

Curriculum vitae

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Dafni Pantousa MEng MSc PhD

Research Fellow in Structural Engineering

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Personal

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Nationality: Greek

DoB: 06/02/1981

Google Scholar profile: https://scholar.google.co.uk/citations?user=-PiqG_AAAAAJ&hl=en

Academic Qualification

Ph.D.	Doctorate in Structural Engineering, University of Thessaly, Volos, Greece, 2014
MSc	Mechanical Engineering, University of Thessaly, Volos, Greece, 2015
MSc	Civil Engineering, University of Thessaly, Volos, Greece, 2006
MEng- BEng	Civil Engineering, University of Thessaly, Volos, Greece, 2003

Professional Qualification

CEng	Chartered Engineer (Greece), 2003
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Education

2009 - 2014	Ph.D. in Structural Engineering , School of Civil Engineering, University of Thessaly. <i>Doctoral Thesis: Behaviour of steel structures under fire conditions after earthquake events, Supervisor: Prof. E. Mistakidis</i>
2013 - 2015	MSc in Mechanical Engineering : “State-of-the-Art Design and Analysis Methods in Industry”, School of Mechanical Engineering, University of Thessaly, <i>Master thesis: Numerical simulation of oil steel tank structural behavior under fire conditions, Supervisor: Prof. S. Karamanos</i>
2004 - 2006	MSc in Civil Engineering : “Applied Mechanics, Systems Modelling and Simulation” School of Civil Engineering, University of Thessaly, <i>Master thesis: Modeling of the Pull-Out of Hooked Steel Fibres in Fibre-Reinforced High-Strength Concrete, Supervisor: Prof. E. Mistakidis</i>
1998 - 2003	Bachelor - MEng in Civil Engineering : School of Civil Engineering, University of Thessaly, <i>Degree Thesis: Quantitative analysis of the dynamic response of simple discrete system, using Poincaré maps, Supervisor: Prof. D. Sophianopoulos</i>

Academic appointments

2017–2019	Marie Skłodowska-Curie Research Fellow , Faculty of Engineering and the Environment, University of Southampton, UK.
2015–2017	Adjunct Lecturer/Research Assistant , School of Civil Engineering, University of Thessaly, Volos, Greece
2014	Adjunct Lecturer , School of Mechanical Engineering, University of Thessaly, Volos, Greece

Grants

- 2017-2019 Marie Skłodowska-Curie Research Individual Fellowships (IF). Project **“Resilient steel frame against fire and seismic hazards”**. Supported by the European Union Commission Horizon 2020 program (€ 183,455).
- 2010-2013 Operational Program "Education and Lifelong Learning" of the National Strategic Reference Framework (NSRF) - Research Funding Program: Heracleitus II. Investing in knowledge society through the European Social Fund. Project: **Behaviour of steel structures under fire conditions after earthquake events** (€ 45.000).

Collaboration in Research Projects

- 2019-2021 **Post-fire seismic performance of steel structures**; Funded by: Operational Program "Education and Lifelong Learning" of the National Strategic Reference Framework (NSRF) - Research Funding Program: Funding for young researchers.
- 2016 **Fire design of composite slabs with trapezoidal thin-walled steel decking according to EN 1994-1-2**; Supervisor: Prof. E. Mistakidis; Funded by: ELASTRON Group: Steel Services (€ 25.000).
- 2010 – 2014 **Cost - TU0904: Integrated Fire Engineering and Response**; Coordinator: Prof. F. Wald (Czech Technical University in Prague); Working Group: “Structural Safety”; Funded by COST (European Union)
- 2009 – 2010 **Cost - C26: Urban Habitat Constructions under Catastrophic Events**; Coordinator: Prof. F. M. Mazzolani (Univ. of Naples “Federico II”); Working Group: “Fire resistance”; Funded by COST (European Union)
- 2011 **Experimental and numerical investigation for the calculation of the real strength of solar system bases made of non-convictional steel cross sections**; Supervisor: Prof. A. Michailidis, (Aristotle Univ. of Thessaloniki, Thessaloniki, Greece); Funded by: EXEL Group; (€ 30.000).
- 2006 National Project: «EIIANTYK»; **National program for the seismic rehabilitation of buildings**; Funded Technical Chamber of Greece

Academic Collaborations – Training Schools

- 2018 **Academic collaboration with Prof. L. Godoy.**
Research collaboration on the area of thermal buckling of thin-walled steel oil storage tanks.
- 2012 **Academic collaboration with Prof. I. Burgess.**
Short Term Scientific Mission (STSM) during COST Action TU0904; Host: Prof. I. Burgess, University of Sheffield; STSM Topic: Numerical analysis of steel structures under fire conditions.
- 2010 **Academic collaboration with Prof. F. Wald.**
Short Term Scientific Mission during COST Action C26; Host: Prof. F. Wald, Czech Technical Univ. in Prague; STSM Topic: Fire tests on composite slabs
- 2014 **Training school** during COST Action TU0904; Title: “Advanced Fire Engineering in Practice - Software Tools”; Luleå University of Technology, Sweden
- 2012 **Training school** during COST Action TU0904; Title: “Fire Engineering Research - Key Issues for the Future” University of Malta, Sliema, Malta

Memberships

Technical Chamber of Greece (Chartered Engineer)
Greek Society of Civil Engineering

Research Supervision

MSc-MEng

- 2016 **Supervisor** of the Thesis: Numerical simulation of pool hydrocarbon fires and their effect on adjacent tanks
Students: Christina Goula and Chrisa Malkotsi
MSc in Civil Engineering, School of Civil Eng., Univ. of Thessaly
- 2014 **Co-Supervisor** of the Thesis: Numerical simulation of natural fire in an industrial building (Supervisor: Prof. E. Mistakidis)
Student: Kalliopi Zografopoulou
MSc in Civil Engineering, School of Civil Engineering, Univ. of Thessaly
- 2016 **Supervisor** of the thesis: Thesis: Study of the buckling behavior of thin-walled steel tanks under non-uniform heating through the finite element method
Student: Maria-Aleksandra Kefaki
MEng in Civil Engineering, School of Civil Eng., Univ. of Thessaly
- 2014 **Co-supervisor** of the Thesis: Numerical evaluation of the rotational capacity of steel beams at elevated temperatures (Supervisor: Prof. E. Mistakidis)
Student: Savvas Akritidis
MEng in Civil Engineering, School of Civil Eng., Univ. of Thessaly

Teaching

University of Southampton, UK

- 2018 - 2019 CENV3056: Structural Engineering; **Teaching Assistant**; Module lead: Assoc. Prof. M.M. Kashani
- 2018 - 2019 CENV6134: Earthquake engineering and seismic design of steel buildings; **Teaching Assistant**; Instructors: Prof. T.L. Karavasilis and Assoc. Prof. M.M. Kashani
- 2017-2018 CENV6134: Earthquake engineering and seismic design of steel buildings; **Teaching Assistant**; Instructors: Prof. T.L. Karavasilis and Assoc. Prof. M.M. Kashani

University of Thessaly, Greece

MSc level

- 2016 - 2017 Simulation of shell structures; **Instructor**
- 2015 - 2017 Fire Design of Steel Structures; **Instructor**

MEng - BEng level

- 2016 - 2017 Methods for simulation of structures; MEng Level; **Instructor**
- 2014 - 2015 Mechanics of Materials II; BEng level; **Instructor**
- 2010 - 2013 Structural Analysis I, BEng level; **Teaching Assistant**; Instructor: Prof. E. Mistakidis
- 2010 - 2013 Structural Analysis II; BEng level; **Teaching Assistant**; Instructor: Prof. E. Mistakidis

Consulting Activity / Practical Experience

- 2016 **Engineer-Consultant**: Seismic vulnerability evaluation of existing school buildings (R/C, timber, and masonry structures) in Serres; Employer: City Council of Serres.
- 2014 – 2018 **Scientific Consultant** for ELASTRON Group: Steel Services
- 2014 **Engineer-Consultant**: Structural detailed design of a commercial two-storey steel-concrete building in Volos, Employer: Chlepmos-Construction Company, Volos
- 2010 **Engineer-Consultant**: Seismic Vulnerability evaluation of R/C buildings of the Municipal Hospital of Volos; Employer: Municipal Hospital of Volos
- 2010 **Engineer-Consultant**: Project: New IKEA store in Larisa in Greece; Employer: AKTOR, Greece

- 2006 **Engineer-Consultant:** Structural design of an industrial steel building in the industrial area of Volos; Employer: Kephalas-Steel and Aluminium, Industrial Area of Volos
- 2006 **Engineer-Consultant:** Structural design of a two-storey composite building used as warehouse in the department store of Praktiker in Volos; Employer: Praktiker Hellas
- 2005-2010 **Quality Control – Quality Assurance Engineer** in the project: “Construction and Extension of pipe network of natural gas (low and medium pressure) in the region of Thessaly”, Employer: J&P Avax

Publications

Refereed Journals

- J1. **Pantousa D.**, Karavasilis T., “Numerical assessment of the fire behaviour of steel post-tensioned moment-resisting frames”, *Journal of structural engineering, Submission in production, 10.1061/(ASCE)ST.1943-541X.0002581, 2019*
- J2. **Pantousa D.**, Luis A. Godoy, “On the mechanics of thermal buckling of oil storage tanks”, *Thin-walled structures, Vol. 145, 2019*
- J3. **Pantousa D.**, “Numerical study on thermal-buckling of thin-walled steel tanks under multiple pool-fire scenarios”, *Thin-walled structures, Vol. 131, pp. 577-594, 2018*
- J4. **Pantousa D.**, Tzaros K. and Kefaki M.A., “Thermal buckling behaviour of unstiffened and stiffened fixed-roof tanks under non-uniform heating”, *Journal of Constructional Steel Research, Vol. 143, pp.162-179, 2018.*
- J5. **Pantousa D.** and Mistakidis E., “Interface modelling between CFD and FEM analysis: The dual layer post-processing model”, *Engineering Computations, Vol. 34 (4), pp.1166-1190, 2017.*
- J6. **Pantousa D.** and Mistakidis E., “Rotational capacity of I-section steel beams at elevated temperatures for use in fire-after-earthquake situations”, *Steel and Composite Structures, Vol. 23 (1), pp. 53-66, 2017.*
- J7. **Pantousa D.** and Mistakidis E., “Fire resistance of a steel structure under different fire-after-earthquake scenarios using ductility based failure criteria”, *Earthquakes and Structures; Vol. 10 (4), pp. 867-891, 2015.*
- J8. **Pantousa D.** and Mistakidis E., “Advanced Modeling of Composite Slabs with Thin-Walled Steel Sheeting Submitted to Fire”, *Fire Technology, Vol. 49, (2), pp, 293–327, 2013.*
- J9. Georgiadi-Stefanidi K., Mistakidis E., **Pantousa D.** and Zygomalas M., “Numerical modelling of the pull-out of hooked steel fibres from high-strength cementitious matrix, supplemented by experimental results”, *Construction and Building Materials; 24 (12), pp. 2489-2506, 2010.*

Conference Proceedings

- CP1. **Pantousa D.**, Karavasilis T., “Numerical assessment of the fire behaviour of steel post-tensioned moment-resisting frames”, *12th HSTAM 2019 International Congress on Mechanics, Thessaloniki, 2019*
- CP2. Zografopoulou K., **Pantousa D.** and Mistakidis E., “Fire-after-earthquake behavior of industrial facilities with fire protected steel structural system”, *16th European conference on earthquake engineering, Thessaloniki, 2018*
- CP3. Koukouselis A., **Pantousa D.** and Mistakidis E., “Evaluation of the ec3 fire resistance calculation methodologies for steel frame structures”, *9th National Conference on Steel Structures, Larisa, 2017*
- CP4. Kefaki M.A., **Pantousa D.** and Tzaros K., “Nonlinear thermal buckling response of fixed-roof tanks under non-uniform heating”, *9th National Conference on Steel Structures, Larisa, 2017*
- CP5. Goula Ch., Malkotsi Ch., Zografopoulou K. and **Pantousa D.**, “Numerical simulation of pool hydrocarbon fires and their effects on adjacent tanks”, *9th National Conference on Steel Structures, Larisa, 2017*
- CP6. **Pantousa D.** “Numerical simulation of oil steel tank structural behavior under fire conditions”, *11th HSTAM International Congress on Mechanics, Athens, 2016*
- CP7. Akritidis S., **Pantousa D.** and Mistakidis E., “Numerical evaluation of the rotational capacity of steel beams at elevated temperatures”, *8th GRACM International Congress on Computational Mechanics, Volos, 2015*

- CP8. **Pantousa D.** and Mistakidis E., “Fire resistance of a steel structure under different fire-after-earthquake scenarios considering both structural and non-structural damage”, 8th National Conference on Steel Structure, Tripoli, 2014
- CP9. **Pantousa D.** and Mistakidis E., “Interface modelling between CFD and FEM analysis: The dual layer post-processing interface model”, Eurosteel, Naples, 2014
- CP10. **Pantousa D.** and Mistakidis E., “Rotational capacity of damaged and undamaged steel I-beams at elevated temperatures”, Eurosteel, Naples, 2014
- CP11. **Pantousa D.** and Mistakidis E., “Fire resistance of steel frames under different fire-after-earthquake scenarios based on scaled design accelerograms”, ASFE, Prague, 2013
- CP12. Zografopoulou K., **Pantousa D.** and Mistakidis E., “The fire–after–earthquake event in a library building Part 1: simulation of the natural fire HSTAM, Chania, 2013
- CP13. **Pantousa D.**, Zografopoulou K. and Mistakidis E., “The fire-after-earthquake event in a building, Part 2: Simulation of the structural behavior”, HSTAM, Chania, 2013
- CP14. **Pantousa D.** and Mistakidis E., “Non-linear analysis of steel frames considering fire-after earthquake scenarios”, Eurosteel, Budapest, 2011
- CP15. **Pantousa D.** and Mistakidis E., “Fire-after-earthquake analysis of steel frames”, 7th National Conference on Steel Structures, Volos, 2011
- CP16. **Pantousa D.** and Mistakidis E., “Determination of the rotational capacity of compact steel beams at elevated temperatures considering local geometric imperfections”, 7th National Conference on Steel Structures, Volos, 2011
- CP17. **Pantousa D.** and Mistakidis E., “The effect of the geometric imperfections on the rotational capacity of steel beams at elevated temperatures”, 7th Gracm international congress on computational mechanics, Athens, 2011
- CP18. **Pantousa D.** and Mistakidis E., “Thermo-mechanical analysis of composite slabs under fire conditions” in F.M. Mazzolani et al “Urban Habitat Construction under Catastrophic Events”, Balkema, 2010
- CP19. Mistakidis E., Georgiadi-Stefanidi K. and **Pantousa D.**, “Modeling of the pull-out of hooked steel fibres in fibre-reinforced high-strength concrete”, Computational Structures Technology Conference, Las Palmas de Gran Canaria, 2006

Contributed Volumes

- CV1. “Organization of national fire and rescue arrangements in different countries”, COST Action TU0904 –Fire brigade reports and investigations, CTU Publishing House, Czech Technical University in Prague, February 2013
- CV2. **Pantousa D.**, Mistakidis E. and Lambrou G., “Fire design of a new building in Athens”, COST Action TU0904 – Case studies, CTU Publishing House, Czech Technical University in Prague, March 2012
- CV3. **Pantousa D.**, Mistakidis E., “Fire research at the laboratory of structural analysis and design of civil engineering, University of Thessaly” COST Action TU0904 – State of the art report, CTU Publishing House, Czech Technical University in Prague, March 2011
- CV4. Nigro E, Cefarelli G., Wald F., Hajpal M., Zaharia R., Lopes N., Vila Real P., Kwasniewski L., Drabowisc Z., **Pantousa D.**, Gedw E., Bacinskas D., Gribniak V., & Heinisuo M. “Vulnerability of existing buildings under fire”, COST Action C26– FINAL REPORT, Taylor & Francis Group, London UK, 2010

Greek Technical Journals

- NJ1. Mistakidis E., Michailidis A., Tzaros K., **Pantousa D.**, Malikoutsakis M., “Effective design of thin-walled steel structural systems used as bases to solar systems according to design assisted by testing requirements of EC3”, Steel Structures, Vol I, 2011 (*in Greek*)