas. *Infinitesimals V* (in Greek). The ϕ , Vol. 5, pp. 81-89, 2008.
- [W10] Dimitrios Kodokostas. *Infinitesimals III* (in Greek). The ϕ , Vol. 4, pp. 79-85, 2007.
- [W11] Dimitrios Kodokostas. *Bolzano's Theorem* (in Greek). Apollonios (a Greek journal), Vol. 5, pp. 71-79, 2007.
- [W12] Dimitrios Kodokostas. *Infinitesimals II, The foundations of usual Analysis: our Arithmetic System* (in Greek). The ϕ , Vol. 3, pp. 59-68, 2006.
- [W13] Dimitrios Kodokostas. *Infinitesimals I, Achilles, the tortoise and Zeno's paradoxes* (in Greek), The ϕ , Vol. 2, pp. 40-46, 2005.

International Mathematical Olympiads shortlist editor

- [W14] Anargyros Fellouris, Dimitrios Kodokostas. *Shortlist editing for the 32nd Balkan Mathematical Olympiad*, Athens 2015.
- [W15] Anargyros Fellouris, Dimitrios Kodokostas, Alexis Papaioannou. *Shortlist editing for the 24th Balkan Mathematical Olympiad*, Rhodes, Greece, 2007.
- [W16] Anargyros Fellouris, Dimitrios Kodokostas, Leonidas Iossifidis, Anastasia Karakosta. *Shortlist editing for the 16th Junior Balkan Mathematical Olympiad*, Veria, Greece, 2012.
- [W17] Anargyros Fellouris, Nikolaos Iosifidis, Dimitrios Kodokostas, Dimitrios Kontogiannis, Dimitrios Stathopoulos. *Shortlist editing for the 9th Junior Balkan Mathematical Olympiad*, Veria, Greece, 2005.
- [W18] Christos Athanasiadis, Mircea Becheanu, Theodoros Bolis, Dimitrios Kodokostas, Marcin E. Kuzma, Svetoslav Savchev, Dimitrios Stathopoulos. *Shortlist editing for the 45th International Mathematical Olympiad*, Athens, Greece, 2004.

Math Summer School Notes

- [W19] Dimitrios Kodokostas. *Articles: 1. Inequalities, 2. The Area of a Spherical Triangle, Euler's Relation for Polyhedra, Regular Solids, 3. A short Summary of Basic Formulas in Combinatorics*. Greek Mathematical Society, Collective Notes, 3rd Summer School in Mathematics 5th - 8th Summer School in Mathematics, 2011 - 2014, Leptokaria, Greece.
- [W20] Dimitrios Kodokostas. *Articles: 1. Elements of Oriented Geometry, 2. Elements of Simple Combinatorics I*. Greek Mathematical Society, Collective Notes, 3rd Summer School in Mathematics, 2009, Leptokaria, Greece.

- [W21] Dimitrios Kodokostas. *1. Elements of Simple Combinatorics I, 2. A method of Producing Olympiad-like Geometric Inequalities, 3. Jordan's Theorem, 4. Induction in Geometry.* Greek Mathematical Society, Collective Notes, 2nd Summer School in Mathematics, 2008, Naousa, Greece.
- [W22] Dimitrios Kodokostas. *Articles: 1. Dirichlet's Principle, 2. Induction in Geometry, 3. Sperner's Lemma.* Greek Mathematical Society, Collective Notes 1st Summer School in Mathematics, 2007, Naousa, Greece.

TEACHING EXPERIENCE

Higher education

National Techn. Univ. (Athens, Greece)	2011-2015	undergraduate courses: Descriptive geometry, Projective and Perspective geometry, Geometric drawing techniques (Lecturer, Scientific Associate) graduate courses: Topological aspects of the crystallographic groups of the euclidean plane and sphere tilings. (Lecturer).
Un. of Thessaly (Volos, Greece)	2012-2014 2005-2012 2012	Geometry for Engineers (Sc. Assoc.). Projective and Discriptive Geometry (Sc. Assoc.). Numerical Methods in the Science of Political Engineering (Sc. Assoc.).
Un. of Ioannina (Ioannina, Greece)	2009 2009	Philosophy of mathematics (Sc. Assoc.). Didactics of Mathematics (Sc. Assoc.).
Un. of West Macedonia (Florina, Greece)	2004	Mathematics teaching in preschool education (Sc. Assoc.).
Tech. Ed. Inst. of Larisa (Larisa, Greece)	2002-03	Descriptive Geometry, Geometry, General Mathematics, Discrete Mathematics, Economics Mathematics, Mathematical Logic, Statistics, Mathematical Software: Derive (Sc. Assoc.).
Army College of Officers (Trikala, Greece)	2013 2006	Higher Mathematics (Sc. Assoc.). Applied Mathematics, Higher Mathematics (Sc. Assoc.).
Un. of Notre Dame (Indiana, USA)	1997 1996 1995,1996 1996 1994	Differential Equations (Teaching Assistant). Discrete Mathematics (Instructor). Calculus III (Teaching Assistant). Calculus II (Teaching Assistant). Calculus I (Teaching Assistant).

Continuing Education

State Inst. of Voc. Training (Larisa, Greece)	2004	Statistics II.
State Inst. of Voc. Training (Trikala, Greece)	2002	Economics Mathematics.

Secondary Education

Omega (tutoring school) (Trikala, Greece)	2001	High school student preparation in Geometry, Statistics and Analysis for the National University Entry Exams.
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Voluntary Teaching

Greek Math Society	2014 and 2007-2012	Geometry, Algebra, Number Theory, Combinatorics, Special Topics (Summer math schools in Leptokaria and Naousa, Greece).
	2006, 2001 2000, 1991	Special Topics, Math competitions preparation courses (Athens, Trikala and Ioannina, Greece).

RESEARCH EXPERIENCE

- 01/07/2013 - 30/11/2015 Thales-National Technical Institute of Athens, Greece- Algebraic modeling of topological and computational structures and applications. Sub-project: Hecke-type quotient Algebras of the braid groups $B_{2,n}$. (Scientific Coordinator: Prof. S. Lambropoulou. MIS:380154, code no.: Special Fund Research Account: 68/119).
- 21/12/2006 - 31/12/2007 Research Project ARCHIMEDES II. Research Group support at Technological Education Institute of Larissa, Greece, at the sub-project: PerLa (Intelligent Personalised Learning Assistants), at the work package: Formal Study of the Mechanism of Logic Production and Decision Making at the Student Model. (Research Committee, T.E.I. of Larissa. Co-funded by the Greek Ministry of Education and the European Union. Scientific Coordinator: Assoc. Prof. K. Karapoulios.)
- 01/01/2006 - 31/12/2006 Research Project Pythagoras I. Mathematical Logic, Recursion Theory and Applications, Project Package "Petri Nets and typical system specialisation". (Research Committee, Athens University, Greece. Co-funded by the European Social Fund and National Resources. Scientific Coordinator: Prof. Y. Moschovakis.)
- 01/09/2004 - 31/08/2006 Research Project ARCHIMEDES I. Research Group support, Technological Education Institute of Larissa, Greece at the subproject: ProsAgent: Foundations and Development Tool for PROSA-like, agent-based, team-oriented, holonic manufacturing control, at the work package: Formal Foundations of Multi-Agent Systems. (Research Committee, T.E.I. of Larissa. Co-funded by the Greek Ministry of Education and the European Union. Scientific Coordinator: Prof. C. Hartonas.)

REVIEWER

- 06/2011 - Mathematics Magazine.

CONFERENCE TALKS, LECTURES

- 02/06/2012 *Bezier Curves, a drawing resort.* Technological Education Institute of Peireaus, Greece, Department of Structural Scientific Symposium of Geometry: from science to application.
- 09/06/2010 *Knot exteriors in B^4 .* Department of Mathematics, National Technical University of Athens, Greece.
- 01/06/2007 *Petri Net Semantics for Communicating Agents.* Department of Mathematics, University of Athens, Greece.
- 11/05/2007 *Process Algebras Petri Net Semantics.* Department of Mathematics, Aegean University, Greece.
- 19/11/2004 *Checking Hypothesis in Mathematics.* Greek Mathematical Society Conference.
- 1994-96 *(A series of talks) Homotopy Theory: Homotopy pairs and triples, Blackers-Massey Theorem, Whitehead Theorem, spectral sequences, homotopy limits and co-limits,* Student Topology Seminar, University of Notre Dame, Dept. of Mathematics, Indiana, USA.

OTHER PROFESSIONAL EXPERIENCE

- 01/09/2007 Member of the Greek Mathematical Society Contests Committee.
- 03-08/05/2015 Vice President of the Problem Selection Committee and of the Grading Committee, Problem Captain for the 32nd Balkan Mathematical Olympiad held in Athens, Greece.
- 13-19/07/2014 Instructor at the 8th Summer Math School, Leptokaria, Greece.
- 28/06-03/07/2013 Leader of the Greek team in the 30th Balkan Mathematical Olympiad, Agros, Cyprus.
- 05-12/07/2012 Instructor at the 6th Summer Math School, Leptokaria, Greece.
- 25-29/06/2012 Vice President of the Problem Selection Committee and of the Grading Committee for the 16th Balkan Mathematical Olympiad held in Veria, Greece.

- 26/04-02/05/2012 Deputy Leader of the Greek team in the 29th Balkan Mathematical Olympiad, Antalya, Turkey.
- 24-30/07/2011 Instructor at the 5th Summer Math School, Leptokaria, Greece.
- 04-08/05/2011 Deputy Leader of the Greek team in the 28th Balkan Mathematical Olympiad, Iassio, Romania.
- 25-31/07/2010 Instructor at the 4th Summer Math School, Leptokaria, Greece.
- 26/07-01/08/2009 Instructor at the 3rd Summer Math School, Leptokaria, Greece.
- 25-30/06/2009 Leader of the Greek team in the 13th Junior Balkan Mathematical Olympiad, Sarajevo, Bosnia.
- 03-09/08/2008 Instructor at the 2nd Summer Math School, Agios Nikolaos, Naousa, Greece.
- 23-29/06/2008 Leader of the Greek team in the 12th Junior Balkan Mathematical Olympiad, Vlora, Albania.
- 05-11/08/2007 Instructor at the 1st Summer Math School, Agios Nikolaos, Naousa, Greece.
- 01/04-02/05/2007 Vice President of the Problem Selection Committee and of the Grading Committee, Problem Captain for the 24th Balkan Mathematical Olympiad held in Rhodes, Greece.
- 10-18/07/2006 Deputy Leader of the Greek team in the 47th International Mathematical Olympiad, Ljubljana, Slovenia.
- 25-30/06/2006 Deputy Leader of the Greek team in the 10th Junior Balkan Mathematical Olympiad, Chisinau, Moldova.
- 20/05-26/06/2005 Member of the Problem Selection Committee and of the Grading Committee for the 9th Junior Balkan Mathematical Olympiad held in Veria, Greece.
- July - Nov. 2004 Member of the Scientific Committee at the 21st conference of the Greek Mathematical Society, held in Trikala, Greece on 18 - 21/11/ 2004.
- March - July 2004 Member of the Problem Selection Committee and of the Grading Committee, Problem Captain for the 45th International Mathematical Olympiad held in Greece, Athens, Greece on July 4-18, 2004.

LANGUAGES

- Greek - Mother tongue.
- English - 5 years of studies in U.S.A.
- French - I can read mathematical texts.

OTHER SKILLS

- Computer skills: mathematica, maple, derive, math type, geogebra, sketchpad, minitab, fortran, ms office, internet, multimedia etc.
- Co-organizer of the Student Topology Seminar, Notre Dame, Indiana, USA, 1994 - 1996.

FELLOWSHIPS-SCHOLARSHIPS

- 1993 - 94, 97 - 98 Fulbright Foundation Scholarship: Visa for graduate studies in U.S.A., health insurance, travel expenses.
- 1993 - 94, 97 - 98 Fellowship, University of Notre Dame, Indiana, USA (salary with no teaching obligation).
- 1994 - 97 Teaching Assistantship, University of Notre Dame, Indiana, USA (salary with a teaching obligation).
- 1993 - 98 Tuition Scholarship, University of Notre Dame, Indiana, USA (tuition fee waiver).
- 1988 - 91 Monetary grant by the National Institute of Scholarships of Greece for the top grade in the Department of Mathematics, University of Ioannina, Greece.

AWARDS

- 1988 3rd place in the 5th Balkan Mathematical Olympiad, Nicosia, Cyprus.
- 1987 1st place in the Final Contest of the Greek Math Olympiad, Athens, Greece.
- 1987 3rd place in the 28th International Mathematical Olympiad, Havana, Cuba.
- 1986 3rd place in the the Final Contest of the Greek Math Olymp., Athens, Greece.
- 1986 Participation in the 27th International Mathematical Olympiad, Warsaw, Poland.
- 1986 3rd place in the 3rd Balkan Mathematical Olympiad, Bucharest, Romania.

- 1986 Special prize in the Final Contest of the Gr. Math Olympiad, Athens, Greece.
1985 Special prize in the Final Contest of the Gr. Math Olympiad, Athens, Greece.

Administration and other activities at National Technical University (N.T.U.A), Athens, Greece

- 06/2015 Supervisor of the undergraduate dissertation titled “The Borsuk Ulam Theorem” of Sfikas Ioannis, Department of Mathematics, N.T.U.A.
04/2015 Talk titled ”Geometry through examples” at the celebrating festivities for the 15 years of the Department of Mathematics at N.T.U.A.
12/2014 Member of the 7-member Examination Committee of the Ph.D. thesis of Ioannis Diamantis, Department of Mathematics, N.T.U.A.
12/2014 Member of the 3-member Examination Committee of the Qualifying Exam for Ph.D. studies of Gucumcu Neslihan, Department of Mathematics, N.T.U.A.
2014-15 Member of the Examinations and Supervising Committee, Department of Mathematics, N.T.U.A.
03/2014 Founding member of the Lab of Computational Mathematics and Mathematical Modeling, Department of Mathematics, N.T.U.A.

DISTINCTIONS

- 1992 1st grade upon graduation from the Department of Ioannina, Greece.
1988 3rd entering grade at the Department of Ioannina, Greece.
1988 Honorary Diploma awarded by the Greek Mathematical Society for my distinctions in the Greek and International Mathematical Olympiads.
1992 GRE General Test, Quantitative: 790 (95% below).
1992 GRE Subject Test (Mathematics): 940 (87% below).

PROFFESIONAL MEMBERSHIPS

- 1986 - 2013 Mathematical Association of America.
1986 - Greek Mathematical Society.
1993 - Fulbright Foundation.
1993 - 2006 American Mathematical Society.