

CURRICULUM VITAE

George Smyrlis
Assistant Professor
Department of Mathematics
Technological Educational Institute (TEI) of Athens
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• Education

1992: Degree in Mathematics, Department of Mathematics, University of Patras

1995: Msc in Pure Mathematics, Department of Mathematics, University of Athens

2002: Ph.D. Thesis in Mathematics, Department of Mathematics, National Technical University of Athens, Greece.

[Thesis title: Nonlinear Elliptic Partial Differential Equations and Hemivariational Inequalities.]

Languages: English, French (elements), Greek (mother tongue)

• Scholarships

–I.K.Y. (1994 - 1996)

– “Papakyriakopoulos” - National Technical University of Athens (1998-2002).

• Research interests

Nonlinear analysis, nonlinear ordinary and partial differential equations(qualitative theory),variational and hemivariational inequalities(qualitative theory), optimization.

• Publications in journals

1. “An Existence Theorem For Nonlinear Elliptic Equations” (with D. Kravvaritis), *Rev. Roumaine Math. Pures Appl.* 47 (3) 2002, 329-339.

2. "An Existence Theorem For Quasilinear Elliptic Resonance Equations"
(with D. Kravvaritis), *Nonlinear Functional Analysis and Applications* 6
(2) 2001, 205-215.

3. "A Variational Approach For A Class of Nonlinear Elliptic Boundary
Value Problems" (with D. Kravvaritis and P. Matei), *Nonlinear Studies* 10
(1) 2003, 39-57.

4. "On Nonlinear Hemivariational Inequalities" (with N. S. Papageorgiou) ,
Dissertationes Mathematica (Rozprawy Mat.) 419(2003), pp. 1-60.

5. "Local Convergence of the Steepest Descent Method in Hilbert spaces"
(with V. Zisis), *Journal of Mathematical Analysis and Applications* 300
(2004), pp. 436-453.

6. "A Multiplicity result for nonlinear elliptic hemi-variational inequalities
below the 1-st eigenvalue", *Nonlinear Functional Analysis and Applica-
tions*, Vol. 10, No. 1 (2005), pp. 25-39.

7. "Some Initial Value Problems Containing a Large Parameter" (with V. Pa-
panicolaou), *Journal of Applied Functional Analysis*, Vol. 1, No 4 (2006),
pp.441-451.

8. "Positive solutions to a singular third-order 3-point boundary value prob-
lem with indefinitely signed Green's function" (with A. Palamides), *Non-
linear Analysis TMA*, Vol. 68, No 7(2008), pp. 2104-2118.

9. "Similarity Solutions for a Multidimensional Replicator Dynamics Equa-
tion" (with V. Papanicolaou), *Nonlinear Analysis TMA* 71 (2009), pp.
3185-3196. 10)

10. "Solvability for a Third-Order Three-Point BVP on Time Scales" (with
D. R. Anderson), *Mathematical and Computer Modelling* 49 (2009), pp.
1994-2001.

11. "Nonlinear Elliptic Equations With Asymptotically Linear Reaction Term"
(with N.S.Papageorgiou), *Nonlinear Analysis TMA* 71(2009), pp. 3129-
3151.

12. "A multiplicity theorem for Neumann problems with asymmetric nonlinearity" (with N. S. Papageorgiou), *Annali di Matematica Pura ed Applicata* Vol. 189, No 2 (2010), pp. 253-272.
13. "Multiple solutions for nonlinear Neumann problems with the p-Laplacian and a nonsmooth crossing potential" (with N. S. Papageorgiou), *Nonlinearity* 23, No 3 (2010), pp. 529-548.
14. "Positive solutions for nonlinear Neumann problems with concave and convex terms" (with N. S. Papageorgiou), *Positivity*, Vol. 16 (2) (2012), pp. 271-296.
15. "Neumann problems with double resonance" (with Donal O' Regan and N. S. Papageorgiou), *Topological Methods in Nonlinear Analysis*, Vol. 39 (1)(2012), pp. 159-174.
16. "Nontrivial solutions for nonlinear problems with one sided resonance", *Electron. J. Differential. Equations* (to appear).
17. "On nonlinear nonhomogeneous resonant Dirichlet equations" (with N.S.Papageorgiou), *Pacific J. Math.* (to appear).

• **Papers submitted for publication**

1. "On a class of parametric Neumann problems with indefinite and unbounded potential" (with N.S.Papageorgiou), *Forum Mathematicum*.
2. "A bifurcation - type theorem for singular nonlinear elliptic equations" (with N.S.Papageorgiou), *Nonlin. Diff.Equ. Appl.*
3. "Positive solutions for nonlinear nonhomogeneous parametric equations" (with N.S.Papageorgiou), *Topological Methods in Nonlin. Anal.*
4. "Positive solutions for parametric p-Laplacian equations" (with N.S.Papageorgiou), *Analysis and Applications*.
5. "Solutions and multiple solutions at resonance for nonlinear, nonhomogeneous Dirichlet equations" (with N.S.Papageorgiou), *Analysis and PDE's*.

• **Publications in Proceedings of Conferences**

1. 8th National Conference in Mathematical Analysis, Techn. Univ. of Thrace, Xanthi, 29/09/2000 - 30/09/2000. Title of contribution : “An Existence theorem for Nonlinear Elliptic PDE’s”.
2. EQUADIFF 10 (The Czechoslovak International Conference on Differential Equations and Their Applications), Prague, 27/08/2001 - 31/08/2001. Title of contribution : “Multiple solutions for the Neumann problem for Nonlinear Hemivariational Inequalities”.
3. 9th National Conference in Mathematical Analysis, Techn. Univ. of Crete, Chania, 05/09/2002 -07/09/2002. Title of contribution: “ Nonlinear Hemivariational Inequalities at Resonance”.
4. “The Scientific Proceedings of The Department of Mathematics” (Lucrarile sesiuniistiintifice ale Catedrei de Matematica), Technical University of Civil Engineering, Bucharest, May 23th 2003, the 7th Edition, pages 68-70. Title of contribution: “On a minimum problem with constraints in Orlicz-Sobolev spaces”.
5. International Conference on “Influence of traditional mathematics and mechanics on modern science and technology”, Messini (Kalamata-Greece), May 22-28/2004. Title of contribution: “An Existence Theorem for Nonlinear Elliptic Equations”.
6. 1st Conference ”From Scientific Computing to Computational Engineering”, Athens, September 8-10 , 2004. Title of contribution: “Local Convergence of the Steepest Descent Method in Hilbert spaces”.
7. 7th International Workshop on “Mathematical Methods in Scattering Theory and Biomedical Engineering” , 8-11 September 2005, Nikios School, Nymphaio, Greece. Title of contribution : “Multiple Solutions for Nonlinear Hemivariational Inequalities below the first eigenvalue”, World Sci. Publ., Hackensack, NJ 2006.
8. 12th National Conference in Mathematical Analysis, Univ. of Athens, 15/05/2008 - 17/05/2008, Title of contribution: “Positive solutions to singular 3-point boundary value problems with indefinitely signed Green’s function”.
9. EQUADIFF 12 (The Czechoslovak International Conference on Differential Equations and Their Applications), Brno, 20/07/09 - 24/07/09. Title of contribution : “Multiple solutions for nonlinear Neumann problems with the p-Laplacian and a nonsmooth crossing potential”.
10. International Workshop on “Variational, Topological and Set-valued Methods for Nonlinear Differential Problems”, Department of Science for Engineering and Architecture - Engineering Faculty, University of Messina (Italy), 14/04/2010-16/04/2010. Title of contribution: “A bifurcation - type theorem for the positive solutions of a nonlinear Neumann problem

with concave and convex terms". Proceedings in: Le Matematiche Vol. LXV (2010) - Fasc. II, pp. 69-78.

11. 13th National Conference in Mathematical Analysis, Univ. of Ioannina, 28 & 29/05/2010. Title of contribution: "Positive solutions for Nonlinear Neumann problems with concave and convex terms".
12. 14th National Conference in Mathematical Analysis, Univ. of Patras, 18/05/2012-19/05/2012. "Nontrivial and multiple solutions for problems at resonance"
13. International Conference on Differential Equations, Difference Equations and Special Functions (in memory of professor Panayiotis D. Siafarikas), September 3 - 7, 2012, Patras, Greece. Title of contribution: "On a Class of Parametric Neumann Problems with Indefinite and Unbounded Potential"

• Referee/Review activities

–Referee in the journals: "Computers and Mathematics with Applications", "Mathematical and Computer Modelling", "Nonlinear Analysis:Real World & Applications", "Applied Mathematics Letters", "J. of Appl. Math. And Computing", "Boundary Value Problems".

–Reviewer in "Mathematical Reviews".

• Teaching activities

–**2002 - 2008:** Instructor in Univ. of the Aegean, Department of Product and Systems Design Engineering.

Undergraduate Courses: "Linear Algebra and Analytic Geometry", "Discrete Mathematics", "Differential Equations".

Graduate Courses: "Applied Mathematics".

– **2002 - 2006, 2007 - 2008:** Instructor in TEI of Athens, Department of Mathematics. Courses: "Calculus I", "Calculus II, "Calculus III".

– **March 2006 - July 2007:** Instructor in National Techn. Univ. of Athens, Department of Mathematics. Courses: "Complex Analysis", "Linear Algebra", "Calculus III".

–**10/07/2008 -today:** Assistant Professor in TEI of Athens, Department of Mathematics. Courses: "Calculus I", "Calculus II, "Calculus III", "Applied Mathematics".

• Granted Research Programmes

– **01/01/2002 - 31/03/2004:** "THALIS", National Techn. Univ. of Athens.

– **01/02/2007 - 31/01/2009:** "CARATHEODORY", National Techn. Univ. of Athens.