

CURRICULUM VITAE of GEORGE C. TSIATAS

Civil Engineer, M.Sc., DIC, Dr. Eng.

Associate Professor of Mechanics

Department of Mathematics, University of Patras

Date and place of birth : 18/6/1974, Athens.
Home address : 41, K. Theotokou St., Gr-16121, Athens, Greece
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1. Studies

- 2003 **Doctor of Engineering**, School of Civil Engineering, National Technical University of Athens, Greece.
Dissertation Title: "**Nonlinear Analysis of Space Membranes by the Boundary Element Method**".
- 2000 Attended a special scientific course on: "**Topics in Finite Elasticity**" at the International Centre for Mechanical Sciences (CISM), Udine, Italy.
- 2000 **Master's Degree in "Structural Design and Analysis of Structures"**, School of Civil Engineering, National Technical University of Athens, Greece.
MSc Thesis title: "Static and Dynamic Nonlinear Analysis of Heterogeneous Anisotropic Membranes by the Analog Equation Method. A Boundary-only Solution". Grade: 10/10.
Grade awarded: **9.11/10**, top 2%.
- 1998 **Master's Degree in "Concrete Structures"** and Diploma of Imperial College (DIC).
Department of Civil Engineering, Imperial College of Science and Technology of London, UK.
MSc Thesis title: "A Study of Rectangular Plate under Colinear Load with both Approximate and Exact Solution".
- 1997 **Bachelor's Degree (Diploma) in Civil Engineering**, School of Civil Engineering, National Technical University of Athens, Greece.
Thesis title: "Torsion of Anisotropic and Non-Homogeneous Bars by Boundary Element Method". Grade: 10/10.
Grade awarded: **8.64/10**, top 5%.
- 1992 "1st General Lyceum of Trikala", Trikala, Greece.
Grade awarded diploma: **18.6/20** Excellent.
Greek University Entrance Exam (rank **13/150**). Admission by the School of Civil Engineering, National Technical University of Athens, Greece.

2. Scholarships – Awards

- 1993-1997 3 Scholarships from the Technical Chamber of Greece for excellent academic performance during the undergraduate studies.
- 1999 First prize of the Hellenic Society of Theoretical and Applied Mechanics (H.S.T.A.M.) for the best undergraduate diploma thesis contest. Thesis title: "Torsion of Anisotropic and Non-homogeneous Bars by the Boundary Element Method".
- 2000 Scholarship from the International Centre for Mechanical Sciences (CISM).

3. Academic Positions

- 2016 – present Associate Professor in the Department of Mathematics at University of Patras.
- 2017 - present Member of the Coactive Educational Staff at the Hellenic Open University, Postgraduate Course "Engineering Project Management MSc", Module: DCHT51 "Construction Project Analysis and Design", School of Science and Technology.
- 2004 - 2016 Adj. Assistant Professor, Department of Civil Engineering, Piraeus University of Applied Sciences.
- 2003 - 2016 Research Associate, Institute of Structural Analysis and Aseismic Research, School of Civil Engineering, National Technical University of Athens.

4. Teaching Activities

a) Teaching at University of Patras as Associate Professor (Department of Mathematics)

- 2016-present *Undergraduate Course*: "Classical Mechanics"
Undergraduate Course: "Algebraic Computing for Advanced Mathematics"
Undergraduate Course: "Mathematics II" (in Department of Geology)
- 2016-2017 *Undergraduate Course*: "Mathematics" (in Department of Biology) (1 semester)

b) Teaching at Hellenic Open University as Member of the Coactive Educational Staff

- Postgraduate course: "Engineering Project Management MSc" (School of Science and Technology)
- 2017-present *Postgraduate Module*: "Construction Project Analysis and Design"

c) Teaching at Piraeus University of Applied Sciences as Adj. Assistant Professor (Department of Civil Engineering)

- 2005-2007 *Undergraduate Course*: "Shell Structures" (5 semesters)
- 2004-2016 *Undergraduate Course*: "Statics III (Static and Dynamic Matrix Structural Analysis)" (18 semesters)

d) Teaching at Akmi Metropolitan College (Department of Civil Engineering)

- 2015-2016 *Undergraduate Course*: "Structural Analysis and Design" Module EG 6101 (2 semesters)
Postgraduate Course: "Civil Engineering Science" Module U22419 (2 semesters)
- 2014-2015 *Undergraduate Course*: "Structural Engineering" Module CE 3202 (1 semester)

e) Teaching at National Technical University of Athens (Department of Structural Engineering, School of Civil Engineering)

- 2001-2003 Co-tutoring as Candidate Doctoral student (3 semesters)
Postgraduate Course: "Advanced Structural Dynamics"
- 2005-2006 Co-tutoring as Research Associate (2 semesters)
Undergraduate Course: "Theory of Plates"

5. Student Theses

a) Supervision of PhD Theses

1. D. Karatzia (in progress, since November 2017) «Nonlinear Stochastic Dynamical Systems», Department of Mathematics, University of Patras, Principal supervisor.
2. P. Syrimi (in progress, since November 2016) «Dynamic analysis of structures – Seismic isolation of bridges», School of Civil Engineering, National Technical University of Athens, Member of the Advisor Committee, Principal supervisor: Prof. E.N. Sapountzakis.

b) Supervision of MSc Theses

3. I. Vissarakis, 2016 «Dynamic Analysis of Orthotropic Cylindrical Panel», MSc Civil Engineering and the Built Environment, Akmi Metropolitan College.

c) Supervision of 13 Bachelor Theses

6. Scientific and Professional Societies

- Member of the Technical Chamber of Greece (1998)
- Member of the Association of Civil Engineers of Greece (1998)
- Member of the Greek Association of Computational Mechanics (2002)
- Member of the Hellenic Society of Theoretical and Applied Mechanics (2006)
- Treasurer and member of the Executive Board of the Greek Association of Computational Mechanics (2013-present)
- Member of the ECCOMAS Young Investigator Committee (2014-2016)

7. Reviewer of International Journals

Reviewer of more than 40 International Journals among which the following are mentioned:

1. Acta Mechanica
2. Composite Structures
3. Composites Part B: Engineering
4. Computational Mechanics
5. Computer Methods in Applied Mechanics and Engineering
6. Engineering Analysis with Boundary Elements
7. European Journal of Mechanics - A/Solids
8. International Journal of Mechanical Sciences
9. International Journal of Non-Linear Mechanics
10. International Journal of Solids and Structures
11. International Journal of Structural Stability and Dynamics
12. Journal of Engineering Mechanics
13. Journal of Sound and Vibration
14. Journal of Vibration and Control
15. Zeitschrift für Angewandte Mathematik und Mechanik

8. Editorial Positions in International Journals

Specialty Chief-Editor of the International Journal [Frontiers in Built Environment: Computational Methods in Structural Engineering](#), by Frontiers

Member of the editorial board of the following International Journals:

1. [Frontiers in Built Environment : Earthquake Engineering](#), by Frontiers
2. [International Journal of Research Innovations in Civil Engineering \(IJRICE\)](#), by SPRG Publications
3. [Mathematical Problems in Engineering](#), by Hindawi
4. [Material Science Research India](#), by Oriental Scientific Publishing Company
5. [Oriental Journal of Computer Science And Technology](#), by Techno Research Publishers
6. [Oriental Journal of Physical Sciences](#), by Exclusive Research Publishers
7. [The Open Mechanical Engineering Journal](#), by Bentham Open

9. Participation in Scientific Advisory Committees of International Conferences

[8th GRACM International Congress on Computational Mechanics](#), Volos, Greece, 12 - 15 July, 2015.

[9th GRACM International Congress on Computational Mechanics](#), Chania, Greece, 4 - 6 June, 2018.

[14th International Conference on Vibration Problems \(ICOVP 2019\)](#), Crete, Greece, 1-4 September, (2019).

10. Organization of Special Sessions (Mini-Symposia) in International Conferences

Mini-symposium "**Advances in Boundary Element and Meshless Methods**", at the 11th HSTAM International Congress on Mechanics (HSTAM 2016), May 27 – 30, 2016, Athens, Greece. Organizers: Evangelos Sapountzakis, **George Tsiatas**.

11. Research projects

- 2018 – present **Supporting Research with Emphasis to New Researchers**, *Nonlinear Analysis of Curved Beams Made of Shape Memory Nickel-Titanium Alloy*, **Coordinator**, Ministry of Education – European Social Fund, Budget: 34.300€.
- 2004 - 2006 **Pythagoras: Support of Research Groups in Universities**, *Torsional - Flexural Buckling of Homogeneous Beams of Constant Arbitrary Cross Section*, **Partner (Postdoctoral Researcher)**, Ministry of National Education and Cults – European Social Fund, Budget: 85.000€.

12. Publications in Books Published by International Publishing Companies

- BC1. **Tsiatas G.C.** and Yiotis A.J. (2010) *A microstructure-dependent orthotropic plate model based on a modified couple stress theory*, Recent Developments in Boundary Element Methods, A Volume to Honour Professor John T. Katsikadelis, Sapountzakis E. (ed.), WIT Press, Southampton, pp. 295-308, ISBN 978-1-84564-492-5.

13. Publications in International Journals

- J32. **Tsiatas G.C.**, Siokas A.G. and Sapountzakis E.J. (2018) A Layered Boundary Element Nonlinear Analysis of Beams, *Frontiers in Built Environment: Computational Methods in Structural Engineering*, Vol. 4, No. 52, pp. 1-12, (<https://doi.org/10.3389/fbuil.2018.00052>).
- J31. Charalampakis A.E. and **Tsiatas G.C.** (2018) A simple rate-independent uniaxial Shape Memory Alloy (SMA) model, *Frontiers in Built Environment: Computational Methods in Structural Engineering*, Vol. 4, No. 52, pp. 1-11 (<https://doi.org/10.3389/fbuil.2018.00046>).
- J30. Charalampakis A.E. and **Tsiatas G.C.** (2018) Effects of Hysteresis and Negative Stiffness on Seismic Response Reduction: A Case Study Based on the 1999 Athens, Greece Earthquake, *Frontiers in Built Environment: Earthquake Engineering*, Vol. 4, No. 23, pp. 1-10, (<https://doi.org/10.3389/fbuil.2018.00023>).
- J29. Plevris V. and **Tsiatas G.C.** (2018) Computational Structural Engineering: Past Achievements and Future Challenges, *Frontiers in Built Environment: Computational Methods in Structural Engineering*, Vol. 4, No. 21, pp. 1-5, (<https://doi.org/10.3389/fbuil.2018.00021>).
- J28. **Tsiatas G.C.** and Fragiadakis M. (2018) Dynamic analysis and seismic response of planar circular arches with variable cross-section, *Journal of Earthquake Engineering*, Vol. 22, pp. 191-210, (<http://dx.doi.org/10.1080/13632469.2016.1217805>)
- J27. **Tsiatas G.C.** and Charalampakis A.E. (2018) A new Hysteretic Nonlinear Energy Sink (HNES), *Communications in Nonlinear Science and Numerical Simulation*, Vol. 60, pp. 1-11, (<https://doi.org/10.1016/j.cnsns.2017.12.014>)
- J26. **Tsiatas G.C.** and Babouskos N.G. (2017) Elastic-plastic analysis of functionally graded bars under torsional loading, *Composite Structures*, Vol. 176, pp. 254-267. (<https://doi.org/10.1016/j.compstruct.2017.05.044>)
- J25. **Tsiatas G.C.** and Babouskos N.G. (2017) Linear and geometrically nonlinear analysis of non-uniform shallow arches under a central concentrated force, *International Journal*

of *Non-Linear Mechanics*, Vol. 92, pp. 92–101.
(<https://doi.org/10.1016/j.ijnonlinmec.2017.03.019>)

- J24. Tsiatas G.C. and Charalampakis A.E. (2017) Optimizing the natural frequencies of axially functionally graded beams and arches, *Composite Structures*, Vol. 160, pp. 256–266. (<http://doi.org/10.1016/j.compstruct.2016.10.057>)
- J23. Katsikadelis J.T. and Tsiatas G.C. (2016) Saint-Venant torsion of non-homogeneous anisotropic bars, *Journal of Applied and Computational Mechanics*, Vol. 2, No. 1, pp. 42-53. (<http://doi.org/10.22055/jacm.2016.12270>)
- J22. Tsiatas G.C. and Yiotis A.J. (2015) Size effect on the static, dynamic and buckling analysis of orthotropic Kirchhoff-type skew micro-plates based on a modified couple stress theory: Comparison with the nonlocal elasticity theory, *Acta Mechanica*, Vol. 226, Issue 4, pp. 1267–1281. (<http://doi.org/10.1007/s00707-014-1249-3>)
- J21. Tsiatas G.C. (2014) A new efficient method to evaluate exact stiffness and mass matrices of non-uniform beams resting on an elastic foundation, *Archive of Applied Mechanics*, Vol. 84, Issue 5, pp. 615-623. (<http://doi.org/10.1007/s00419-014-0820-7>)
- J20. Tsiatas G.C. and Yiotis A.J. (2013) A BEM-based meshless solution to buckling and vibration problems of orthotropic plates, *Engineering Analysis with Boundary Elements*, Vol. 37, Issue 3, pp. 579–584. (<http://doi.org/10.1016/j.enganabound.2013.01.007>)
- J19. Tsiatas G.C. and Katsikadelis J.T. (2011) Nonlinear analysis of elastic space cable-supported membranes, *Engineering Analysis with Boundary Elements*, Vol. 35, Issue 10, pp. 1149–1158. (<http://doi.org/10.1016/j.enganabound.2011.05.005>)
- J18. Tsiatas G.C. and Katsikadelis J.T. (2011) A new microstructure-dependent Saint-Venant torsion model based on a modified couple stress theory, *European Journal of Mechanics/A Solids*, Vol. 30, Issue 6, pp. 741-747. (<http://doi.org/10.1016/j.euromechsol.2011.03.007>)
- J17. Tsiatas G.C. (2010) Nonlinear analysis of non-uniform beams on nonlinear elastic foundation, *Acta Mechanica*, Vol. 209, Issue 1-2, pp. 141-152. (<http://doi.org/10.1007/s00707-009-0174-3>)
- J16. Tsiatas G.C. (2009) A new Kirchhoff plate model based on a modified couple stress theory, *International Journal of Solids and Structures*, Vol. 46, Issue 13, pp. 2757-2764. (<http://doi.org/10.1016/j.ijsolstr.2009.03.004>)
- J15. Tsiatas G.C. and Katsikadelis J.T. (2009) Post-critical behavior of damped beam columns with variable cross-section subjected to distributed follower forces, *Nonlinear Dynamics*, Vol. 56, Issue 4, pp. 429-441. (<http://doi.org/10.1007/s11071-008-9412-9>)
- J14. Sapountzakis E.J. and Tsiatas G.C. (2007) Flexural-torsional buckling and vibration analysis of composite beams, *Computers, Materials & Continua*, Vol. 6, Issue 2, pp. 103-116. (<http://doi.org/10.3970/cmc.2007.006.103>)
- J13. Katsikadelis J.T. and Tsiatas G.C. (2007) Optimum design of structures subjected to follower forces, *International Journal of Mechanical Sciences*, Vol. 49, Issue 11, pp. 1204-1212. (<http://doi.org/10.1016/j.ijmecsci.2007.03.011>)
- J12. Katsikadelis J.T. and Tsiatas G.C. (2007) Nonlinear dynamic stability of damped Beck's column with variable cross-section, *International Journal of Non-linear Mechanics*, Vol. 42, Issue 1, pp. 164-171. (<http://doi.org/10.1016/j.ijnonlinmec.2006.10.019>)
- J11. Sapountzakis E.J. and Tsiatas G.C. (2007) Elastic flexural buckling analysis of composite beams of variable cross-section by BEM, *Engineering Structures*, Vol. 29, Issue 5, pp. 675-681. (<http://doi.org/10.1016/j.engstruct.2006.06.010>)
- J10. Sapountzakis E.J. and Tsiatas G.C. (2007) Flexural-torsional vibrations of beams by BEM, *Computational Mechanics*, Vol. 39, Issue 4, pp. 409-417. (<http://doi.org/10.1007/s00466-006-0039-8>)

- J9. **Tsiatas G.C.** and Katsikadelis J.T. (2006) A BEM based domain decomposition method for nonlinear analysis of elastic space membranes, *Computational Mechanics*, Vol. 38, Issue 2, pp. 119-131. (<http://doi.org/10.1007/s00466-005-0725-y>)
- J8. **Tsiatas G.C.** and Katsikadelis J.T. (2006) Large deflection analysis of elastic space membranes, *International Journal for Numerical Methods in Engineering*, Vol. 65, Issue 2, pp. 264-294. (<http://doi.org/10.1002/nme.1499>)
- J7. Katsikadelis J.T. and **Tsiatas G.C.** (2006) Regulating the vibratory motion of beams by shape optimization, *Journal of Sound and Vibration*, Vol. 292, Issue 1-2, pp. 390-401. (<http://doi.org/10.1016/j.jsv.2005.08.002>)
- J6. Katsikadelis J.T. and **Tsiatas G.C.** (2005) Buckling load optimization of beams, *Archive of Applied Mechanics*, Vol. 74, Issue 11-12, pp. 790-799. (<http://doi.org/10.1007/s00419-005-0402-9>)
- J5. Katsikadelis J.T. and **Tsiatas G.C.** (2004) Nonlinear dynamic analysis of beams with variable stiffness, *Journal of Sound and Vibration*, Vol. 270, Issue 4-5, pp. 847-863. ([http://doi.org/10.1016/S0022-460X\(03\)00635-7](http://doi.org/10.1016/S0022-460X(03)00635-7))
- J4. Katsikadelis J.T. and **Tsiatas G.C.** (2003) Large deflection analysis of beams with variable stiffness, *Acta Mechanica*, Vol. 164, Issue 1-2, pp. 1-13. (<http://doi.org/10.1007/s00707-003-0015-8>)
- J3. Katsikadelis J.T. and **Tsiatas G.C.** (2003) Nonlinear dynamic analysis of heterogeneous orthotropic membranes by the analog equation method, *Engineering Analysis with Boundary Elements*, Vol. 27, Issue 2, pp. 115-124. ([http://doi.org/10.1016/S0955-7997\(02\)00089-9](http://doi.org/10.1016/S0955-7997(02)00089-9))
- J2. Katsikadelis J.T. and **Tsiatas G.C.** (2001) The analog equation method for large deflection analysis of heterogeneous orthotropic membranes. A boundary-only solution, *Engineering Analysis with Boundary Elements*, Vol. 25, Issue 8, pp. 655-667. ([http://doi.org/10.1016/S0955-7997\(01\)00033-9](http://doi.org/10.1016/S0955-7997(01)00033-9))
- J1. Katsikadelis J.T., Nerantzaki M.S. and **Tsiatas G.C.** (2001) The analog equation method for large deflection analysis of membranes. A boundary-only solution, *Computational Mechanics*, Vol. 27, Issue 6, pp. 513-523. (<http://doi.org/10.1007/s004660100263>)

14. Publications in National and International Conferences

Presentation of 35 scientific papers in national and international conferences, many of which were published in the proceedings of the respective conferences.

15. Synopsis of scientific reputation

In the following, data from reference databases are provided, giving the number of references by other researchers on my published work in international literature, the corresponding number excluding self-references (in the case this choice is supported by the database) as well as the h-index number and RG Score. The data were taken on **March 01, 2019**)

Scopus

Link: <http://www.scopus.com/authid/detail.url?authorId=6603725853>
 Documents 29
 Citations 635 (556 excluding self-citations)
 h-index: 12
 co-authors 9

Google Scholar

Link: <https://scholar.google.gr/citations?user=sgLUDDkAAAAJ&hl=e>
 Citations 867 (482 since 2014)

h-index: 17 (11 since 2014)
i10-index 21 (11 since 2014)

ResearchGate

Link: https://www.researchgate.net/profile/George_Tsiatas

Research items 72

Reads: 8015

Citations: 831

RG Score: 25.24 (higher than 80 % of ResearchGate members)

h-index: 15 (13 excluding self-citations)