CURRICULUM VITAE
Christos G. Panagiotopoulos
PhD. Civil Engineering
Foundation for Research and Technology – Hellas
Institute of Applied and Computational Mathematics

Personal information

- Surname : Panagiotopoulos
- Name : Christos
- Birthday : 15/08/1976
- Email : pchr@iacm.forth.gr, pchr76@gmail.com

Education

- **Aristotle University of Thessaloniki, Greece (A.U.Th.), Faculty of Engineering, School of Civil Engineering, Diploma in Civil Engineering** (27/03/2002)- Grade achieved 6.8/10
- July of 2003 joined the post-graduate program of Faculty of Engineering (A.U.Th) which leads to doctorate with specialty in structural engineering.
- Advanced courses for post-graduate students, grade achieved 9.5/10 – PhD candidate since 2004
- **Aristotle University of Thessaloniki, Greece (A.U.Th.), Faculty of Engineering, School of Civil Engineering, PhD Civil Engineering** (24/11/2009)- Grade achieved "*Excellent with Distinction*"
- **Homologation** of **PhD** title of **Aristotle University of Thessaloniki, Greece (A.U.Th.), Faculty of Engineering, School of Civil Engineering** to the title of **Doctor** for **University of Seville, Spain, Department of Mechanics of Continuous Medium, Theory of Structures and Ground Engineering** (27/01/2010).
- Homologation of diploma of **Aristotle University of Thessaloniki, Greece (A.U.Th.), Faculty of Engineering, School of Civil Engineering** to the Spanish title of engineering of **Ingeniero de Caminos, Canales y Puertos** (13/12/2012)

Attended courses/seminars

- "**Computational Aspects of Structural Acoustics and Vibration**", CISM center of Udine (Italy) on June of 2006.
- **"Mechanics of Unsaturated Geomaterials"**, 2nd ALERT Olek Zienkiewicz Course, Lausanne (Switzerland) on July of 2010.
- "**Large Scale BEM Computing**", Brescia (Italy), Faculty of Engineering, University of Brescia, 29/08/2011-02/09/2011.
- **"Modeling of Localized Inelastic Deformation"**, by Prof. Milan Jirasek, Czech Technical University in Prague, Czech Republic, 17-21 September 2012.
- "**Wind Energy Technology Reconsideration to enhance the concept of Smart Cities**", COST Action TU1304-WINERCOST, Technical University of Crete, Chania, Greece, 4-8 April 2016.

Languages

- Greek (Native)
- English (FCE, B2-CEFR)
- Spanish (Nivel III-Avanzado, Instituto de Idiomas, Universidad de Sevilla, B2-CEFR)

Academic/Research Positions

- Graduate Teaching Assistant at the Faculty of Engineering, School of Civil Engineering, Aristotle University of Thessaloniki, Greece, 2003-2009.
- One month visit at the Bulgarian Academy of Sciences, Sofia, Bulgaria, September 2006.
- Senior Scientist (Vědecký Pracovník-VP2) at the Mathematical Institute, Charles University, Prague, Czech Republic, 06/10/2010-06/11/2010
- Post-doctoral and collaborative Researcher at the Group of Elasticity and and Strength of Materials, Department of Continuum Mechanics, School of Engineering, University of Seville. 15/1/2010-31/12/2015 .
- Visiting Researcher at the Institute of Thermodynamics, Academy of Sciences of Czech Republic, Prague, Czech Republic, 02/11/2011-18/11/2011
- Post-doctoral Researcher at the Foundation for Research and Technology – Hellas, Institute of Applied and Computational Mathematics, Heraklion, Greece, 15/2/2014-30/11/2015.
- Visiting Researcher at the Foundation for Research and Technology – Hellas, Institute of Applied and Computational Mathematics, Heraklion, Greece, 4/1/2016- 31/8/2016.
- Autonomous Academic Teaching, for the course of "Computational Mechanics", at the Technical University of Crete, Department of Production Engineering and Management. Chania, Greece, Second semester of 2016-2017.
- Autonomous Academic Teaching, for the course of "Seminar on Applied Acoustics with Computers", at the Technological Educational Institute of Crete, School of Applied Sciences, Department of Music Technology and Acoustics. Rethymno, Greece, First semester of 2017-2018.
- Autonomous Academic Teaching, for the course of "Dynamics, vibration and control of structures", at the Technical University of Crete, Department of Production Engineering and Management. Chania, Greece. Second semester of 2017-2018.
- Post-doctoral Researcher in the framework of the ARCHERS-SNF project at the Foundation for Research and Technology – Hellas, Institute of Applied and Computational Mathematics, Heraklion, Greece, 22/2/2018- 21/02/2019.
- Autonomous Academic Teaching, for the course of "Seminar on Applied Acoustics with Computers (Computational Acoustics)", at the Technological Educational Institute of Crete, School of Applied Sciences, Department of Music Technology and Acoustics. Rethymno, Greece, First semester of 2018-2019.
- Autonomous Academic Teaching, for the course of "Applied Mathematics", at the Technological Educational Institute of Crete, School of Applied Sciences, Department of Music Technology and Acoustics. Rethymno, Greece, First semester of 2018-2019.

Main Research Activity – Interests

Computational Methods in Engineering, BEM, FEM, Wave Propagation problems, Elastostatics – Elastodynamics, Structural Dynamics & Statics, Risk analysis, Contact mechanics, Optimization in mechanics, Fracture mechanics, Development of computational mechanics code.

Membership

- Technical Chamber of Greece
- Hellenic Association for Earthquake Engineering
- Greek Association of Computational Mechanics
- Hellenic Institute of Acoustics

Peer-review activities

- Review editor, Computational Methods in Structural Engineering, part of the journal(s) Frontiers in Built Environment
- Engineering Analysis with Boundary Elements (Elsevier, ISSN: 0955-7997)
- Computer Applications in Engineering Education (Wiley, ISSN [Print] 1061-3773, ISSN [Online] 1099-0542)
- Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería (Elsevier, ISSN [Print] 0213-1315, ISSN [Online] 1886-158 X)
- Meccanica (Springer, ISSN [Print] 0025-6455, ISSN [Online] 1572-9648)
- European Journal of Computational Mechanics (Taylor and Francis, ISSN [Print] 1779-7179, ISSN [Online] 1958-5829)
- Referee for the conference "Inovatívny prístup k modelovaniu inteligentných konštrukčných prvkov v stavebníctve" Kosice, Slovakia, 2010.
- Referee for a chapter of the book "Mathematical Methods and Models in Composites", edited by Vladislav Mantič, published by Imperial College Press, 2013.

Research Projects Participation (12)

- ARCHERS: Advancing Young Researchers' Human Capital in Cutting Edge Technologies in the Preservation of Cultural Heritage and the Tackling of Societal Challenges, Foundation for Research and Technology – Hellas (FORTH), funded by the Stavros Niarchos Foundation, February 2018 - February 2019
- COMFPRAC: New approaches in computational fracture mechanics to characterize crack initiation and propagation in composites at different scales. (Ref.: MAT2015-71036-P, funded by the Ministerio de Economía y Competitividad, Secretaria de Estado de Investigación, Desarrollo e Innovación, Dirección General de Investigación Científica y Técnica (Spanish Ministry of Economy and Competitiveness), and The European Regional Development Fund (ERDF).), January 2016 - December 2018
- ADAPTIVES: Algorithmic Developement and Analysis of Pioneer Techniques for Imaging with waVES, ERC Starting Independent Research Grant in Mathematics, funding by the European Research Council, through a Starting Independent Research Grant awarded to Chrysoula Tsogka. FORTH-IACM, February 2014-November 2015.
- Caracterización y Medida de las Propiedades de la Interfase en Materiales Compuestos Mediante Ensayos de Fibra Única Usando Enfoques no Clásicos de la Mecánica de la Fractura (Ref.: MAT2012-37387, funded by the Junta de Andalucía), January 2013-December 2015.
- Study of initiation and propagation of damage at micro and meso level in composite materials by developing and applying Finite Fracture Mechanics (P08-TEP-04501, funded by the Junta de Andalucía), January 2010-December 2012.
- Reformation of postgraduate program of Civil Engineering department of Aristotle University of Thessaloniki. http://edusoft.civil.auth.gr/ Funding Agents: "European Commssion" and "Education ministry of Greece".
- Development and Proposition for Implementation of an Efficient Methodology and Appropriate Local Instruments for the Management, Prevention and Reduction of Seismic Risk in Duzce-Turkey. Grevena-Grecce, Catania-Italy. (SRM-DGC). Funding Agents: "European Commssion" and "Economy and Economics ministry of Greece".
- Development of computer software for analysis of structures under repair and restoration. Funding Agents: "General Secretariat for Research and Technology of the Ministry of

Development of Greece" & "4M-VK, http://www.4msa.com/", ΠΑΒΕΤ-2005, 2006-2008.

- Data base development for the insertion, process and the efficient analysis of records of sensor's net on bridges of Egnatia Odos. In the framework of "Seismic protection of bridges". Funding Agents: "Egnatia Odos S.A., http://www.egnatia.eu", 0000/2454/A01, 2005-2006.
- Development of analysis tools & software for synthesis of seismograms in complex geological regions. Funding Agents: "General Secretariat for Research and Technology of the Ministry of Development of Greece" & "The Bulgarian Ministry of Education, Sofia, Bulgaria", 2005-2007.
- Development of a global methodology for the vulnerability assessment and risk management of the life lines, infrastructures and critical facilities. Application to the metropolitan area of Thessaloniki (SRM-LIFE). Funding Agents: "General Secretariat for Research and Technology of the Ministry of Development of Greece", Δ.Π.-19, 2003-2006.
- An advanced approach to earthquake risk scenarios with applications to different European towns (Risk-UE), *Funding Agents:* "European Commission – Research Directorate – General" & "General Secretariat for Research and Technology of the Ministry of Development of Greece", EVK4-2000-00014, 2001-2005.

List of Scientific Publications

Academic dissertations (2)

1) Analytical assessment of unreinforced masonry buildings earthquake resistance and fragility, **Diploma Thesis** at Civil Engineering Department of Aristotle University of Thessaloniki. Thessaloniki, Greece 2002 (in Greek)

2) A novel BEM development based on reciprocal theorem in terms of velocities: Theory and Implementation, **Doctoral Thesis** at Civil Engineering Department of Aristotle University of Thessaloniki. Thessaloniki, Greece 2009 (in Greek)

Textbooks (2)

2) **Christos G. Panagiotopoulos**, Panayiotis K. Koliopoulos, *Handbook of Structural Dynamics*, 235 pages, ISBN 978-960-6706-04-2, "σοφία A.E." publications, Thessaloniki, 2007. (in Greek)

1) George D. Manolis, Panayiotis K. Koliopoulos, **Christos G. Panagiotopoulos**, *Dynamics of Structures*, http://repository.kallipos.gr/handle/11419/2465, ISBN: 978-960-603-074-1, "ΣΕΑΒ", 2015. (in Greek)

Chapters in Textbooks (4)

4) Tomas Roubiček, Martin Kružik, Vladislav Mantič, **Christos G. Panagiotopoulos**, Roman Vodicka, and Jan Zeman, *Delamination and Adhesive Contacts, Their Mathematical Modeling and Numerical Treatment*, Chapter in : Vladislav Mantič, *"Mathematical Methods and Models in Composites"*, Vol.5 of series Computational and Experimental Methods in Structures, second edition, Imperial College Press, to be published in 2019.

3) **Christos G. Panagiotopoulos**, Chrysoula Tsogka, Yiannis Petromichelakis, *Time reversal and imaging for structures*, Chapter in : Anastasios Sextos, George D. Manolis, *"Dynamic Response of Infrastructure to Environmentally Induced Loads"*, Springer International Publishing AG, Cham, Switzerland, 2017.

2) **Christos G. Panagiotopoulos**, Elias A. Paraskevopoulos, George D. Manolis, *Critical Assessment of Penalty-Type Methods for Imposition of Time-Dependent Boundary Conditions in FEM Formulations for Elastodynamics*, Chapter in : M. Papadrakakis, Michalis Fragiadakis & Nikos D. Lagaros, *"Computational Methods in Earthquake Engineering"*, Series: ECCOMAS, Springer, 2011.

1) Elias A. Paraskevopoulos, **Christos G. Panagiotopoulos**, Demosthenes G. Talaslidis, *Rational derivation of conserving time integration schemes: the moving mass case*, Chapter in : M. Papadrakakis, D.C. Charmpis, N.D. Lagaros & Y. Tsompanakis, *"Progress in Computational Dynamics and Earthquake Engineering"*, Taylor & Francis, 2008.

- **Papers in International Scientific Journals (19)**

19) **C.G. Panagiotopoulos,** V. Mantic, I.G. Garcia, E. Graciani, *Boundary integral formulation of frictionless contact problems based on an energetic approach and its numerical implementation by the collocation BEM.* **Frontiers in Built Environment - Computational Methods in Structural Engineering, 2018**.
https://doi.org/10.3389/fbuil.2018.00056

18) I. Petromichelakis, C. Tsogkaa, **C.G. Panagiotopoulos,** *Signal-to-Noise Ratio analysis for Time-Reversal based imaging techniques in bounded domains.* **Wave Motion, 2018**. https://doi.org/10.1016/j.wavemoti.2018.02.007

17) T. Roubiček, **C.G. Panagiotopoulos**, E*nergy-conserving time-discretisation of abstract dynamical problems with applications in continuum mechanics of solids.* **Numerical Functional Analysis and Optimization, 2017, 38 :1143-1172**.
Preprint https://arxiv.org/pdf/1605.09762.pdf.

16) **C.G. Panagiotopoulos**, G.D. Manolis, *A web-based educational software for structural dynamics*. **Computer Applications in Engineering Education**, 2016, DOI: 10.1002/cae.21735. Preprint http://dynasoft.civil.auth.gr/sources/PM_CAEE_preprint.pdf.

15) **C.G. Panagiotopoulos**, V. Mantič, T. Roubiček, *Two adhesive-contact models for quasistatic mixed-mode delamination problems*. **Mathematics and Computers in Simulation**, 2016, DOI: 10.1016/j.matcom.2016.10.004. Preprint http://arxiv.org/abs/1511.08873.

14) T. Roubiček, M. Thomas, **C.G. Panagiotopoulos**, *Stress-driven local-solution approach to quasistatic brittle delamination.* **Nonlinear Analysis: Real World Applications**, Vol. 22, 2014, 645-663. *Preprint Weierstrass Institute for Applied Analysis and Stochastics (WIAS) Preprint No. 1889, (2013)*

13) T. Roubiček, **C.G. Panagiotopoulos**, V. Mantič, *Local-solution approach to rate-independent quasistatic mixed-mode delamination.* **Mathematical Models and Methods in Applied Sciences**, Vol.25, (2015), 1337-1364. Preprint http://arxiv.org/abs/1412.8593.

12) **C.G. Panagiotopoulos**, V. Mantič, T. Roubiček, *A simple and efficient BEM implementation of quasistatic linear visco-elasticity.* **International Journal of Solids and Structures**, Vol. 51, 2014, 2261-2271.
Preprints:http://arxiv.org/abs/1402.6631, http://ncmm.karlin.mff.cuni.cz/publications/

11) M. Kružik, **C.G. Panagiotopoulos**, T. Roubiček, *Quasistatic adhesive contact delaminating in mixed mode and its numerical treatment.* **Mathematics and Mechanics of Solids,** 2015, 20:582-599, DOI: 10.1177/1081286513507942,
Preprints No.2013-026, Nečas center, Prague, and arXiv no.1309.7150

10) T. Roubiček, **C.G. Panagiotopoulos**, V. Mantič, *Quasistatic adhesive contact of viscoelastic bodies and its numerical treatment for small viscosity*. **Journal of Applied Mathematics and Mechanics**, Vol. 93, 2013, 823–840.

9) **C.G. Panagiotopoulos**, V. Mantič, T. Roubiček, *BEM solution of delamination problems using an interface damage and plasticity model*. **Computational Mechanics**, Vol. 51, 2013, Issue 4, 505–521. Preprint http://arxiv.org/abs/1212.2611.

8) T. Roubiček, V. Mantič, **C.G. Panagiotopoulos,** *Quasistatic mixed-mode delamination model*. Preprint No.2011-020, **Discrete and Continuous Dynamical Systems** - Series S, Vol. 6, 2013, Issue 2, 591–610.

7) **C.G. Panagiotopoulos** , G.D. Manolis, *Three-dimensional BEM for transient elastodynamics based on the velocity reciprocal theorem*. **Engineering Analysis with Boundary Elements**, Vol. 35, 2011, Issue 3.

6) G.D. Manolis, **C.G. Panagiotopoulos,** E.A. Paraskevopoulos, F.E. Karaoulanis, G.N. Vadaloukas and A.G. Papachristidis, *Retrofit strategy issues for structures under earthquake loading using sensitivity-optimazation procedures*. **Earthquake and Structures**, Vol. 1, 2010, Issue 1.

5) E.A. Paraskevopoulos, **C.G. Panagiotopoulos** and G.D. Manolis, *Imposition of time-dependent boundary conditions in FEM formulations for elastodynamics: Critical assessment of penalty-type methods*. **Computational Mechanics**, Vol. 45, 2010, Issue 2-3, DOI: 10.1007/s00466-009-0428-x.

4) **C.G. Panagiotopoulos** and G.D. Manolis, *Velocity-based reciprocal theorems in elastodynamics and BIEM implementation issues*. **Archives of Applied Mechanics**, Vol. 80, 2010, Issue 12, DOI 10.1007/s00419-009-0376-0.

3) A. Kappos, G. Panagopoulos, **C. Panagiotopoulos** and G. Penelis, *A hybrid method for the vulnerability assessment of RC and URM building*. **Bulletin of Earthquake Engineering**, Vol. 4, 2006, Issue 4.

2) **C.G. Panagiotopoulos**, *Reciprocal Theorems in Structural Dynamics Including Initial Conditions*. **International Journal of Earthquake Engineering & Structural Dynamics**, Vol.35, 2006, Issue 5.

1) D.G. Talaslidis, G.D. Manolis, E.A. Paraskevopoulos, **C.G. Panagiotopoulos**, N. A. Pelekasis and J.A. Tsamopoulos, *Risk Analysis of Industrial Structures under Extreme Transient Loads*. **Soil Dynamics and Earthquake Engineering**, Vol.24, 2004, Issue 6.

- **Invited Talks/Seminars (4)**

4) The Symplegma project, a java computational mechanics framework., **Technical University of Crete**, organized by the **Department of Production Engineering and Management,** 29 of September 2016, Chania, Crete, Greece.

3) *Time reversal procedures in elastodynamics with application to structures*, **De-Grie research project, Deutscher Academischer Austausch Dienst, Aristotle University of Thessaloniki**, "Dynamic Analysis, Testing and Design of Infrastructure to Environmental Loads"**,** 11-13 of November 2014, Thessaloniki, Greece.

2) *Energetic approach for problems of elastic solids assembly connected through inelastic interfaces, application using the boundary element method*, **Department of Production Egineering and Management, Technical University of Crete**, organized by the **Institute of Computational Mechanics and Optimization** (in Greek language[1]), 29 of January 2014, Chania, Crete, Greece.

1) *Boundary Element Method for Linear Elasticity and Implementation of an Energetic Approach to the Delamination Problem, **Necas Center of Mathematical Modeling**,* organized by the **Mathematical Institute of the Charles University** (*Necas Seminar on Continuum Mechanics*), 18 of October 2010, Prague, Czech Republic.

- **Contributions in International Scientific Conferences (39)**

39) **C.G. Panagiotopoulos**, *Symplegma, a JVM implementation for numerical methods in computational mechanics*. 2018 Free & Open-Source Software Communities Meeting (FOSSCOMM 2018), Heraklion, Greece, October 13-14, 2018.

38) L. Távara, I.G. García, R. Vodička, **C.G. Panagiotopoulos**, V. Mantič, *Revisiting the Problem of Debond Initiation at Fibre-Matrix Interface under Transversal Biaxial Loads. A Comparison of Several Non-Classical Fracture Mechanics Approaches*. Abstract and paper submitted to the **15th International Conference on Fracture and Damage Mechanics (FDM XV)**. Alicante, Spain. 14-16 September, 2016. Published in **Key Engineering Materials**, Vol. **713**, (2016), 232-235.

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1 Ενεργειακή προσέγγιση προβλημάτων συμπλέγματος ελαστικών σωμάτων συνδεδεμένων μέσω ανελαστικών διεπιφανειών, εφαρμογή με χρήση της μεθόδου των συνοριακών στοιχείων.

37) **Christos G. Panagiotopoulos,** Yiannis Petromichelakis, Chrysoula Tsogka, *Damage detection in solids through imaging based on recorded elastodynamic response*, Abstract submitted to the **International Congress of the Hellenic Society for Theoretical and Applied Mechanics** (**11th HSTAM**), Athens, Greece, May 27-30, 2016.

36) Chrysoula Tsogka, Yiannis Petromichelakis, **Christos G. Panagiotopoulos**, *Influence of the boundaries in imaging for damage localization in 1D domains*, Abstract and paper submitted to the **International Congress of the Greek Association of Computational Mechanics** (**8th GRACM**), Volos, Greece, July 12-15, 2015.

35) **Christos Panagiotopoulos**, Yiannis Petromichelakis, Chrysoula Tsogka, *Time reversal in elastodynamics with application to structural health monitoring,* Abstract and paper submitted to the **Computational Methods in Structural Dynamics and Earthquake Engineering (CompDyn 2015)**, Crete, Greece, May 25-27, 2015

34) V. Mantič, **C.G. Panagiotopoulos**, *BEM implementation of a quasistatic and rate-independent non-associative model of mixed-mode interface-crack growth*, paper submitted to the **20th European Conference on Fracture (ECF20)**, Trondheim, Norway, 30 June - 4 July, 2014. Published in **Procedia Materials Science**, Vol. 3C, (2014), 1203-1208.

33) **C.G. Panagiotopoulos**, V. Mantič, I. Garcia, E. Graciani, *Quadratic programming for minimization of the total potential energy to solve contact problems using BEM*, paper submitted to the **International Conference on Boundary Element Techniques** (**BETEQ 2013**), Paris, France, July 16- 18, 2013.

32) **C.G. Panagiotopoulos**, V. Mantič, *An efficient BEM approach to quasi-static viscoelasticity of Kelvin-Voigt materials*, paper submitted to the **International Conference on Boundary Element Techniques** (**BETEQ 2013**), Paris, France, July 16- 18, 2013.

31) **C.G. Panagiotopoulos**, V. Mantič, T. Roubiček, *Boundary element analysis of quasistatic delamination of viscoelastic bodies*, Abstract submitted to the **Congress on Numerical Methods in Engineering** (**CNM 2013**), Bilbao, Spain, June 25-28, 2013.

30) **C.G. Panagiotopoulos**, V. Mantič, T. Roubiček, *Application of a vanishing viscosity procedure to a fiber-matrix debonding problem*, Abstract submitted to the **International Conference on Computational Modeling of Fracture and Failure of Materials and Structures** (**CFRAC 2013**), Prague Czech Republic, June 5-7, 2013.

29) **C.G. Panagiotopoulos**, T. Roubiček, V. Mantič, *BEM analysis of quasistatic delamination of viscoelastic bodies with very small viscosity*, Extended abstract submitted to the **Symposium of the International Association for Boundary Element Methods** (**IABEM 2013**), Santiago, Chile, January 9-11, 2013.

28) **C.G. Panagiotopoulos**, V. Mantič, T. Roubiček, BEM implementation of an interface damage and plasticity model and its application to DBC test, Abstract submitted to the **6th European congress on Computational Methods in Applied Sciences and Engineering** (**ECCOMAS 2012**), Vienna, Austria, September 10-14, 2012

27) **C.G. Panagiotopoulos**, G.D. Manolis, A. Athanatopoulou, *EDUSOFT PACKAGE FOR STRUCTURAL ENGINEERING. Web-based Educational Material using JAVA for Structural*

Dynamics, Abstract and paper submitted to the **4th International Conference on Computer Supported Education** (**CSEDU 2012**), Porto, Portugal, April 16-18, 2012

26) **C.G. Panagiotopoulos**, V. Mantič, T. Roubiček, *Associative Quasistatic Delamination Model Based on Energetic Solutions and its BEM Implementation*, Abstract submitted to the **Symposium of the International Association for Boundary Element Methods** (**IABEM 2011**), Brescia, Italy, September 5- 8, 2011.

25) **C.G. Panagiotopoulos**, V. Mantič, T. Roubiček, *BEM Implementation of Energetic Solutions for Quasistatic Delamination Problems*, Abstract and paper submitted to the **International Conference on Boundary Element Techniques** (**BETEQ 2011**), Brasilia, Brazil, July 13- 15, 2011.

24) **C.G. Panagiotopoulos**, V. Mantič, I.G. García, *An Energetic Approach for Frictionless Contact Problems Utilizing the Direct Collocation BEM*, Abstract and paper submitted to the **International Congress on Computational Mechanics** (**7th GRACM**), Athens, Greece, June 30- July 2, 2011.

23) **C.G. Panagiotopoulos**, G.D. Manolis, *Stability issues in 3D BEM formulations for transient elastodynamics*, Abstract and paper submitted to the **33st International Conference on Boundary Elements and Other Mesh Reduction Methods** (**BEM/MRM 33**), New Forest, UK, June 28-30, 2011

22) **C.G. Panagiotopoulos**, V. Mantič, T. Roubiček, *Applications of rate-independent delamination model based on the global minimization of the sum of the potential and dissipated energies*, Abstract submitted to the **International Conference on Computational Modeling of Fracture and Failure of Materials and Structures** (**CFRAC 2011**), Barcelona, Spain, June 6-8, 2011

21) G. K. Panagopoulos, **C. G. Panagiotopoulos**, A. I. Kappos, *Derivation of capacity curves for reinforced concrete frame and dual structures*, **14th European Conference on Earthquake Engineering (14ECEE)**, Ohrid, Republic of Macedonia , 30 August-03 September 2010.

20) A. I. Kappos, G. K. Panagopoulos, A. G. Sextos, V. K. Papanikolaou, K. C. Stylianidis, L. A. Kouris, **C. G. Panagiotopoulos**, E. D. Goutzika, *Development of earthquake loss scenarios for two Mediterranean cities*, Abstract and paper submitted to the **9th US National & 10th Canadian Conference on Earthquake Engineering (9USN/10CCEE)**, Toronto, Canada, 25-29 July 2009.

19) G.D. Manolis, **C.G. Panagiotopoulos**, E. A. Paraskevopoulos, F.E. Karaoulanis, G. Vadaloukas and A. Papachristidis, *Sensitivity Analysis of Structures: Building Repair Issues Based on the Definition of Deficiency Indices for Column*s, Abstract and paper submitted to the **International Scientific Conference: Science & Practice (UACEG 2009)**, Sofia, Bulgaria, 29-31 October 2009.

18) George D. Manolis, **Christos G. Panagiotopoulos**, *Velocity-based boundary integral equation formulation in the time domain,* Abstract and paper submitted to the **The 18th International Conference on the Applications of Computer Science and Mathematics in Architecture and Civil Engineering (18 IKM)**, Weimar, Germany, 7-9 July 2009.

17) George D. Manolis, **Christos G. Panagiotopoulos**, *Velocity-based boundary integral equation formulation in the time domain*, Abstract and paper submitted to the **31st International Conference on Boundary Elements and Other Mesh Reduction Methods** (**BEM/MRM 31**), New Forest, UK, September 2-4, 2009.

16) Elias A. Paraskevopoulos, **Christos G. Panagiotopoulos**, George D. Manolis, *Critical Assessment of Penalty-type Methods for Imposition of Time-dependent Boundary Conditions in FEM Formulations for Elastodynamics,* Abstract and paper submitted to the **Computational Methods in Structural Dynamics and Earthquake Engineering (CompDyn 2009)**, Rhodes, Greece, June 22-24, 2009.

15) **Christos G. Panagiotopoulos**, George D. Manolis, *Time stepping algorithms for the convolution integrals in transient boundary element formulations,* Abstract and paper submitted to the **International Congress on Computational Mechanics** (**6th GRACM**), Thessaloniki, Greece, June 19-21, 2008.

14) G. D. Manolis, T. V. Rangelov, P. S. Dineva, **C.G. Panagiotopoulos**, *Free-Field Motions on the Inhomogeneous Half-Space Surface*, Abstract and paper submitted to the **International Congress on Computational Mechanics** (**6th GRACM**), Thessaloniki, Greece, June 19-21, 2008.

13) Elias A. Paraskevopoulos, **Chris G. Panagiotopoulos**, Demosthenes G. Talaslidis, *Rational Derivation of Energy/Momentum Preserving Time Integration Algorithms. Application to Dynamic Response under Moving Vehicles*, Abstract and paper submitted to the **Computational Methods in Structural Dynamics and Earthquake Engineering (CompDyn 2007)**, Rethymno, Crete, Greece, June 13-15, 2007.

12) G. D. Manolis, T. V. Rangelov, P. S. Dineva, **C.G. Panagiotopoulos**, *Scattered wavefields in the inhomogeneous half-plane with discotinuities: computational aspects*, Abstract and paper submitted to the **Computational Methods in Structural Dynamics and Earthquake Engineering (CompDyn 2007)**, Rethymno, Crete, Greece, June 13-15, 2007.

11) F.E. Karaoulanis, **C.G. Panagiotopoulos**, Th. Chatzigogos, *A consistent methodology for the imposition of time varying boundary conditions in Soil Dynamics: Theory and Application*, Abstract and paper submitted to the **4th International Conference on Earthquake Geotechnical Engineering (4-ICEGE)**, Thessaloniki, Greece, June 25-28, 2007.

10) G. D. Manolis, T. V. Rangelov, P. S. Dineva, **C.G. Panagiotopoulos**, *Free-field motions in the inhomogeneous half-plane*, Abstract and paper submitted to the **4th International Conference on Earthquake Geotechnical Engineering (4-ICEGE)**, Thessaloniki, Greece, June 25-28, 2007.

9) G. D. Manolis, **C.G. Panagiotopoulos**, E.A. Paraskevopoulos, F.E. Karaoulanis, G.N Vadaloukas, A.G. Papachristidis, *Sensitivity analysis of complex systems and structural retrofit strategies*, Abstract and paper submitted to the **Jubilee Scientific Conference, 65th Anniversary of the University, University of Architecture, Civil Engineering and Geodesy**, Sofia, Bulgaria, May 17-18, 2007.

8) F.E. Karaoulanis, **C.G. Panagiotopoulos**, E.A. Paraskevopoulos, *Recent developments in Finite Element Programming*, Abstract and paper submitted to the **First South-East European**

Conference on Computational Mechanics (SEECCM-06), Kragujevac, Serbia and Montenegro, June 28-30, 2006.

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1) Gr.G. Penelis, A.J. Kappos, K.C. Stylianidis and **C.G. Panagiotopoulos**, *2nd Level analysis and vulnerability assessment of U.R.M. buildings*, **International conference on Earthquake Loss Estimation and Risk Reduction**, Bucharest, Romania, October 24-26, 2002.

- **Papers in Greek Journals on engineering topics (2)**

2) G.D. Manolis, **C.G. Panagiotopoulos**, E.A. Paraskevopoulos, F.E. Karaoulanis, G.N Vadaloukas, A.G. Papachristidis, *Sensitivity analysis for retrofit of existing buildings to withstanding earthquake-induced loads, Part II Application, Bulletin of Greek Civil Engineers,* Vol.360, 2008. (in Greek)

1) G.D. Manolis, **C.G. Panagiotopoulos**, E.A. Paraskevopoulos, F.E. Karaoulanis, G.N Vadaloukas, A.G. Papachristidis, *Sensitivity analysis for retrofit of existing buildings to withstanding earthquake-induced loads, Part I Theoretical Background, Bulletin of Greek Civil Engineers,* Vol.354, 2007. (in Greek)

- **Contributions in Greek National Scientific Conferences (3)**

3) A. Kappos, A. Sextos, L. Kouris, G. Panagopoulos, V. Papanikolaou. **C. Panagiotopoulos**, K. Stylianidis, *Seismic risk scenarios of Duzce (Turkey) city, utilizing an integrated computational platform*, **16th Greek Conference for Reinforced Concrete**, Lemesos, Cyprus, October 21-23, 2009. (in Greek)

2) A. Kappos, K. Stylianidis, A. Sextos, L. Kouris, G. Panagopoulos, V. Papanikolaou. **C. Panagiotopoulos**, E. Gougika, *Seismic risk scenarios of Grevena (Greece), utilizing an integrated computational platform*, **16th Greek Conference for Reinforced Concrete**, Lemesos, Cyprus, October 21-23, 2009. (in Greek)

1) G.D. Manolis, **C.G. Panagiotopoulos**, E.A. Paraskevopoulos, F.E. Karaoulanis, G.N Vadaloukas, A.G. Papachristidis, *Sensitivity analysis for retrofit of existing buildings to withstanding earthquake-induced loads,* **3rd Greek Conference on Earthquake Engineering and Technical Seismology**, November 7-8, 2008. (in Greek)

- **Contributions in Spanish National Scientific Conferences (2)**

2) I.G. Garcia, L. Tavára, **C.G. Panagiotopoulos**, V. Mantič, *Revisiting the problem of debond initiation and growth at fibre-matrix interface under transversal biaxial loads. A comparison of several non-classical fracture mechanics approaches*, Abstract and paper submitted to the **X Congreso Nacional de Materiales Compuestos (MATCOMP 13)**, Algeciras, Spain, July 2-5, 2013. (in English)

1) **C.G. Panagiotopoulos**, V. Mantič, *Symmetric and non-symmetric debonds at fiber-matrix interface under transverse loads. An application of energetic approaches using collocation BEM*, Abstract and paper submitted to the **XXX Encuentro del Grupo Español de Fractura**, Toledo, Spain, March 13-15, 2013. (in English)

- **Organisation of Minisymposia/Workshops/Conferences (1)**

1) Numerical techniques for interface problems, minisymposium organized by **C.G. Panagiotopoulos** and L.A. Tavára, **Extended Discretization Methods (X-DMS 2015)**, Ferrara, Italy, September 9-11, 2015.

- **Development of (open source) scientific/engineering software for educational and research purposes used in higher education**

Institute	Department	Course	Software
Aristotle University of Thessaloniki, Greece	Department of Civil Engineering	Strength of Materials and Structural Elements I	EduSoft
Aristotle University of Thessaloniki, Greece	Department of Civil Engineering	Strength of Materials and Structural Elements II	EduSoft
Aristotle University of Thessaloniki, Greece	Department of Civil Engineering	Dynamics of Structures I	EduSoft, dynasoft
Aristotle University of Thessaloniki, Greece	Department of Civil Engineering	Dynamics of Structures II	EduSoft, dynasoft
Technical University of Crete, Greece	Department of Production Engineering and Management	Computational Mechanics (MPD 515)	Symplegma Development Environment (SDE), Climax
Technical University of Crete, Greece	Department of Production Engineering and Management	Dynamics, vibration and control of structures (MPD 432)	Dynasoft, Symplegma Development Environment (SDE), Climax
Technological Educational Institute of Crete	School of Applied Sciences, Department of Music Technology and Acoustics	Computational Acoustics	Dynasoft, Symplegma Development Environment (SDE), Climax
Technological Educational Institute of Crete	School of Applied Sciences, Department of Music Technology and Acoustics	Applied Mathematics	Dynasoft, Symplegma Development Environment (SDE), Climax

Miscellaneous

- Programming skills in FORTRAN, Java, C++, Python, Matlab, Octave, Mathematica, Maxima, SQL, Latex, etc.
- Linux, Windows operating systems.
- Development of educational web-based software (java web start programming) for engineering mechanics, funded under a EU-project to Aristotle University of Thessaloniki, Department of Civil Engineering for applications to the undergraduate studies program. A respective web-page constructed (in Greek) http://edusoft.civil.auth.gr
- Participation in the development of finite element method framework under the acronym nemesis-project, http://nemesis-project.org
- Development of a general purposes boundary element framework, in Java language code.
- Development of finite element method code in Java for educational and research purposes.
- Lectures given for the course of "Applied informatics" of post graduate program of **Civil Engineering of Aristotle Univeristy of Thessaloniki**, on the use and the capabilities of software *Mathematica* (2002-03).
- Lectures given at the **Faculty of Civil Engineering of Aristotle University of Thessaloniki** in the course of "Advanced Topics of Statics" (2005-06).
- Contribution to a book on structural dynamics, by writing two chapters under the supervision of Prof. G.D. Manolis: P.K. Koliopoulos, G.D. Manolis, A Structural Dynamics Primer with Applications in Earthquake Engineering (In Greek), 309 pages, V. Giourdas Publishers, Athens, Greece, 2005, ISBN:960-387-374-8.
- Development of educational web-based software (java web start programming) for dynamics of structures, accompanying the book: George D. Manolis, Panayiotis K. Koliopoulos, **Christos G. Panagiotopoulos**, *Dynamics of Structures*, to be appeard in 2016. (in Greek, electronic format). http://dynasoft.civil.auth.gr

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- George D. Manolis, Professor, Department of Civil Engineering at Aristotle University Thessaloniki, Greece, Tel: +30-2310-995663, Fax: +30-2310-995769, E-mail: gdm@civil.auth.gr
- Vladislav Mantič Leščišin, Professor, Group of Elasticity and Strength of Materials, Department of Continuum Mechanics, School of Engineering, University of Seville, Spain, Tel: +34-954482135, Fax: +34-954461637, E-mail: mantic@esi.us.es
- Chrysoula Tsogka, Professor, Department of Mathematics and Applied Mathematics University of Crete, Heraklion GR-700 13 Heraklion, Crete, Greece, Tel: +30-2810-393730, Fax: +30-2810-393701 , E-mail: tsogka@tem.uoc.gr
- Tomas Roubiček, Professor, Mathematical Institute, Charles University of Prague, Czech Republic, Tel: +420-2-2191-3213, Fax: +420-2-2232-3394, E-mail: tomas.roubicek@mff.cuni.cz
- Euripides Papamichos, Professor, Department of Civil Engineering at Aristotle University Thessaloniki, Greece, Tel: +30-2310-995972, Fax: +30-2310-995769, E-mail: epapamic@civil.auth.gr
- George Stavroulakis, Professor, Department of Production Engineering and Management at Technical University of Crete, Chania, Greece, Tel: +30-28210-37418, Fax: +30-28210-37486, E-mail: gestavr@dpem.tuc.gr
- Panagiotis Koliopoulos, Professor, Department of Civil (Structural) Engineering of the Technological Education Institute (T.E.I.) of Serres, Greece, Tel: +30-23210-49267, Fax: +30-23210-49154, E-mail: kolio@teiser.gr
- Andreas Kappos, Professor, Department of Civil Engineering, City University London , Tel: +44-20-70408956, E-mail: Andreas.Kappos.1@city.ac.uk