

Theodoros Zygiridis

Curriculum Vitae

Karamanli & Lygeris

50131, Kozani

☎ +30 24610 56533

☎ +30 24610 56501

✉ tzygiridis@uowm.gr

🌐 <http://users.uowm.gr/tzygiridis/>

Personal Data

Date of birth February 15th, 1978
Place of birth Thessaloniki
Military duty Fullfilled (from 13/02/2006 to 13/02/2007)

Education

- 2006 **PhD**, Department of Electrical and Computer Engineering, Aristotle University of Thessaloniki, Greece.
- Dissertation: "Development of optimized higher-order finite-difference schemes for the accurate solution of electromagnetic problems in the time domain".
 - Supervisor: Prof. Theodoros Tsiboukis.
 - Grade: "Excellent".
 - Awarded: 24/03/2006.
- 2000 **Diploma (five-year)**, Department of Electrical and Computer Engineering, Aristotle University of Thessaloniki, Greece.
- Admission: 1995.
 - Graduation: 13/07/2000.
 - Diploma grade: 8.40 ("Very good").
 - 10th among 191 students.
- 1995 **Admission** to the Department of Electrical and Computer Engineering, Aristotle University of Thessaloniki, Greece.
- Ranking 9th, after national exams.
 - High-school diploma, 19 6/10 ("Excellent").

Academic employment

- July 2013 **Assistant Professor**, Department of Informatics and Telecommunications Engineering, – today University of Western Macedonia, Greece.
- June 2010 **Lecturer**, Department of Informatics and Telecommunications Engineering, University of – Sept. 2013 Western Macedonia, Greece.
- Oct. 2008 **Contract lecturer (407/80)**, Department of Informatics and Telecommunications Engineering, – June 2010 University of Western Macedonia, Greece.
- Oct. 2008 **Scientific associate**, Technological Educational Institute of Serres, Greece. – July 2009
- Oct. 2007 **Scientific and laboratory associate**, Technological Educational Institute of Serres, Greece. – July 2008

- Jan. 2007 **Postdoctoral research associate**, Department of Electrical and Computer Engineering,
– Jan. 2009 Aristotle University of Thessaloniki, Greece.
- Nov. 2000 **PhD Candidate - Researcher**, Department of Electrical and Computer Engineering, Aristotle
– Feb. 2006 University of Thessaloniki, Greece.

Post-doctoral research

- 1/2/2008 Scholarship from the Greek Scholarships Foundation.
- 31/1/2009 ○ Research project entitled: “Hybrid algorithms and supplemental techniques for the generalized application of optimized discretization schemes in complex electromagnetic problems”.
- 1/1/2007 Grant of Excellence, Research Committee, Aristotle University of Thessaloniki, Greece
- 31/12/2007 ○ Research project entitled: “Optimized and hybrid computational finite-difference models for problems with complex electromagnetic and geometric features”.

Undergraduate awards

- 1999 Annual award for excellence as a student (Organization for Telecommunications in Greece).
- 1998 Annual award for excellence as a student (State Scholarship Foundation).

Teaching experience

University of Western Macedonia – Department of Informatics and Telecommunications Engineering

- 2008-2016 **Mathematical Analysis I** (1st semester, compulsory).
**Also delivered to the Department of Mechanical Engineering during 2009-2015.*
Contents: Sets. Real numbers. Sequences of real numbers. Series of real numbers. Real functions of a single variable. Limits and continuity. Derivatives. Application of derivatives. Indefinite and definite integrals, improper integrals. Applications of integration. Power series.
- 2008-2016 **Mathematical Analysis II** (2nd semester, compulsory).
**Also delivered to the Department of Mechanical Engineering during 2009-2015.*
Contents: The \mathcal{R}^n space. Quadratic surfaces. Real functions of several variables. Partial derivatives. Chain differentiation. Directional derivative. Extreme values. Taylor series. Double integrals. Triple integrals. Vector functions. Curves. Line integrals. Differentiation of scalar and vector fields. Conservative fields. Green’s theorem. Surface integrals. Gauss and Stokes theorems.
- 2010-2016 **Applied Mathematics I** (3rd semester, compulsory).
**Also delivered to the Department of Mechanical Engineering during all years.*
Contents: Introduction. First-order ordinary differential equations. Separable equations. Exact equations, integrating factors. Linear equations. Solution via substitution. Higher-order ordinary differential equations. Linear equations with constant coefficients. Order reduction. Solution of inhomogeneous differential equations. Laplace transform and its use for solving differential equations. Series solution of differential equations, ordinary and singular points. Systems of differential equations, solution with the matrix method. Complex numbers. Complex functions. Differentiation of complex functions. Integration of complex functions.
- 2012-2016 **Applied Mathematics II** (4th semester, compulsory).
**Also delivered to the Department of Mechanical Engineering during all years.*

Contents: Introduction to Partial Differential Equations (PDEs). Examples of PDEs. First-order PDEs. Linear, semi-linear, and quasi-linear PDEs. Characteristic curves. The Cauchy problem. Second-order PDEs, classification, standard forms. Eigenvalue problems. The Laplace equation, solution in Cartesian and polar coordinates, cases of homogeneous and inhomogeneous boundary conditions and infinite domains. Orthogonal functions, Fourier series and Fourier integrals. The heat equation, solution in finite and infinite spaces. Special functions. The wave equation, finite and infinite strings.

2011-2015 **Electromagnetic Waves** (5th semester, compulsory) .

**Co-teaching during 2011-2013.*

Contents: Time-varying fields, displacement current, Maxwell's equations, wave equation, retarded potentials, Poynting vector. Plane waves, polarization, propagation. Reflection and transmission. Transmission lines, TEM waves, telegrapher's equations. Waveguides, TE and TM modes, dielectric waveguides. Electromagnetic radiation and antennas, short dipole, half-wavelength dipole, antenna arrays, radiation pattern..

2010-2012 **Signal and System Theory** (4th semester, compulsory).

Contents: Signal and system classification. Elementary signals. Generalized functions. Linear time invariant systems. Convolution. Impulse response. Fourier transform and series. Frequency response. Laplace transform. Transfer functions. Stability. Sampling. Filters.

[Technological Educational Institute of Serres – Department of Informatics & Communications](#)

2008-2009 **Computational Methods in Telecommunications** (Lectures & Lab).

Contents: Introduction to computational methods, finite differences for the Laplace equations, finite differences for the Poisson, diffusion and wave equations, finite elements for one-dimensional problems, method of moments.

2007-2008 **Numerical Methods in Programming Environment** (Lab).

Contents: Methods for equation solving, linear systems, LU factorization, eigenvalues and eigenvectors, numerical integration.

Computational Methods in Telecommunications (Lab).

Wireless Communications (Lab).

Contents: Efficiency of radio-systems, passive reflectors, back-to-back antenna systems, radio-systems with various capacities.

Digital Signal Processing (Lab).

Contents: Introduction to Matlab, basic sequences, transformations of signals, even and odd parts, convolution, system response, computing DFT and DTFT, Z-transform.

[Technological Educational Institute of Serres – Department of Mechanical Engineering](#)

2007-2009 **Electric Machines** (Lectures).

Contents: Basic principles of dc machines, dc generators, dc motors, ac machines, synchronous generators, inductive motors.

[Aristotle University of Thessaloniki – Department of Electrical and Computer Engineering](#)

2001-2005 Teaching assistant for: **Electromagnetic fields I, II, III and IV.**

Contents: static electric fields, inductors and capacitors, static magnetic fields, electromagnetic induction, magnetic circuits, forces on particles, electric flow field, Maxwell's equations, plane waves, reflection and transmission, waveguides, transmission lines, radiation.

Research interests

- Computational Electromagnetics.
Finite-difference methods, finite-element methods, and finite-volume methods for time-dependent electromagnetic fields.
- Finite-difference time-domain methods.
Conventional and non-standard techniques, implicit and explicit algorithms, hybrid schemes, high-order discretization techniques, curvilinear coordinate systems, etc.
- Error minimization and optimized algorithms.
Phase-error reduction techniques, single-frequency or wideband improvement, generalizations to lossy media, separate or simultaneous treatment of space-time errors, optimized temporal integrators, determination of optimum time-step size, interface discretizations, etc.
- Algorithm parallelization on graphics processing units.
Minimization of simulation times, acceleration of explicit and implicit algorithms, implementation of best practices.
- Computational modeling of problems with uncertainties.
Intrusive stochastic FDTD algorithms, polynomial chaos, collocation methods and sparse grids, Monte-Carlo methods.
- Modeling and simulations of realistic problems.
Electromagnetic radiation effects on biological tissues, lightning-induced fields, electromagnetic compatibility problems, metamaterial-nanomaterial and graphene structures, antennas, wireless propagation, etc.

Languages

English Certificate of Proficiency in English, University of Cambridge (Grade: A).

Professional organizations

- Member of the Technical Chamber of Greece since 2000.
- Member of the Institute of Electrical and Electronics Engineers (IEEE).

Computing experience

- Programming languages: C, Cuda.
- Operating systems: WINDOWS.
- Software packages: Matlab, Mathematica, XFDTD, CST, EDX SignalPro.

Publications in international peer-reviewed journals

- [J.38] Georgios G. Pyrialakos, **Theodoros T. Zygiridis**, and Nikolaos V. Kantartzis, "A 3-D polynomial-chaos FDTD technique for complex inhomogeneous media with arbitrary stochastically-varying index gradients," *ACES Express J.*, vol. 1, no. 3, pp. 109–112, Mar. 2016.
- [J.37] **Theodoros T. Zygiridis**, Nikolaos V. Kantartzis, and Theodoros D. Tsiboukis, "Four-stage split-step FDTD method with error-cancellation features," *ACES Express J.*, vol. 1, no. 3, pp. 105–108, Mar. 2016.
- [J.36] **Theodoros T. Zygiridis**, Nikolaos V. Kantartzis, and Theodoros D. Tsiboukis, "Development of optimized operators based on spherical-harmonic expansions for 3D FDTD schemes," *International Journal of Applied Electromagnetics and Mechanics*, vol. 51, no. s1, pp. S57–S66, 2016.

- [J.35] Nikolaos V. Kantartzis, **Theodoros T. Zygiridis**, Christos S. Antonopoulos, Yasushi Kanai, and Theodoros D. Tsiboukis, "A generalized domain-decomposition stochastic FDTD technique for complex nanomaterial and graphene structures," *IEEE Trans. Magn.*, vol. 52, no. 3, #7203804, Mar. 2016.
- [J.34] **Theodoros T. Zygiridis**, Nikolaos V. Kantartzis, Christos S. Antonopoulos, and Theodoros D. Tsiboukis, "Efficient integration of high-order stencils into the ADI-FDTD method," *IEEE Trans. Magn.*, vol. 52, no. 3, #7201704, Mar. 2016.
- [J.33] Georgios G. Pyrialakos, **Theodoros T. Zygiridis**, Nikolaos V. Kantartzis, and Theodoros D. Tsiboukis, "GPU-based calculation of lightning-generated electromagnetic fields in 3-D problems with statistically defined uncertainties," *IEEE Trans. Electromagn. Compat.*, vol. 57, no. 6, pp. 1556-1567, Dec. 2015.
- [J.32] Georgios Pyrialakos, Athanasios Papadimopoulos, **Theodoros Zygiridis**, Nikolaos Kantartzis, and Theodoros Tsiboukis, "A curvilinear stochastic-FDTD algorithm for 3-D EMC problems with media uncertainties," *COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering*, vol. 34, no. 5, pp. 1637-1651, 2015.
- [J.31] **Theodoros Zygiridis**, Georgios Pyrialakos, Nikolaos Kantartzis, and Theodoros Tsiboukis, "Accelerated unconditionally stable FDTD scheme with modified operators," *COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering*, vol. 34, no. 5, pp. 1564-1577, 2015.
- [J.30] **T. T. Zygiridis**, N. V. Kantartzis, and T. D. Tsiboukis, "Parallel LOD-FDTD method with error-balancing properties," *IEEE Trans. Magn.*, vol. 51, no. 3, #7205804, Mar. 2015.
- [J.29] N. V. Kantartzis, **T. T. Zygiridis**, and T. D. Tsiboukis, "A 3-D stochastic FDTD method based on reduced-order modeling for statistically random media in nano-electromagnetic applications," *IEEE Trans. Magn.*, vol. 51, no. 3, #7205705, Mar. 2015.
- [J.28] **T. T. Zygiridis**, N. V. Kantartzis, and T. D. Tsiboukis, "GPU-accelerated efficient implementation of FDTD methods with optimum time-step selection," *IEEE Trans. Magn.*, vol. 50, no. 2, #7011704, Feb. 2014.
- [J.27] N. V. Kantartzis, **T. T. Zygiridis**, and T. D. Tsiboukis, "Enhanced analysis of multiconductor nanostructured devices via a compact block FDTD/VFDTD method," *IEEE Trans. Magn.*, vol. 50, no. 2, #7004104, Feb. 2014.
- [J.26] **Theodoros T. Zygiridis**, "Design of least-squares time integrators for reliable FDTD simulations," *IEEE Trans. Magn.*, vol. 49, no. 5, pp. 1817-1820, May 2013.
- [J.25] **Theodoros T. Zygiridis**, "High-order error-optimized FDTD algorithm with GPU implementation," *IEEE Trans. Magn.*, vol. 49, no. 5, pp. 1809-1812, May 2013.
- [J.24] **Theodoros T. Zygiridis**, "Fourth-order finite-difference time-domain method based on error-controlling concepts," *Int. J. Numer. Model.*, vol. 25, no. 5-6, pp. 587-598, Sept.-Dec. 2012.
- [J.23] **T. T. Zygiridis**, "Optimum time-step size for 2D (2, 4) FDTD method," *Electron. Lett.*, vol. 47, no. 5, pp. 317-319, March 2011.
- [J.22] **T. T. Zygiridis**, "Bandwidth control of optimized FDTD schemes," *ACES Journal*, vol. 25, no. 12, pp. 1078-1085, Dec. 2010.
- [J.21] **T. T. Zygiridis**, "Two-dimensional time-domain algorithm with adaptive spectral properties," *IEEE Microw. Wireless Compon. Lett.*, vol. 20, no. 5, pp. 241-243, May 2010.
- [J.20] **T. T. Zygiridis**, T. K. Katsibas, C. S. Antonopoulos, and T. D. Tsiboukis, "Treatment of grid-conforming dielectric interfaces in FDTD methods," *IEEE Trans. Magn.*, vol. 45, no. 3, pp. 1396-1399, Mar. 2009.

- [J.19] **T. T. Zygiridis** and T. D. Tsiboukis, "Error estimation and performance control for the (2,4) FDTD method in lossy spaces," *IEEE Trans. Magn.*, vol. 45, no. 3, pp. 1356-1359, Mar. 2009.
- [J.18] **T. T. Zygiridis** and T. D. Tsiboukis, "Assessment of human head exposure to wireless communication devices: combined electromagnetic and thermal studies for diverse frequency bands," *Progress In Electromagnetic Research B*, vol. 9, pp. 83-96, 2008.
- [J.17] **T. T. Zygiridis** and T. D. Tsiboukis, "Improved finite-difference time-domain algorithm based on error control for lossy materials," *IEEE Trans. Microw. Theory Tech.*, vol. 56, no. 6, pp. 1440-1445, June 2008.
- [J.16] **T. T. Zygiridis** and T. D. Tsiboukis, "Optimized (2,4) FDTD method for conducting media," *IEEE Trans. Magn.*, vol. 44, no. 6, pp. 1370-1373, June 2008.
- [J.15] **T. T. Zygiridis** and T. D. Tsiboukis, "Optimized three-dimensional FDTD discretizations of Maxwell's equations on Cartesian grids," *J. Comp. Phys.*, vol. 226, no. 2, pp. 2372-2388, Oct. 2007.
- [J.14] T. V. Yioultsis, T. I. Kosmanis, **T. T. Zygiridis**, E. P. Kosmidou, A. Pyrpasopoulou, T. D. Xenos, N. J. Farsaris, V. Kotoula, P. M. Hytirogrou, G. Karkavelas, I. N. Magras, and T. D. Tsiboukis, "An integrated computational and experimental approach of low power microwave pulse-modulated nonthermal biological effects on prenatal development," *WSEAS Trans. Communications*, vol. 5, no. 10, pp. 1995-2001, Oct. 2006.
- [J.13] **T. T. Zygiridis**, E. P. Kosmidou, K. P. Prokopidis, N. V. Kantartzis, C. S. Antonopoulos, K. I. Petras, and T. D. Tsiboukis, "Numerical modeling of an indoor wireless environment for the performance evaluation of WLAN systems," *IEEE Trans. Magn.*, vol. 42, no. 4, pp. 839-842, Apr. 2006.
- [J.12] **T. T. Zygiridis** and T. D. Tsiboukis, "Design of optimized FDTD schemes for the accurate solution of electromagnetic problems," *IEEE Trans. Magn.*, vol. 42, no. 4, pp. 811-814, Apr. 2006.
- [J.11] **T. T. Zygiridis** and T. D. Tsiboukis, "Development of higher order FDTD schemes with controllable dispersion error," *IEEE Trans. Antennas Propagat.*, vol. 53, no. 9, pp. 2952-2960, Sept. 2005.
- [J.10] **T. T. Zygiridis** and T. D. Tsiboukis, "Phase error reduction in general FDTD methods via optimum configuration of material parameters," *J. Materials Processing Tech.*, vol. 161, no. 1-2, pp. 186-192, Apr. 2005.
- [J.9] **T. T. Zygiridis** and T. D. Tsiboukis, "Higher-order finite-difference schemes with reduced dispersion errors for accurate time-domain electromagnetic simulations," *Int. J. Num. Modelling*, vol. 17, no. 5, pp. 461-486, Sept.-Oct. 2004.
- [J.8] **T. T. Zygiridis** and T. D. Tsiboukis, "Low-dispersion algorithms based on the higher order (2,4) FDTD method," *IEEE Trans. Microwave Theory Tech.*, vol. 52, no. 4, pp. 1321-1327, Apr. 2004.
- [J.7] **T. T. Zygiridis** and T. D. Tsiboukis, "A dispersion-reduction scheme for the higher order (2,4) FDTD method," *IEEE Trans. Magn.*, vol. 40, no. 2, Part 2, pp. 1464-1467, Mar. 2004.
- [J.6] N. V. Kantartzis, **T. T. Zygiridis**, and T. D. Tsiboukis, "An unconditionally stable higher order ADI-FDTD technique for the dispersionless analysis of generalized 3-D EMC structures," *IEEE Trans. Magn.*, vol. 40, no. 2, Part 2, pp. 1436-1439, Mar. 2004.
- [J.5] **T. T. Zygiridis**, N. V. Kantartzis, and T. D. Tsiboukis, "Higher order tangential vector finite elements for 3-D antenna array structures," *Electromagnetics*, vol. 24, no. 1-2, pp. 95-111, Jan.-Mar. 2004.

- [J.4] **T. T. Zygidis**, N. V. Kantartzis, T. V. Yioultsis, and T. D. Tsiboukis, "Higher order approaches of FDTD and TVFE methods for the accurate analysis of fractal antenna arrays," *IEEE Trans. Magn.*, vol. 39, no. 3, Part 1, pp. 1230-1233, May 2003.
- [J.3] T. V. Yioultsis, T. I. Kosmanis, E. P. Kosmidou, **T. T. Zygidis**, N. V. Kantartzis, T. D. Xenos, and T. D. Tsiboukis, "A comparative study of the biological effects of various mobile phone and wireless LAN antennas," *IEEE Trans. Magn.*, vol. 38, no. 2, Part 1, pp. 777-780, Mar. 2002.
- [J.2] N. V. Kantartzis, **T. T. Zygidis**, and T. D. Tsiboukis, "A nonstandard higher order FDTD algorithm for 3-D arbitrarily and fractal-shaped antenna structures on general curvilinear lattices," *IEEE Trans. Magn.*, vol. 38, no.2, Part 1, pp. 737-740, Mar. 2002.
- [J.1] **T. T. Zygidis**, N. V. Kantartzis, and T. D. Tsiboukis, "Sierpinski double-gasket antenna investigated with a 3-D FDTD conformal technique," *Electron. Lett.*, vol. 38, no. 3, pp. 107-109, Jan. 2002.

Submitted papers

- [S.3] **Theodoros T. Zygidis**, "Improved unconditionally-stable FDTD method for three-dimensional wave-propagation problems," submitted to *IEEE Transactions on Microwave Theory and Techniques*, July 2016.
- [S.2] **T. T. Zygidis**, N. V. Kantartzis, and T. D. Tsiboukis, "Investigation of uncertainty in lightning-produced EM fields with a polynomial-chaos FDTD approach," submitted to *International Journal of Numerical Modeling: Electronic Networks, Devices and Fields*.
- [S.1] N. V. Kantartzis, **T. T. Zygidis**, and T. D. Tsiboukis, "Efficient Krylov-based 3-D FDTD schemes with adaptive domain decomposition for graphene and nanostructured EMC components," submitted to *International Journal of Numerical Modeling: Electronic Networks, Devices and Fields*.

Publications in international-conference proceedings

- [C.50] A. N. Papadimopoulos, S. A. Amanatiadis, N. V. Kantartzis, I. T. Rekanos, **T. T. Zygidis**, and T. D. Tsiboukis, "A convolutional PML scheme for the efficient modeling of graphene structures through the ADE-FDTD technique," accepted for presentation in *The Seventeenth Biennial IEEE Conference on Electromagnetic Field Computation*, Miami, Florida USA, November 13-16, 2016.
- [C.49] **T. T. Zygidis**, A. D. Papadopoulos, N. V. Kantartzis, C. S. Antonopoulos, E. N. Glytsis, and T. D. Tsiboukis, "Polynomial-chaos time-domain method for uncertainty analysis of axially-symmetric structures," accepted for presentation in *The Seventeenth Biennial IEEE Conference on Electromagnetic Field Computation*, Miami, Florida USA, November 13-16, 2016.
- [C.48] A. N. Papadimopoulos, S. A. Amanatiadis, N. V. Kantartzis, **T. T. Zygidis**, and T. D. Tsiboukis, "Rigorous time-domain analysis of statistically oriented graphene sheet fluctuations," accepted for presentation in *The 17th International IGTE Symposium on Numerical Field Calculation in Electrical Engineering*, Graz, Austria, 18-21 Sept., 2016.
- [C.47] Christos I. Salis, Nikolaos V. Kantartzis and **Theodoros T. Zygidis**, "Stochastic LOD-FDTD method for two-Dimensional electromagnetic uncertainty problems," accepted for presentation in *The 17th International IGTE Symposium on Numerical Field Calculation in Electrical Engineering*, Graz, Austria, 18-21 Sept., 2016.

- [C.46] **Theodoros T. Zygidis**, Nikolaos V. Kantartzis and Theodoros D. Tsiboukis, "Uncertainty assessment of lightning electromagnetic pulses with collocation methods," accepted for presentation in *The 17th International IGTE Symposium on Numerical Field Calculation in Electrical Engineering*, Graz, Austria, 18-21 Sept., 2016.
- [C.45] Panagiotis Sarigiannidis, Dimitris Pliatsios, **Theodoros Zygidis**, and Nikolaos Kantartzis, "DAMA: A Data Mining Forecasting DBA Scheme for XG-PONs," *The International Conf. on Modern Circuits and Systems Technologies*, pp: 1-4, Thessaloniki, Greece, 12–14 May, 2016. DOI: 10.1109/MOCAST.2016.7495169
- [C.44] Athanasios Papadimopoulos, Vivian Alreem, **Theodoros Zygidis**, Panagiotis Sarigiannidis, Nikolaos Kantartzis, and Christos Antonopoulos, "Statistical analysis of microwave components through a 3-D stochastic-FDTD technique," *The International Conf. on Modern Circuits and Systems Technologies*, pp: 1-4, Thessaloniki, Greece, 12–14 May, 2016. DOI: 10.1109/MOCAST.2016.7495163
- [C.43] Christos Salis, **Theodoros Zygidis**, Panagiotis Sarigiannidis, and Nikolaos Kantartzis, "Unconditionally-stable time-domain approach for uncertainty assessment in transmission lines," *The International Conf. on Modern Circuits and Systems Technologies*, pp. 1-4, Thessaloniki, Greece, 12–14 May, 2016. DOI: 10.1109/MOCAST.2016.7495151
- [C.42] **Theodoros Zygidis**, Nikolaos Kantartzis, and Theodoros Tsiboukis, "Investigation of Uncertainty in Lightning-Produced EM Fields with a Polynomial-Chaos FDTD Approach," *The 10th International Symp. on Electric and Magnetic Fields (EMF 2016), From Numerical Models to Industrial Applications*, p. 1, Lyon, France, 12–14 April, 2016.
- [C.41] Nikolaos Kantartzis, **Theodoros Zygidis**, and Theodoros Tsiboukis, "Efficient Krylov-based 3-D FDTD schemes with adaptive domain decomposition for graphene and nanostructured EMC components," *The 10th International Symp. on Electric and Magnetic Fields (EMF 2016), From Numerical Models to Industrial Applications*, p. 1, Lyon, France, 12–14 April, 2016.
- [C.40] Stamatios A. Amanatiadis, Alexandros I. Dimitriadis, **Theodoros T. Zygidis**, and Nikolaos V. Kantartzis, "Transmitted and reflected graphene surface waves due to substrate discontinuities," *10th European Conf. on Antennas and Propagation (EuCAP)*, pp. 1–3, Davos, Switzerland, 10–15 April, 2016. doi: 10.1109/EuCAP.2016.7481955.
- [C.39] **Theodoros T. Zygidis**, Nikolaos V. Kantartzis, Christos S. Antonopoulos, and Theodoros D. Tsiboukis, "Construction of 3D FDTD schemes with frequency-dependent operator coefficients," *10th European Conf. on Antennas and Propagation (EuCAP)*, pp. 1–5, Davos, Switzerland, 10–15 April, 2016. doi: 10.1109/EuCAP.2016.7481734.
- [C.38] **Theodoros T. Zygidis**, Nikolaos V. Kantartzis, and Theodoros D. Tsiboukis, "Development of optimized operators based on spherical-harmonic expansions for 3D FDTD schemes," *XVII International Symp. on Electromagnetic Fields in Mechatronics, Electrical and Electronic Engineering – ISEF 2015*, pp. 1-8, Valencia, Spain, September 10-12, 2015.
- [C.37] N. V. Kantartzis, **T. T. Zygidis**, C. S. Antonopoulos, and T. D. Tsiboukis, "Reduced-order models of VFETD/FDTD algorithms for optimized nanomaterial EMC applications," *Joint IEEE International Symp. on Electromagnetic Compatibility and EMC Europe*, pp. 512–517, Dresden, Germany, August 16 - 22, 2015.
- [C.36] G. G. Pyrialakos, **T. T. Zygidis**, N. V. Kantartzis, and T. D. Tsiboukis, "GPU-accelerated stochastic-FDTD study of lightning-induced EM Fields over non-deterministic terrains," *Progress In Electromagnetics Research Symp. - PIERS 2015*, pp. 2310-2314, Prague, Czech Republic, July 6–9, 2015.

- [C.35] **T. T. Zygiridis**, N. V. Kantartzis, and T. D. Tsiboukis, "Development of ADI-FDTD methods with dispersion-relation-preserving features," *Progress In Electromagnetics Research Symp. - PIERS 2015*, pp. 2209-2214, Prague, Czech Republic, July 6–9, 2015.
- [C.34] **Theodoros T. Zygiridis**, Nikolaos V. Kantartzis, Christos S. Antonopoulos, and Theodoros D. Tsiboukis, "Efficient integration of high-order stencils into the ADI-FDTD method," *20th International Conf. on the Computation of Electromagnetic Fields - COMPUMAG 2015*, pp. 1-2, Montreal, Quebec, Canada, June 28 – July 2, 2015.
- [C.33] Nikolaos V. Kantartzis, **Theodoros T. Zygiridis**, Christos S. Antonopoulos, and Theodoros D. Tsiboukis, "A generalized domain-decomposition stochastic FDTD technique for complex nanomaterial and graphene structures," *20th International Conf. on the Computation of Electromagnetic Fields - COMPUMAG 2015*, pp. 1-2, Montreal, Quebec, Canada, June 28 – July 2, 2015.
- [C.32] A. N. Papadimopoulos, G. G. Pyrialakos, A. X. Lalas, **T. T. Zygiridis**, N. V. Kantartzis, C. S. Antonopoulos, T. F. Eibert, and T. D. Tsiboukis, "Statistical modeling of antennas via a generalized stochastic-FDTD method," *9th European Conf. on Antennas and Propagation - EuCAP 2015*, pp. 1-5, Lisbon, Portugal, 12 – 17 April, 2015.
- [C.31] G. G. Pyrialakos, A. N. Papadimopoulos, **T. T. Zygiridis**, N. V. Kantartzis, and T. D. Tsiboukis, "A curvilinear stochastic-FDTD algorithm for 3-D EMC problems with media uncertainties," *16th International IGTE Symp. on Numerical Field Calculation in Electrical Engineering (IGTE '14)*, p. 64, Graz, Austria, Sept. 14-17, 2014.
- [C.30] **T. T. Zygiridis**, G. G. Pyrialakos, N. V. Kantartzis, and T. D. Tsiboukis, "Accelerated unconditionally stable FDTD scheme with modified operators," *16th International IGTE Symp. on Numerical Field Calculation in Electrical Engineering (IGTE '14)*, p. 50, Graz, Austria, Sept. 14-17, 2014.
- [C.29] G. Pyrialakos, **T. Zygiridis**, N. Kantartzis, and T. Tsiboukis, "FDTD analysis of 3D lightning problems with material uncertainties on GPU architecture," *Proc. of the 2014 International Symp. on Electromagnetic Compatibility (EMC Europe 2014)*, pp. 577-582, Gothenburg, Sweden, September 1-4, 2014.
- [C.28] **T. T. Zygiridis**, N. V. Kantartzis, and T. D. Tsiboukis, "Parallel LOD-FDTD method with error-balancing properties," *The Sixteenth Biennial IEEE Conf. on Electromagnetic Field Computation - CEFC 2014*, Annecy, France, May 25-28, 2014.
- [C.27] N. V. Kantartzis, **T. T. Zygiridis**, and T. D. Tsiboukis, "A 3-D stochastic FDTD method based on reduced-order modeling for statistically random media in nano-electromagnetic applications," *The Sixteenth Biennial IEEE Conf. on Electromagnetic Field Computation - CEFC 2014*, Annecy, France, May 25-28, 2014.
- [C.26] G. G. Pyrialakos, **T. T. Zygiridis**, N. V. Kantartzis, and T. D. Tsiboukis, "GPU-based three-dimensional calculation of lightning-generated electromagnetic fields," *IEEE International Conf. on Numerical Electromagnetic Modeling and Optimization for RF, Microwave and Terahertz Applications - NEMO2014*, pp. 1-4, Pavia, Italy, May 14-16, 2014.
- [C.25] **T. T. Zygiridis**, "On the design of leapfrog integrators for optimized implementations of 3D FDTD models," *International Conf. on Electromagnetics in Advanced Applications '13*, pp. 1224-1227, Torino, Italy, Sept. 9-13, Sept. 2013. **(invited)**
- [C.24] **T. T. Zygiridis**, N. V. Kantartzis, and T. D. Tsiboukis, "GPU-accelerated efficient implementation of FDTD methods with optimum time-step selection," *19th COMPUMAG Conf. on the Computation of Electromagnetic Fields*, pp. 1-2, Budapest, Hungary, 30 June – 4 July 2013.

- [C.23] N. V. Kantartzis, **T. T. Zygiridis**, and T. D. Tsiboukis, "Enhanced analysis of multiconductor nanostructured devices via a compact block FDTD/VFETD method," *19th COMPUMAG Conf. on the Computation of Electromagnetic Fields*, pp. 1-2, Budapest, Hungary, 30 June – 4 July 2013.
- [C.22] **T. T. Zygiridis**, "Design of least-squares time integrators for reliable FDTD simulations," *The 15th Biennial IEEE Conf. on Electromagnetic Field Computation, CEFC 2012*, p. 376, Oita, Japan, Nov. 11-14 2012.
- [C.21] **T. T. Zygiridis**, "High-order error optimized FDTD algorithm with GPU implementation," *The 15th Biennial IEEE Conf. on Electromagnetic Field Computation, CEFC 2012*, p. 207, Oita, Japan, Nov. 11-14 2012.
- [C.20] K. Rallis, T. Theodoulidis and **T. Zygiridis**, "Efficient calculation of the lightning generated electric field above ground," *EMC Europe 2012, International Symp. on Electromagnetic Compatibility*, Rome, Italy, Sept. 17-21, 2012.
- [C.19] T. I. Kosmanis, N. V. Kantartzis, **T. T. Zygiridis**, and P. T. Aisopoulos, "Numerical analysis of the electromagnetic interference of a WAVE inter-vehicle communication system on vehicle electronics," *9th International Symp. on EMC joint with 20th International Wroclaw Symp. on EMC*, pp. 265-268, Wroclaw, Poland, Sept. 13 -17, 2010.
- [C.18] T. I. Kosmanis, **T. T. Zygiridis**, N. V. Kantartzis, and P. T. Aisopoulos, "Vehicle-to-vehicle communication system EMI characterization on automotive electronics," *2010 URSI International Symp. on Electromagnetic Theory*, pp. 418-421, Berlin, Germany, Aug. 16-19, 2010.
- [C.17] **T. T. Zygiridis**, "Bandwidth control of optimized FDTD schemes," *26th Annual Review of Progress in Applied Computational Electromagnetics*, pp. 320-323, Tampere, Finland, April 26-29, 2010.
- [C.16] N. V. Kantartzis and **T. T. Zygiridis**, "Enhanced FDTD schemes based on dispersion-optimized stencil-adjustable nonstandard operators," *26th Annual Review of Progress in Applied Computational Electromagnetics*, Tampere, Finland, pp. 316-319, April 26 - 29, 2010.
- [C.15] **T. T. Zygiridis**, T. K. Katsibas, C. S. Antonopoulos, and T. D. Tsiboukis, "Treatment of grid-conforming dielectric interfaces in FDTD methods," *CEFC 2008, 13th Biennial IEEE Conf. on Electromagnetic Field Computation*, Athens, Greece, May 11-15, 2008, p. 460.
- [C.14] **T. T. Zygiridis** and T. D. Tsiboukis, "Error estimation and performance control for the (2,4) FDTD method in lossy spaces," *CEFC 2008, 13th Biennial IEEE Conf. on Electromagnetic Field Computation*, Athens, Greece, May 11-15, 2008, p. 244.
- [C.13] **T. T. Zygiridis** and T. D. Tsiboukis, "Optimized (2,4) FDTD method for conducting media," *16th COMPUMAG Conf. on the Computation of Electromagnetic Fields*, Aachen, Germany, June 24-28, 2007, pp. 783-784.
- [C.12] **T. T. Zygiridis**, K. I. Petras, and T. D. Tsiboukis, "A generic study of human exposure to wireless systems: evaluation of power absorption and thermal effects," *16th COMPUMAG Conf. on the Computation of Electromagnetic Fields*, Aachen, Germany, June 24-28, 2007, pp. 549-550.
- [C.11] K. P. Prokopidis, N. V. Kantartzis, **T. T. Zygiridis**, and T. D. Tsiboukis, "Modeling of dielectric properties of biological tissues by vector fitting," *16th COMPUMAG Conf. on the Computation of Electromagnetic Fields*, Aachen, Germany, June 24-28, 2007, pp. 539-540.

- [C.10] T. V. Yioultsis, T. I. Kosmanis, **T. T. Zygiridis**, E. P. Kosmidou, A. Pyrpasopoulou, T. D. Xenos, N. J. Farsaris, V. Kotoula, P. M. Hytiroglou, G. Karkavelas, I. N. Magras, and T. D. Tsiboukis, "A combined computational and experimental investigation of nonthermal biological effects on prenatal development due to radiation from low power microwave antennas," *6th WSEAS International Conf. on Applied Informatics and Communications*, Elounda, Greece, August 18-20, 2006, pp. 323-327.
- [C.9] **T. T. Zygiridis**, E. P. Kosmidou, K. P. Prokopidis, N. V. Kantartzis, C. S. Antonopoulos, K. Petras, and T. D. Tsiboukis, "Numerical modeling of an indoor wireless environment for the performance evaluation of WLAN systems," *15th COMPUMAG Conf. on the Computation of Electromagnetic Fields*, Shenyang, China, June 26-30, 2005, vol. III, pp. 210-211.
- [C.8] **T. T. Zygiridis** and T. D. Tsiboukis, "Design of optimized FDTD schemes for the accurate solution of EM problems," *15th COMPUMAG Conf. on the Computation of Electromagnetic Fields*, Shenyang, China, June 26-30, 2005, vol. II, pp. 120-121.
- [C.7] N. V. Kantartzis, **T. T. Zygiridis**, and T. D. Tsiboukis, "An unconditionally stable higher-order ADI-FDTD technique for the dispersionless analysis of generalized 3-D EMC structures," *14th COMPU-MAG Conf. on the Computation of Electromagnetic Fields*, Saratoga Springs, New York, U.S.A., July 13-17, 2003, vol. I, pp. 148-149.
- [C.6] **T. T. Zygiridis** and T. D. Tsiboukis, "A dispersion-reduction scheme for the higher-order (2,4) FDTD method," *14th COMPUMAG Conf. on the Computation of Electromagnetic Fields*, Saratoga Springs, New York, U.S.A., July 13-17, 2003, vol. I, pp. 146-147.
- [C.5] **T. Zygiridis** and T. Tsiboukis, "Phase error reduction in general FDTD methods via optimum configuration of material parameters," *JAPMED '03, Proceedings of the 3rd Japanese-Mediterranean Workshop on Applied Electromagnetic Engineering for Magnetic and Superconducting Materials & 3rd Workshop on Superconducting Flywheels*, May 19-21, 2003, Athens, Greece, pp. 73-74.
- [C.4] **T. T. Zygiridis**, N. V. Kantartzis, T. V. Yioultsis, and T. D. Tsiboukis, "Higher-order approaches of FDTD and TVFE methods for the accurate analysis of fractal antenna arrays," *IEEE CEFC 2002, The Tenth Biennial IEEE Conf. on Electromagnetic Field Computation*, Perugia, Italy, June 16-19 2002, p. 150.
- [C.3] **T. T. Zygiridis**, N. V. Kantartzis, and T. D. Tsiboukis, "Higher-order tangential vector finite elements for complicated 3-D antenna array structures," *6th International Workshop on Finite Elements for Microwave Engineering – Antennas, Circuits and Devices*, Chios, Greece, May 30 - June 1 2002, p. 56.
- [C.2] T. V. Yioultsis, T. I. Kosmanis, E. P. Kosmidou, **T. T. Zygiridis**, N. V. Kantartzis, T. Xenos, and T. D. Tsiboukis, "A comparative study of the biological effects of various mobile phone and wireless LAN antennas," *13th COMPUMAG Conf. on the Computation of Electromagnetic Fields*, Evian-les-bains, France, July 2-5, 2001, pp. 100-101.
- [C.1] N. V. Kantartzis, **T. T. Zygiridis**, and T. D. Tsiboukis, "A nonstandard higher-order FDTD algorithm for 3-D arbitrarily and fractal-shaped antenna structures on general curvilinear lattices," *13th COMPUMAG Conf. on the Computation of Electromagnetic Fields*, Evian-les-bains, France, July 2-5, 2001, pp. 24-25.

Other publications

- [O.1] **T. Zygiridis**, H. Pallas, and T. Tsiboukis, "Composition of electromagnetic radiation patterns for the area of the city of Serres," *Bulletin of the Panhellenic Association of Mechanical-Electrical Engineers*, issue 368, pp. 56-60, June 2004 (in Greek).

Other conference publications

- [G.2] Eleni Diamantidou and **Theodoros Zygiridis**, "Software for the calculation and design of anten-nas array radiation patterns," *9th Conference for Electrical and Computer Engineering Students*, Chania, Crete, 22-24 April, 2016 (in Greek).
- [G.1] Eleni Diamantidou and **Theodoros Zygiridis**, "Software for the simulation of metamaterial characteristic properties," *8th Conference for Electrical and Computer Engineering Students*, pp. 211-214, Patra, 3–5 April 2015 (in Greek).

Citations

- There have been found **250** citations (excluding self-citations, h-index = **9**) of the published work in scientific publications, dissertations and books.
- Scopus: **132** (excluding self-citations, h-index = **7**)
- ResearchGate: **215**.
- Publish or Perish: **254** (h-index = **8**).

Lecture notes

- **Single-Variable Calculus**, 175 pages.
(available at <http://eclass.uowm.gr/courses/ICTE108/>).
Sets, real numbers, sequences, series, single-variable functions, limits, derivatives, applications of derivatives, indefinite integrals, techniques of integrations, definite integrals, applications of definite integrals, power series.
- **Multivariable calculus and vector analysis**, 139 pages.
(available at <http://eclass.uowm.gr/courses/ICTE136/>).
The \mathcal{R}^n space, multivariable functions, differentiation, double integrals, triple integrals. Vector functions, curves, line integrals, scalar and vector fields, surface integrals, Green, Gauss and Stokes theorems.
- **Ordinary differential equations**, 153 pages.
(available at <http://eclass.uowm.gr/courses/ICTE109/>).
Introduction, 1st-order ODEs, higher-order ODEs, Laplace transform, solution via power series, systems of ODEs. Complex numbers, complex functions and derivatives, integration.
- **Partial differential equations**, 103 pages.
(available at <http://eclass.uowm.gr/courses/ICTE217/>).
Introduction to PDEs, 1st-order PDEs, linear 2nd-order PDEs, eigenvalue problems, Laplace equation, Fourier series and integrals, diffusion equation, wave equation.

Reviewer services

Scientific journals

- IEEE Microwave and Wireless Components Letters
- IEEE Transactions on Magnetics
- IEEE Antennas and Wireless Propagation Letters
- IEEE Transactions on Microwave Theory and Techniques
- IET Electronics Letters
- International Journal of Numerical Modelling: Electronic Networks, Devices and Fields
- Progress In Electromagnetics Research

- Journal of Electromagnetic Waves and Applications
- IEEE Photonics Technology Letters
- Applied Computational Electromagnetics Society (ACES)
- International Journal of Antennas and Propagation (Hindawi)
- COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering
- Physica Status Solidi (b) (Wiley)
- International Journal of Communication Systems
- IEEE Transactions on Audio, Speech and Language Processing
- Proceedings of the Royal Society A

Scientific conferences

- The European Conference on Antennas and Propagation (2015, 2017)
- The Biennial IEEE Conference on Electromagnetic Field Computation (2012, 2016)
- The International Conference on Modern Circuits and Systems Technologies (2016)

Participation in conference committees

- 9th European Conference on Antennas and Propagation – EuCAP 2015 (Technical Programme Committee Member).
- International Conference on Modern Circuits and Systems Technologies – MOCAS 2016 (Program Committee).

Research projects – Professional experience

- 11/2000 – 7/2001 **Complete study of the consequences of electromagnetic radiation to embryos of rats and a simulation approach to human and other organisms.**
[Aristotle university of Thessaloniki (A.U.Th.) - General Secretariat of Research and Technology (G.S.R.T.)]
Analysis of specific radiation-interaction problems in living beings, extraction and comparison of results, composition of measurement and simulation archive, justification.
- 11/06/2001 – 10/06/2003 **Measurements of EM field level in the city of Serres, Greece and study of antenna park relocation**
[A.U.Th. - Municipality of Serres]
Project's technical personnel, measurements and extraction of radiation patterns, data process.
- 01/07/2002 – 30/09/2002 **Telecommunications Centre, Aristotle University of Thessaloniki**
[A.U.Th.]
Technical personnel of the Telecommunications Centre, support for distant-learning systems.
- 12/06/2003 – 11/02/2006 **Complete numerical and experimental study of the influence of radiation from contemporary wireless systems on humans.**
[A.U.Th. - G.S.R.T.]
Numerical simulation of various types of antennas, software development.
- 01/10/2003 – 31/12/2003 **Reformation of the current undergraduate study program of the department of Electrical and Computer Engineering**
01/09/2005 [A.U.Th. - Ministry of Education & Religious Affairs]
– 30/11/2005 Development of electronic educational material for the courses of “Electromagnetic Field” and “Special Topics of Electromagnetic Field”.

- 01/01/2004 **Measurements of electromagnetic and acoustic power density.**
 – 31/01/2004 [Research Committee A.U.Th.]
 26/03/2004 On-site and lab measurement at RF and microwave frequencies, including power density,
 – 30/04/2004 antenna gain, electromagnetic shielding, and scattering parameters.
 01/02/2006
 – 07/02/2006
- 06/06/2007 **Advanced services of distant learning of T.E.I. of Serres**
 – 15/09/2007 [Technological Educational Institute of Serres]
 Development & support of advanced telematics services for higher education. Production of
 electronic educational material for the theoretical courses PHYSICS I and PHYSICS II, which
 are taught at the Department of Informatics and Communications.
- 01/04/2009 **Complete simulation and electromagnetic compatibility investigation of the electronic**
 – 30/09/2010 **systems of conventional and hybrid electric vehicles**
 [Technological Educational Institute of Thessaloniki]
 Simulation (design and analysis) of electronic vehicular components and study of their
 interactions with the electromagnetic surroundings.
- 2011–today **Internship program, Department of Informatics and Telecommunications Engineering**
 [University of Western Macedonia]
 Supervision of undergraduate students.
- 01/06/2015 **Irakleitos II - central actions for doctoral studies**
 – 30/09/2015 [A.U.Th. - European union and national funds]
 Project evaluation at Aristotle University of Thessaloniki.
- 26/09/2012 **Advanced computational modeling and applications for innovative materials and**
 – 30/09/2015 **structures (“ΑΡΙΣΤΕΙΑ Ι”)**
 [A.U.Th. - European union and national funds]
 Advanced numerical techniques in the time domain, graphene, parallelization and
 development of algorithms on graphics processing units, micro-electromechanical systems,
 metamaterials. (Budget: 300,000€).

Scientific committees for phd students

- Supervisor of one (1) PhD candidate:
 - Christos Salis, “Efficient computational methods for the solution of electromagnetic problems with uncertainties,” University of Western Macedonia (Sept. 2014 - today).
- Currently serving as an Advisory Committee Member for one (1) PhD candidate:
 - Georgios Pyrgialakos, “Design of combined metamaterial-graphene structures with adaptive properties and optimum performance,” Aristotle University of Thessaloniki (Sept. 2014 - today).

- Served as an Examination Committee Member for four (4) doctoral theses:
 - Konstantinos Rallis, “Electromagnetic study of underground conductors,” *PhD dissertation*, Department of Mechanical Engineering, University of Western Macedonia, Kozani, 2012.
 - Chrysovalantou Ziogou, “Modelling, optimisation and control of integrated PEM fuel cell systems,” *PhD Dissertation*, Department of Informatics and Telecommunications Engineering, University of Western Macedonia, Kozani, Greece, 2013.
 - Harikleia-Haritini Voulgaraki, “Study of excitation for a SQUID magnetometer in non destructive testing applications,” *PhD dissertation*, Department of Mechanical Engineering, University of Western Macedonia, Kozani, December 2014.
 - Athanasios Sfikas, “Development of a water pollution prediction model using a multi-parameter sensors network,” *PhD dissertation*, Department of Informatics and Telecommunications Engineering, University of Western Macedonia, Kozani, Sept. 2015.

Supervision of diploma theses

Supervisor of eight (8) completed diploma projects and three (3) more in progress:

- E. Magganopoulou, *Operation control of modern antennas using metamaterials*, June 2016.
- C. Livas, *Parallelization of a finite-difference algorithm for acoustic problems*, Feb. 2016.
- P. Giannakeris, *Realization of the compact FDTD method for waveguide problems*, July 2015.
- A. Terzidou, *Simulation study of the effect of electromagnetic radiation on human biological tissues*, July 2015.
- K. Minas, *Computational solution of the telegrapher equations with high-order approximations for the study of transmission line problems*, July 2014.
- G. Stylianou, *Acceleration of the two-dimensional FDTD method with CUDA and applications in the study of wireless networks*, Mar. 2014.
- N. Koutsou, *Computational study of smart antenna systems*, Oct. 2013.
- P. Valsamas, *Computational study of contemporary antennas for wireless communication configurations*, Oct. 2013.

Administrative duties

- 2016–today Member of the Temporal General Assembly of the Department of Informatics and Telecommunications Engineering.
- 2010–2013
- 2015 Member of the Academic Matters and Personnel Committee of the University of Western Macedonia. Also participated in workgroups with the following responsibilities:
 - Organization and supervision of undergraduate study programs.
 - Decisions on instructors, length of academic year and examination periods.
- 2014–today Committees of Admission Exams from other Universities/Institutes.
 - Department of Informatics and Telecommunications Engineering (2014,2015).
 - Department of Environmental Engineering (2015).
- 2012–today Responsible for preparing and editing the formal Study Guide of the Department of Informatics and Telecommunications Engineering.
- 2011–today Member of the Internal Evaluation Committee, Department of Informatics and Telecommunications Engineering.

2011–today Member of various committees, Department of Informatics and Telecommunications Engineering:

- Committee for the evaluation of temporary teaching staff (2011-today).
- Academic Planning Committee.
- Committee for supply receipt and work confirmation (2011-today).
- Committee for investigating the violation of written examination rules (2014).
- Committee for the valuation of applications for contributory scholarships (2012-2013).
- Committee for the evaluation of applications for PhD studies (2013).
- Committee for equipment disposal (2012).
- Committee for the evaluation of applications of transferred student (2010-2011).

2010–today Participation in several University committees for public tender.

2013 Responsible for preparing the regulations for conducting written exams at the Department.

2011 Responsible for preparing the regulations for the Department's doctoral studies program.