

**Theodoros C. Rousakis**

Ph.D., M.Sc., Civil Engineer

Assistant Professor in Reinforced Concrete Laboratory,

Engineering Structures Section,

Civil Engineering Department,

Engineering Faculty

Democritus University of Thrace (D.U.Th.)

CURRICULUM VITAE

Xanthi, January 2017

**Specialism: FRPs in Construction. Repair and Strengthening of Concrete Structural Members with Composite Materials (FRP, FR, Hybrid). 3D Finite Element Analysis. Pre-seismic and Post-seismic Control of Structures, Rapid Visual Screening of the Vulnerability of Buildings, Reinforced Concrete Members under Fatigue Loading or with Steel Corrosion, Assessment – Analysis and Strengthening and Repair.**

(site <http://utopia.duth.gr/~trousak/>)

### **Personal Data**

Date of birth: 10-2-1976

Place of birth: Agia Triada Thessaloniki, Municipality of Thermaikos

Married since 2003. Father of one daughter.

### **Education – Research and Academic Positions**

- High School graduation (1993), Neoi Epivates Thessaloniki (with grade 17.9 / 20)
- During 5 year diploma in Civil Engineering (1994-1999) he obtained a distinction scholarship (5<sup>th</sup> higher grade in 180 students at the 3<sup>rd</sup> year of undergraduate studies) from Institute of Greek State Grants (IKY). He supervised the construction of 7 multi-storey buildings in Xanthi. Diploma thesis in Use of FRP in Construction (Grade, ‘Excellent’).
- Master in Structural Engineering entitled “New Materials and Technologies in Design of Reinforced Concrete Structures” with a state scholarship (1999-2000). Master Thesis in FRP confined concrete conducting experiments and proposing a plasticity model (co-author with his supervisor Professor A.I. Karabinis of one journal paper and two conference papers, based on that work). Teaching assistance was assigned from his supervisor.
- Participation in 2 competitive European research programs within the framework of TMR Network ConFibreCrete «Development of Guidelines for the Design of Concrete Structures, Reinforced, Prestressed or Strengthened with Advanced Composites» as a visiting researcher (2000-2001), ‘Project assistant’ Chalmers University of Technology (Sweden) under the supervision of Professor R. Tepfers. Also, he participated in the two year (2005-2006) research program “Strengthening of cylinders with carbon FRPs” of Chalmers University of Technology (Göteborg, Sweden) and Polymer Mechanics Institute (PMI Riga – Latvia). In above researches he had the chance to collaborate among else with young researchers from Latvia as well as from Italy. Three conference papers and three journal papers in which he was co-author were based on that collaborations.
- During his stay at Chalmers he participated as young researcher in the European Union Network for the Training and Mobility of Researchers (TMR) CONFIBRECRETE, aiming at the ‘Development of Guidelines for the Design of Concrete Structures, Reinforced, Prestressed or Strengthened with Advanced

Composites' with the team of Chalmers University of Technology (one of the 11 teams from 9 different European countries) under the supervision of Professor R. Tepfers.

- As PhD Candidate he defended his PhD thesis in October 2005 entitled 'Mechanical Behaviour of FRP confined Concrete by FRP Materials' and got PhD degree with grade 'Excellent' under the supervision of Professor A.I. Karabinis. Teaching assistance was assigned from his supervisor from 2001 – 2003.
- Elected (after the standard election procedure followed for full-time Professors) as a full-time Special & Lab Teaching Staff Civil Engineer of the Reinforced Concrete Laboratory of the Civil Engineering Department of The Engineering Faculty of D.U.Th. (hired from 7/2003 – 9/2009). Teaching of courses in Civil Engineering Department were assigned and assistance in supervision of Diploma and Master Thesis.
- Hired as part-time Lecturer in Architectural Engineering Department of D.U.Th. (3/2006 – 9/2009) to co-teach reinforced concrete and seismic design courses.
- Elected (after the standard election procedure followed for full-time Professors) as full-time Lecturer of the Reinforced Concrete Laboratory of the Engineering Structures Section of the Civil Engineering Department of The Engineering Faculty of D.U.Th. (hired 9/2009 – 12/2014) with full teaching assignments in 4<sup>th</sup> and 5<sup>th</sup> year of undergraduate level and in Master program. He has supervised Diploma and Master Theses.
- Elected (after the standard election procedure followed for full-time Professors) as full-time Assistant Professor of the Reinforced Concrete Laboratory of the Engineering Structures Section of the Civil Engineering Department of The Engineering Faculty of D.U.Th. (hired 12/2014 – present) with full teaching assignments in 4<sup>th</sup> and 5<sup>th</sup> year of undergraduate level and in Master program. He has supervised Diploma and Master Theses.

#### *Additional specialization – continuous education*

2003(/5): Participation in seminar – course: *fib* Course “Strengthening with Externally Bonded FRP Reinforcement – Behaviour, Design and Applications” in Athens, 4-5 of May 2003.

2010(/10): Participation in webinar within the framework of ACI FALL Covention 2010, Pittsburgh, entitled «ACI Sustainable Design with Concrete Part 2».

2011(19/3): Participation in seminar entitled «Design of Concrete Structures based on Eurocodes» by Technical Chamber of Greece, SMPE and OASP, in Kavala, Greece.

2011(19/10): ): Participation in seminar entitled “Retrofit of Reinforced Concrete Structures based on EN1504 (FEK 1100/21-7-2010)” by Technical Chamber of Greece, in Thrace, Komotini, Greece.

2011(17/12): Participation in seminar entitled «New retrofit Code (KAN.EPE) assessment of structures and interventions» by Technical Chamber of Greece and OASP, in Kavala, Greece.

- 2013(19/4): Participation in seminar entitled “Pathology – Durability of Reinforced Concrete and Retrofit” by EPES and Technical Chamber of Greece and Greek Section of International Association for Bridge and Structural Engineers (IABSE) in Thessaloniki, Greece.
- 2014(8/1): Participation in webinar organized by the International Institute for FRP in Construction, IIFC, entitled «RC beam strengthened for flexure», E. Martinelli , University of Salerno, 08 January 2014.
- 2014(5/8): Participation in webinar organized by ACI, entitled « Design and Construction of Externally Bonded Fabric-Reinforced Cementitious Matrix (FRCM) Systems » by A. Nanni.
- 2014(2/9): Participation in webinar organized by ACI, entitled «Background and Application of ACI 437.2-13: Code Requirements for Load Testing of Existing Concrete Structures».
- 2014(16/10): Participation in webinar organized by ANSYS UK entitled «Simulating Composite Products with ANSYS».
- 2015(8/1): Participation in webinar organized by International Institute for FRP in Construction, IIFC, entitled « FRP material for strengthening of structures in the field of construction, mechanical properties and bond», by *Professor Ferrier*, University Lyon, 08 January 2015. Also, in RC beam strengthened for flexure, by *Professor Martinelli*, University of Salerno, Italia, 14 January 2015, RC beam strengthened for shear, by *Professor Barros*, University of Minho, Portugal, 26 February 2015, Field applications of FRP in bridges in Australia, by *Professor Riadh Al-Mahaidi*, Swinburne University of Technology Australia, Development of Standard Design Equations for Pultruded GFRP Members Subject to Compression, by *Professor Harries*, University of Pittsburgh, USA, March 2015, 30 of March, Durability of FRP, by *Professor Benmokrane*, University of Sherbrooke, Canada, 10 June 2015, Seismic behavior of structures Strengthened by FRP, by *Professor Triantafillou*, University of Patras, Greece, June 2015.
- 2015(18/6): Participation in webinar organized by SIMULIA, entitled « Live eSeminar on fe-safe Industry Application Workflows ».

### **Administrative work (I)**

As a full-time Special & Lab Teaching Staff he participated with vote in the general assembly of the Civil Engineering Department and its administrative council. Also his duty was to participate in the general assembly of the engineering structures section and of the reinforced concrete laboratory since 2003. As Lecturer (since 2009) he was a member of the general assembly of the Civil Engineering Department (2011-present) and of the general assembly of the engineering structures section. He has been a member of committees concerning the preparation of proposals for Department equipment, evaluation of equipment, evaluation and ranking of candidates for staff or of candidates for the Engineering Structures Master Program, specifications for reinforced concrete lab equipment, etc.

## **Teaching Experience (II)**

Assignment of the teaching assistance or co-teaching of several courses in 4<sup>th</sup> year:

- Reinforced Concrete Structures Ib from 1999-2010,
- Masonry Structures from 2010-present,
- Reinforced Concrete Structures II from 2015

and 5<sup>th</sup> year:

- Reinforced Concrete Structures Ic from 2008-present,
- Reinforced Concrete and Prestressed Bridges 2006-present,
- Assessment and Retrofit of Reinforced Concrete Structures 2010-present
- Design of Engineering Structures with Computational Methods 2013-present

of undergraduate level at the Civil Engineering Department in D.U.Th.

Participation in the postgraduate program “New Materials and Technologies in Design of Reinforced Concrete Structures”. Co-teaching of the postgraduate courses:

- Seismic Design and Use of New Materials in Reinforced Concrete Bridges (2010-2013) and
- Behaviour and Design of Reinforced Concrete Structural Members with Synthetic Reinforcement’ (2013-2015)

was assigned.

Also he is teaching the postgraduate course:

- Research Methodology in Reinforced Concrete (2011-present).

Finally two courses on Reinforced Concrete Design of the 3<sup>rd</sup> year of Architectural Engineering Department were taught (2002-2009). In all above courses he supervises student projects that are obligatory to fulfil and include Finite Element Analyses of Structures (1D, 2D or 3D). Undergraduate courses include elastic and inelastic 3D analysis of structures (buildings and bridges – elastic analysis of 3D structures with 1D or 2D finite elements) with advanced softwares. Undergraduate course Design of Engineering Structures with Computational Methods includes the use of different softwares for the design of new or existing concrete buildings with professional softwares according to Eurocode 2 and 8 – elastic or inelastic analysis of 3D structures with 1D finite elements), RESPONSE 2000 for the analysis of RC sections and members (pushover) with Modified Compression Field Theory for Axial load - Flexure – Shear interaction, Seismostruct or SAP for the pushover analysis or time-history analysis of as-built and retrofitted structures (inelastic analysis of 3D structures with 1D finite elements and discretization of sections in fibers). Thus, there is a project with inelastic analysis in section, member and structure level. In the post-graduate level and especially in the course of Research

Methodology in Reinforced Concrete, lessons include the introduction to 3D non associative Drucker-Prager plasticity theory for confined concrete as well as Damage plasticity models in order to construct, analyse and assess the analytical behaviour of 3D FE RC columns and beams strengthened with FRPs or not.

He has assisted the supervision of more than 30 Diploma theses and Master theses until 2009 (Supervisor Professor A.I. Karabinis). After elected as Lecturer in 2009 he has been the supervisor of more than 30 Diploma Theses and Master Theses.

He is member of the consulting committee for the doctoral studies of the following PhD candidates: Eleni Fitneoglou in the field of “repair of reinforced concrete structures” (Supervisor Professor Athanasios Karabinis) and Garyfallia Triantafyllou in the field of “strengthening of reinforced concrete members” (Supervisor Professor Athanasios Karabinis).

### **Professional work (III)**

1999: Supervision of the construction of 7 multi-storey buildings in Xanthi during his 5-month internship program as undergraduate student of Civil Engineering Department (DUTH).

2000(/02): Full license for Civil Engineering Profession through examination in the Technical Chamber of Greece (February 2000). Member of Technical Chamber of Greece reg.no: 84578. Member of Technical Chamber of Greece reg.no: 84578. Member of the Association of Greek Civil Engineers,

2000(/8) – : Participation in two competitive European research projects, working as `Project assistant` (principal researcher) Chalmers University of Technology (Sweden) under the supervision of Professor R. Tepfers. Principal researcher in ten Greek projects (assigned by DUTH, Organization of School Buildings, Technical Chamber of Greece or private companies).

2002(/2) – 2002(/7): Special design projects and building projects of total budget 2.295.489,56 Euros and supervision of building projects of total budget: 331.181,12 Euros 732 Directorate of Military Projects (Greek Army).

### **Consultancy as invited expert**

2007(/6): Assessment of DUTH buildings in Orestiada. Assigned by DUTH in committee of experts.

2012(/10): Assessment of Reinforced Concrete Bridge in Peteinos, Xanthi after damage of multiple girders caused by vehicular impact. Assigned by Regional Division of Xanthi in committee of experts.

2015(/3): Assessment of Educational Reinforced Concrete Building in Kimmeria, Xanthi after damages in non-structural elements. Assigned by DUTH Rector in committee of experts.

2015(/10): Assessment of Educational Stone-Brick Masonry Building in Xanthi after damages in bearing walls. Assigned by DUTH Senate in committee of experts.

### **Participation in evaluation committees**

2014(/5): Invited evaluator of the candidate Teachers of the academic years 2014-2017 for module “Seismic damage, Repair and Strengthening of Structures” (SMA61) of the Postgraduate Program of Studies “Earthquake Engineering and Seismic-Resistant Structures” of the Hellenic Open University, Patras, Greece.

2014(/6): Invited examiner of the candidate Graduate Civil Engineers, for the Greek regulatory body for Civil Engineering profession (Chartered Engineers) on Wednesday 25<sup>th</sup> of June 2014 in Komotini.

2014(/9): Invited evaluator of research proposals within the framework of European Research Network ERA-MIN.

2015(/6): Invited examiner of the candidate Graduate Civil Engineers, for the Greek regulatory body for Civil Engineering profession (Chartered Engineers) on Wednesday 24<sup>th</sup> of June 2015 in Komotini and Thursday 25<sup>th</sup> of June 2015 in Kavala.

2015(/11) and 2016(/2): Invited examiner of the candidate Graduate Civil Engineers, for the Greek regulatory body for Civil Engineering profession (Chartered Engineers) on Monday 2<sup>nd</sup> of November 2015 and on Monday 29<sup>th</sup> of February 2016 in Kavala.

### **Participation in research projects (IV)**

2000(/8) – 2001(/1): Hired as Project Assistant of Professor Ralejs Tepfers in Chalmers University of Technology (Sweden) within the framework of TMR Network ConFibreCrete “Development of Guidelines for the Design of Concrete Structures, Reinforced, Prestressed or Strengthened with Advanced Composites”. He was the main researcher and author of the research report, supervised by Professor Tepfers. The research project concerned the investigation of the experimental behaviour of FRP confined concrete under axial monotonic and repeated load-unload-reload compression. The plain concrete strengths varied from 25-82 MPa while 3 different carbon FRP materials were used. Prestressed (active) confinement was applied using carbon filament. The funding of this competitive research project was by the EU, and the grant reached a total of 12000 Euros.

2001(/9) – 2001(/12): Participation in the research project in Riga Institute of Polymer Mechanics (PMI) Latvia, within the framework of TMR Network ConFibreCrete

“Development of Guidelines for the Design of Concrete Structures, Reinforced, Prestressed or Strengthened with Advanced Composites”. The project further advanced the former project with the collaboration of Chalmers University. The funding of this competitive research project was by the EU.

2002(/4) – 2003(/4) & 2004(1/5 – 30/5): Hired as Principal Researcher from the Research Committee of DUTH within the framework of the project ‘Preseismic Assessment of Structures’ with assignment of the project ‘Collection and Elaboration of first level preseismic assessment’. Project leader Professor A. Karabinis. He conducted rapid visual screening of all University structures (Xanthi, Komotini, Alexandroupolis) based on FEMA 154 procedure modified and improved for use in Greek structures. The method was also applied in 687 structures hit from major Athens 1999 earthquake that also included collapsed structures. He made a database for further elaboration and estimation of vulnerable buildings. A pushover analysis of a University reinforced concrete structure was conducted according to ATC-40/1996 procedure in order to compare the results of detailed assessment with the ones from RVS method and evaluate the limit score. The total grant reached 11700 Euros.

2004(23/9) – 2005(23/1): Hired as Principal Researcher by the Technical Chamber of Greece as a member of a research group of the “National Program for the Seismic Strengthening of Existing Structures (EPIANTYK)” with objective: census of existing buildings and assessment of the seismic vulnerability and seismic hazard of buildings in the town of Xanthi (Residential area, Project with Project Leader Professor A. Karabinis). Total grant 500 Euros.

2005(1/1) – 2006(31/12): Participation in the research project in Riga Institute of Polymer Mechanics (PMI) entitled “Strengthening of concrete cylinders with carbon FRPs”. The project was in collaboration with Chalmers University of Technology. He participated as member of the research team coming from DUTH, PMI, Chalmers and Lecce.

2005(26/1) – 2005(25/4) and 2005(24/10) – 2005(31/12): Hired by the Research Committee of DUTH as a principal member of research group under the supervision of Professor A. Karabinis in the research project ‘Application of the 1<sup>st</sup> phase of the research program for the pre-seismic control of school buildings that were designed and constructed without seismic code in the counties of Xanthi’ assigned by the Organization of School Buildings (OSK). The assigned task was the in-situ inspection and fill in of the RVS data-sheets for the structural and non-structural vulnerability of school buildings. Another demanding task was the decision of direct structural retrofit or of direct demolition of dangerous non-structural elements for each building

2005(10/6) – 2006(28/2): Hired by the Research Committee of DUTH as a principal member of research group under the supervision of Professor A. Karabinis in the research project ‘Application of the 1<sup>st</sup> phase of the research program for the pre-seismic control of school buildings that were designed and constructed without seismic code in the counties of Kavala, Evros, Rodopi’ assigned by the Organization of School Buildings (OSK). The assigned task was the in-situ inspection and fill in of the RVS data-sheets for the structural and non-structural vulnerability of school buildings. Another demanding task was the decision of direct structural retrofit or of direct demolition of dangerous non-structural elements for each building

2006(1/3) – 2006(30/9): Hired by the Research Committee of DUTH as a principal member of research group under the supervision of Professor A. Karabinis in the



research project ‘Application of the 1<sup>st</sup> phase of the research program for the pre-seismic control of school buildings that were designed and constructed without seismic code in the counties of Serres and Drama’ assigned by the Organization of School Buildings (OSK). The assigned task was the in-situ inspection and fill in of the RVS data-sheets for the structural and non-structural vulnerability of school buildings in 7 counties of Greece including the whole Thrace and a part of East Macedonia. Another demanding task was the decision of direct structural retrofit or of direct demolition of dangerous non-structural elements for each building. He traced the buildings of that category and coordinated the team for the in-situ visits and the preparation of RVS data-sheets. The total grant for the whole OSK project surpassed 15.000 Euros.

2006(25/10) – 2007(24/10): Hired by the Research Committee of DUTH as a principal member of research group under the supervision of Professor A. Karabinis in the research project ‘Preparation of guidelines and evaluation of the results from the assessment of seismic capacity of existing buildings owned by GTO (OTE) properties SA (Phase A)’” assigned by OTE properties SA.

2008(8/4) – 2008(8/10): Hired by the Research Committee of DUTH as a member of research group under the supervision of Professor A. Karabinis in the research project ‘ Investigation of the causes and evaluation of research results concerning the burn of the new factory of Michas AEBE in Levadia’ assigned by Michas AEBE.

2012(/5): Hired by the Research Committee of DUTH as a member of research group under the supervision of Professor A. Karabinis in the research project ‘Laboratory tests of concrete structural members, structures and materials’ with objective proposals for the experimental investigation of the efficiency of concrete elements’ strengthening with FRPs, assigned by Emvolo Thessalonikis ATE. Budget of 1845 Euros.

2013(/6) – 2017(/6): Participation in the *TUD COST (European Cooperation in Science and Technology) Action TU1207: Next Generation Design Guidelines for Composites in Construction*, as member of the Management Committee. The Action starts from June 2013 and aims to: coordinate European research in the field; develop and maintain a critical mass of researchers; offer a link between academia and industry; and develop a new generation of design guidelines based on European Standards. [http://www.cost.eu/domains\\_actions/tud/Actions/TU1207?](http://www.cost.eu/domains_actions/tud/Actions/TU1207?)

2015(/4) – 2019(/4): Participation in the *TUD COST (European Cooperation in Science and Technology) Action TU1406: Quality specifications for roadway bridges, standardization at a European level (BridgeSpec)*, as substitute member of the Management Committee. The Action starts from April 2015 and aims to: to bring together, for the first time, both research and practicing community in order to accelerate the establishment of a European guideline in this subject. It will be also analysed new indicators related to sustainable and economic performance of roadway bridges. [http://www.cost.eu/domains\\_actions/tud/Actions/TU1406?](http://www.cost.eu/domains_actions/tud/Actions/TU1406?)

2015(/6) - 2015(/11): Participation in the research project in Alexandroupolis, Greece entitled “Investigation of the structural system and retrofit proposal for the Education buildings in Alexandroupolis, Greece”.

### **Research project leader (IV.1)**

Project leader in two ongoing projects and one already finished in repair and strengthening of concrete elements with FRPs and other advanced reinforcements.

2005(/5) – 2012(/3): Project Leader of the research program KE1331 (80296) entitled: ‘Mechanical behaviour of FRP confined concrete’ with a funding of 23616 Euros from Engineers and Public Works Contractors Research Fund.

2009(/10) – 2012(/9): Project Leader of the research program KE1900 (80001) entitled: ‘Repair and strengthening of Concrete Structural Members by Fiber Reinforced Polymer or/and Resin Injection’ with a funding of 13570 Euros from Engineers and Public Works Contractors Research Fund.

2011(/11) – 2014(/10): Project Leader of the research program KE 80867 entitled: ‘Retrofit of Concrete Structural Members’ with a funding of 22841 Euros from Engineers and Public Works Contractors Research Fund.

2014(/9) – present: Project Leader of the research program KE 81420 entitled: ‘Specialized Retrofit of Concrete Members and Structures’ with a funding of 20388 Euros from Engineers and Public Works Contractors Research Fund.

### **Research interests**

In the last 16 years he has conducted research in experimental, analytical and in-situ inspection projects. His research involves constitutive and empirical modelling of materials and concrete members, inelastic analyses of structures, as well as experiments on concrete members retrofitted by FRPs etc.

The research Interests involve (from his site <http://utopia.duth.gr/~trousak/>)

- Experimental investigation of the repair and strengthening of reinforced concrete elements with composite materials (FRPs), designed with old and modern codes
- Analytical investigation and design recommendations for the repair and strengthening of concrete elements with use of composite materials
- Plasticity modelling of FRP strengthened concrete elements
- 3D finite element analysis of FRP strengthened reinforced concrete elements and structures
- Assessment of capacity of existing RC structures with static or dynamic inelastic (time-history) analysis and investigation of FRP strengthening alternatives
- Pre-seismic control of structures. Calibration and improvement of RVS methodology through post-seismic inspections. Investigation of vulnerability parameters of structures through inspections to earthquake damaged structures.
- Experimental and analytical research on the use of composite fiber reinforcements (FR) in retrofit, combined with other composites (hybrid) or not (seismic strengthening through confinement, shear strengthening, flexural etc).
- Assessment of residual life of ageing infrastructure and of members under fatigue loads (bridge girders etc) or with corroded steel reinforcements.

## **Publications**

(Scopus <http://www.scopus.com/authid/detail.url?authorId=12795640500>)

**Google Scholar**

[http://scholar.google.gr/citations?user=OKejd\\_wAAAAJ&hl=el&oi=sra](http://scholar.google.gr/citations?user=OKejd_wAAAAJ&hl=el&oi=sra)

**ResearchGate** [http://www.researchgate.net/profile/Theodoros\\_Rousakis/](http://www.researchgate.net/profile/Theodoros_Rousakis/))

More than 440 citations from other publications (author's and coauthors' references not taken into account).

## **Journal papers (V)**

1. Karabinis A.I, Rousakis T.C. (2002): Concrete Confined by FRP Material: A Plasticity Approach. Elsevier Engineering Structures Journal, 24, pp. 923-932.
2. Rousakis T., Tepfers R. (2004): Behavior of concrete confined by high E-modulus carbon FRP sheets, subjected to monotonic and cyclic axial compressive load. Nordic Concrete Research Journal, Publication No. 31, (1), pp. 73-82. [http://www.nordicconcrete.net/ikbViewer/page/fagmiljo/liste1/artikkel?p\\_o=10064&p\\_menu=30103&p\\_submenu=13246&p\\_document\\_id=42471](http://www.nordicconcrete.net/ikbViewer/page/fagmiljo/liste1/artikkel?p_o=10064&p_menu=30103&p_submenu=13246&p_document_id=42471)
3. Tamuzs V., Tepfers R., Chi-Sang You, Rousakis T., Repelis I., Skruls V., Vilks U., (2006): Behavior of Concrete Cylinders Confined by Carbon-Composite Tapes and Prestressed Yarns. Mechanics of Composite Materials. Vol 42, No 1, ISSN 0191-5665. Springer Science+Business Media, Inc. pp. 13-32. Also in Russian. ISSN 0203-1272. pp. 21-44.
4. Rousakis T.C, Karabinis A.I, Kiouisis P.D (2007): FRP-Confined Concrete Members: Axial Compression Experiments and Plasticity Modelling. Elsevier, Engineering Structures Journal. Vol 29, No 7, 1343-1353.
5. Valdmanis V., De Lorenzis L., Rousakis T., Tepfers R. (2007): Behavior and Capacity of CFRP-Confined Concrete Cylinders Subjected to Monotonic and Cyclic Axial Compressive Load. Structural Concrete, Journal of the *fib*, Volume 8, Number 4, December 2007. Thomas Telford, London.
6. Rousakis T.C., Karabinis A.I. (2008): Substandard Reinforced Concrete Members Subjected to Compression - FRP Confining Effects. RILEM Materials and Structures, Springer Netherlands, 15.01.2008, vol. 41, no. 9, pp. 1595-1611.
7. Karabinis A.I., Rousakis T.C., Manolitsi G. (2008): 3D Finite Element Analysis of Substandard Columns Strengthened by Fiber Reinforced Polymer Sheets. ASCE Journal of Composites for Construction, Volume 12, Issue 5, pp. 531-540.
8. Rousakis T.C., Karabinis A.I., Kiouisis P.D., Tepfers R. (2008): Analytical modelling of Plastic Behaviour of Uniformly FRP Confined Concrete Members. Elsevier, Journal of Composites Part B: Engineering, Volume 39, Issues 7-8, October-December 2008, Pages 1104-1113.
9. Rousakis T.C., Karabinis A.I. (2012): Adequately FRP confined reinforced concrete columns under axial compressive monotonic or cyclic loading. RILEM Materials and Structures, Springer Netherlands, 2012;45(7) 957-975.
10. Rousakis T.C., Rakitzis T.D., Karabinis A.I. (2012): Design - Oriented Strength Model for FRP Confined Concrete Members. ASCE Composites for Construction

- 2012, 16(6), 615–625. (2<sup>nd</sup> most viewed paper for the site of the journal until 4/2013).
11. Rousakis, T. (2014): Elastic Fiber Ropes of Ultrahigh-Extension Capacity in Strengthening of Concrete Through Confinement. *J. Mater. Civ. Eng.*, 26(1), 34–44.
  12. Rousakis, T. (2013): Hybrid Confinement of Concrete by FRP Sheets and Fiber Ropes Under Cyclic Axial Compressive Loading. *ASCE, J. Compos. Constr.*, 17(5), 732–743.
  13. Rousakis T.C., Kouravelou K.B., Karachalios T.K. (2014): Effects of Carbon Nanotube Enrichment of Epoxy Resins on Hybrid FRP - FR Confinement of Concrete. Elsevier, *Journal of Composites Part B: Engineering*. Volume 57, February 2014, Pages 210-218.
  14. Rousakis T.C., Tourtouras I.S. (2014): RC Columns of Square Section – Passive and Active Confinement with Composite Ropes. Elsevier, *Journal of Composites Part B: Engineering*. Volume 58, March 2014, pages 573-581.
  15. Triantafyllou G.G., Rousakis T.C., Karabinis A.I. (2015): Axially Loaded Reinforced Concrete Columns with a Square Section Partially Confined by Light GFRP Straps. *ASCE Composites for Construction*, Volume 19, Issue 1, 10.1061/(ASCE)CC.1943-5614.0000496 , 04014035.
  16. Nisticò N., Pallini F., Rousakis T., Wu Y.F., Karabinis A. (2014): Peak strength and ultimate strain prediction for FRP confined square and circular concrete sections. *Composites Part B: Engineering*. Volume 67, December 2014, Pages 543–554.
  17. Rousakis, T. C., Tourtouras, I. S. (2015): Modeling of passive and active external confinement of RC columns with elastic material. *ZAMM Journal*, by Wiley-VCH Verlag GmbH & Co. KGaA. V.95 ( 10 ) pp. 1046 – 1057. Article first published online: 6 AUG 2015. DOI: 10.1002/zamm.201500014.
  18. Rousakis T.C., Saridaki M.E., Mavrothalassitou S.A., Hui D. (2016): Utilization of hybrid approach towards advanced database of concrete beams strengthened in shear with FRPs. *Composites Part B: Engineering*, Volume 85, February 2016, Pages 315-335.
  19. Charalambidi B., Rousakis T., Karabinis A. (2016): Fatigue Behavior of Large-Scale Reinforced Concrete Beams Strengthened in Flexure with Fiber-Reinforced Polymer Laminates. *ASCE Journal of Composites for Construction*, Volume 20, Issue 5, [10.1061/\(ASCE\)CC.1943-5614.0000689](https://doi.org/10.1061/(ASCE)CC.1943-5614.0000689) , 04016035
  20. Charalambidi B., Rousakis T., Karabinis A. (2016): Analysis of the Fatigue Behavior of Reinforced Concrete Beams Strengthened in Flexure with Fiber Reinforced Polymer Laminates, *Composites Part B* (2016), Volume 96, 1 July 2016, Pages 69-78.
  21. Rousakis T.C. (2016): Reusable and recyclable nonbonded composite tapes and ropes for concrete columns confinement, *Composites Part B: Engineering*, Volume 103, 15 October 2016, Pages 15-22.
  22. Triantafyllou G.G., Rousakis T.C., Karabinis A.I. (2017): Corroded RC beams patch repaired and strengthened in flexure with fiber-reinforced polymer

laminates. Accepted in Elsevier Journal of Composites Part B: Engineering, Volume 112, 1 March 2017, Pages 125-136.

23. Kwiecień A., Matija G., Rousakis T., Viskovic A., Korelc J. (2016): Validation of a New Hyperviscoelastic Model for Deformable Polymers Used for Joints between RC Frames and Masonry Infills. Engineering Transactions of Polish Academy of Sciences.
24. Rousakis T.C. (2017): Discussion of the review paper “Repair and rehabilitation of concrete structures using confinement: A review” by Chau-Khun Ma, Nazirah Mohd Apandi, Sofrie Chin Siew Yung, Ng Jen Hau, Lo Wen Haur, Abdullah Zawawi Awang, Wahid Omar [Construction and Building Materials 133 (2017) 502–515], Construction and Building Materials, Available online 24 January 2017, ISSN 0950-0618, <http://dx.doi.org/10.1016/j.conbuildmat.2017.01.050>

### **Invited Book chapters (V.1)**

1. Rousakis T.C. (2013). Hybrid FRP Sheet – PP Fiber Rope Strengthening of Concrete Members, Fiber Reinforced Polymers - The Technology Applied for Concrete Repair, Dr. Martin Masuelli (Ed.), ISBN: 978-953-51-0938-9, InTech, DOI: 10.5772/51425. Available from: <http://www.intechopen.com/books/fiber-reinforced-polymers-the-technology-applied-for-concrete-repair/hybrid-frp-sheet-pp-fiber-rope-strengthening-of-concrete-members>
2. Rousakis T.: Retrofitting and Strengthening of Contemporary Structures: Materials Used. In: Beer M., Patelli E., Kougoumtzoglou I., Au I. (Ed.) Encyclopedia of Earthquake Engineering: SpringerReference ([www.springerreference.com](http://www.springerreference.com)). Springer-Verlag Berlin Heidelberg, 2013. 2014-03-23 12:12:26 UTC.
3. Rousakis T.: Natural fibre rebar cementitious composites. In: Dr. Fan, Dr. Fu Book: Advanced High Strength Fibre Composites in Construction, First edition. Woodhead Publishing, Elsevier. ISBN: 9780081004111, October 2016.

### **Invited Co-Editor of Journal Special Issue (V.2)**

1. Tarantino A.M., Kaplunov J., Luciano R., Majorana C., Rousakis T.C., Willam K. (2017): Editorial for the Special Issue: Structural Modelling at the Micro-, Meso-, and Nanoscale. Modelling and Simulation in Engineering Open Access Journal, Hindawi. Volume 2017 (2017), Article ID 3504949, 3 pages. <https://doi.org/10.1155/2017/3504949>

### **Papers in International Conferences (VI)**

1. Karabinis A. I, Rousakis T.C. (2001): Carbon FRP Confined Concrete Elements Under Axial Load. FRP Composites in Civil Engineering Conference, 12 - 15 December 2001, Hong Kong, pp 309-316.

2. Karabinis A. I, Rousakis T.C. (2001): A Model for the Mechanical Behaviour of the FRP Confined Concrete Columns. FRP Composites in Civil Engineering Conference, 12 - 15 December 2001, Hong Kong, pp 317-325.
3. Rousakis T.C, Tefers R. (2002): Experimental Investigation of Concrete Cylinders Confined by Carbon FRP Sheets, under Monotonic and Cyclic Axial Compressive Load. XII Mechanics of Composite Materials (MCM 2002) Conference, 9 – 13 June 2002, Riga, Latvia, pp 172-181.
4. Karabinis A.I., Rousakis T.C. (2003): Behaviour of Rectangular FRP Confined Concrete Elements Subjected to Monotonic and Cyclic Axial Compressive Load. *fib* 2003 Symposium ‘Concrete Structures in Seismic Regions’, 6-8 May 2003, Athens, pp: 372.
5. Kioussis P.D., Rousakis T.C., Karabinis A.I. (2003): Theory of Plasticity for the Modeling of Rectangular FRP Confined Concrete Columns. *fib* 2003 Symposium ‘Concrete Structures in Seismic Regions’, 6-8 May 2003, Athens, pp: 120.
6. Rousakis T.C, Chi-Sang You, Laura de Lorenzis, Tamuzs V, Tefers R. (2003): Concrete Cylinders Confined by Carbon FRP Sheets, Subjected to Monotonic and Cyclic Axial Compressive Load. 6<sup>th</sup> International Symposium on Fibre-Reinforced Polymer (FRP) Reinforcement of Concrete Structures (FRPRCS-6), 8 – 10 July 2003, Singapore.
7. Rousakis T.C, Chi-Sang You, Laura de Lorenzis, Tamuzs V, Tefers R. (2003): Concrete Cylinders Confined by Prestressed Carbon FRP Filament Winding, Subjected to Monotonic and Cyclic Axial Compressive Load. 6<sup>th</sup> International Symposium on Fibre-Reinforced Polymer (FRP) Reinforcement of Concrete Structures (FRPRCS-6), 8 – 10 July 2003, Singapore.
8. Rousakis T.C, Tefers R. (2003): High Strength concrete confined by high-Modulus carbon FRP sheets subjected to monotonic and cyclic axial compressive load. Composites in Construction, International Conference, University of Calabria, 16-19 September 2003.
9. Karabinis A.I., Rousakis T.C. (2004): Seismic rehabilitation of reinforced concrete beam-column connections by FRP material. International Conference on Computational & Experimental Engineering & Sciences ICCES 04, 26-29 July 2004, Madeira, Portugal.
10. Karabinis A.I., Rousakis T.C. (2006): FRP Confining Effects on Steel Reinforced Concrete Square Sections Subjected to Axial Load. Proceedings of the 2<sup>nd</sup> International *fib* Congress, 5-8 June 2006, Naples, Italy (accepted for publication without revising). Condensed papers Vol. 2, pp: 88.
11. Karabinis A.I., Rousakis T.C., Manolitsi G. (2007): Three-dimensional Finite Element Analysis of Reinforced Concrete Columns Strengthened by Fiber Reinforced Polymer Sheets. Proceedings of the 8th International Symposium on Fiber Reinforced Polymer Reinforcement for Concrete Structures, FRPRCS-8.
12. Rousakis T.C., Manolitsi G., Karabinis A.I. (2007): FRP Strengthening of RC Columns – Parametric Finite Element Analyses of Bar Quality Effect. Asia-Pacific Conference on FRP in Structures (APFIS 2007), 12-14 December 2007, Hong Kong.

13. Rousakis T.C., Karabinis A.I. (2009): FRP STRENGTHENING OF COLUMNS AGAINST BARS BUCKLING-PARAMETRIC FINITE ELEMENT ANALYSES. Proceedings of the 9<sup>th</sup> International Symposium on Fiber-Reinforced Polymer Reinforcement for Concrete Structures (FRPRCS-9), 13-15 July 2009, Sydney – Australia, pp: 91.
14. Karabinis A.I., Rousakis T.C. (2010): Evaluation of RVS method for pre-seismic assessment of structures utilizing post-earthquake damage investigations COST Action C26 International Conference "Urban Habitat Constructions under Catastrophic Events", ", (Proceedings) – Mazzolani (Ed). ©2010 Taylor & Francis Group, 16-18 September 2010, Naples, Italy.
15. Rousakis T., Karabinis A. (2010): Fiber Reinforced Polymer Confinement of Bridge Columns Suffering from Premature Bars' Buckling – Strength empirical model. 34th IABSE (International Association for Bridge and Structural Engineering) Symposium on LARGE STRUCTURES AND INFRASTRUCTURES FOR ENVIRONMENTALLY CONSTRAINED AND URBANIZED AREAS, 22-24 September 2010 Venice, Italy
16. Rousakis T.C. (2012): Confinement of Concrete Columns by Fiber Rope Reinforcements. In: Monti J. (ed.) The 6<sup>th</sup> International Conference on FRP Composites in Civil Engineering – CICE 2012. Rome 13 - 15 of June 2012. <http://www.iifc-hq.org/publications/proceedings-iifc-official-conferences/cice-2012-rome-italy-13-15-june-2012/>
17. Rousakis T., Nistico N., Karabinis A. (2012): Upgraded Experimental Database of Uniformly FRP Confined Concrete Columns for Assessment of Existing Recommendations. In: Monti J. (ed.) The 6<sup>th</sup> International Conference on FRP Composites in Civil Engineering – CICE 2012. Rome 13 - 15 of June 2012. <http://www.iifc-hq.org/publications/proceedings-iifc-official-conferences/cice-2012-rome-italy-13-15-june-2012/>
18. Rousakis T., Tsakiris S., Karabinis A. (2012): Adequate FRP Confinement of Rectangular Reinforced Concrete Columns Suffering from Premature Bars' Buckling. In: Monti J. (ed.) The 6<sup>th</sup> International Conference on FRP Composites in Civil Engineering – CICE 2012. Rome 13 - 15 of June 2012. <http://www.iifc-hq.org/publications/proceedings-iifc-official-conferences/cice-2012-rome-italy-13-15-june-2012/>
19. Rousakis T., Rakitzis T., Karabinis A. (2012): Empirical Modelling of Failure Strains of Uniformly FRP Confined Concrete Columns. In: Monti J. (ed.) The 6<sup>th</sup> International Conference on FRP Composites in Civil Engineering – CICE 2012. Rome 13 - 15 of June 2012. <http://www.iifc-hq.org/publications/proceedings-iifc-official-conferences/cice-2012-rome-italy-13-15-june-2012/>
20. Achillopoulou D, Rousakis T., Karabinis A. (2012): Square Reinforced Concrete Columns Strengthened Through Fiber Reinforced Polymer (FRP) Sheet Straps. In: Monti J. (ed.) The 6<sup>th</sup> International Conference on FRP Composites in Civil Engineering – CICE 2012. Rome 13 - 15 of June 2012. <http://www.iifc-hq.org/publications/proceedings-iifc-official-conferences/cice-2012-rome-italy-13-15-june-2012/>
21. Rousakis T.C., Kouravelou K.B., Karachalios T.K. (2012): Epoxy resins reinforced with carbon nanotubes in repair and strengthening of concrete

- members. 9<sup>th</sup> International Conference on Nanosciences & Nanotechnologies (NN12). 3-6 July 2012, Thessaloniki, Greece.
22. Tsakiris S.A., Rousakis T.C., Karabinis A.I. (2012): Confinement effects and strain transfer in reinforced concrete jackets of different detailing for the strengthening of old-type concrete columns. 15<sup>th</sup> World Conference on Earthquake Engineering, 24-28 September 2012, Lisbon.
  23. Charalambidi B.G., Rousakis T.C., Karabinis A.I. (2012): Finite element modeling of reinforced concrete columns seismically strengthened through partial FRP jacketing. 15<sup>th</sup> World Conference on Earthquake Engineering, 24-28 September 2012, Lisbon.
  24. Achillopoulou D.V., Rousakis T.C., Karabinis A.I. (2012): Force transfer between existing concrete columns with reinforced concrete jackets subjected to axial loading. 15<sup>th</sup> World Conference on Earthquake Engineering, 24-28 September 2012, Lisbon.
  25. Rousakis T.C., Gronti Z. (2012): Pushover Analyses of Two-Span Reinforced Concrete Bridge With Piers Confined by Fiber Reinforcements. The 1<sup>st</sup> Virtual International Conference on Advanced Research in Scientific Areas (ARSA-2012) Slovakia, December 3-7 2012, pp 1885-1890.
  26. Rousakis T.C., Gkouma M.E. (2013): Experimental Plastic Dilatation of Concrete Columns Confined by Hybrid FRP Sheet and Fiber Rope. Proceedings of the 11<sup>th</sup> International Symposium on Fiber-Reinforced Polymer Reinforcement for Concrete Structures (FRPRCS-11), 26-28 June 2013, Guimarães – Portugal, editors: Joaquim Barros & José Sena-Cruz.
  27. Rousakis T.C., Kardala M.K., Moutziz I., Stylianou M. (2014): Confinement With High Deformability Fiber Ropes In Existing Reinforced Concrete Structure. Proceedings of The Twenty-second Annual International Conference on COMPOSITES/NANO ENGINEERING (ICCE-22), 13 - 19 July, Malta, editor David Hui.
  28. Rousakis T.C., Gkouma M. (2014): FRP and FR Confining Effects on Concrete Sections Subjected to Cyclic Axial Compressive Loading. Proceedings of The Twenty-second Annual International Conference on COMPOSITES/NANO ENGINEERING (ICCE-22), 13 - 19 July, Malta, editor David Hui.
  29. Rousakis T.C., Saridaki M.E. (2014): Advanced Database Of Concrete Beams Strengthened In Shear with FRPs. Proceedings of The Twenty-second Annual International Conference on COMPOSITES/NANO ENGINEERING (ICCE-22), 13 - 19 July, Malta, editor David Hui.
  30. Triantafyllou G.G., Rousakis T.C., Karabinis A.I. (2014): Ultimate Axial Stress and Strain of Partially FRP Wrapped Reinforced Concrete Columns. Proceedings of The Twenty-second Annual International Conference on COMPOSITES/NANO ENGINEERING (ICCE-22), 13 - 19 July, Malta, editor David Hui.
  31. Triantafyllou G.G., Rousakis T.C., Karabinis A.I. (2015): COUPLING OF AVERAGE RESIDUAL STRUCTURAL SECTION AREA OF CORRODED STEEL BARS WITH LONGITUDINAL CRACKING IN RC MEMBERS. Second Greek-Russian Symposium on Mechanics, Xanthi, Greece, June 28-July 1, 2015.



32. Rousakis T., Tourtouras I., Hui D., Wang S., Nistico N., Wu Y., Karabinis A. (2015): Analytical Modeling of Load – Deformation Behavior of Non-circular RC Columns Confined with FRPs and Composite Fiber Ropes. 23<sup>rd</sup> International Conference on Composites/Nano Engineering (ICCE-23), 12-18 July 2015, Chengdu, China, editor David Hui.
33. Wang S., Zishan Z., Hui D., Tianyu S., Rousakis T. (2015): Rock and Concrete Lining Frost Heaving Force Calculation For New Tunnel and Its Frost Damage Classification. 23<sup>rd</sup> International Conference on Composites/Nano Engineering (ICCE-23), 12-18 July 2015, Chengdu, China, editor David Hui.
34. Gkouma M., Rousakis T., Batt F. (2015): Design Considerations for Retaining Walls Reinforced with Composite Bars. 23<sup>rd</sup> International Conference on Composites/Nano Engineering (ICCE-23), 12-18 July 2015, Chengdu, China, editor David Hui.
35. Rousakis T., Panagiotakis G., Kostopoulos A., Archontaki E. (2015): Experimental Testing of Prismatic Concrete Columns Confined by FRP and Composite Fiber Ropes. 23<sup>rd</sup> International Conference on Composites/Nano Engineering (ICCE-23), 12-18 July 2015, Chengdu, China, editor David Hui.
36. Rousakis T., Saridaki M., Mavrothalassitou S., Hui D. (2015): Design Oriented Debonding Model for Shear Strengthening of Reinforced Concrete Beams with U FRP wraps. 23<sup>rd</sup> International Conference on Composites/Nano Engineering (ICCE-23), 12-18 July 2015, Chengdu, China, editor David Hui.
37. Wang S., Zan S., Rousakis T., Zhang Z. (2015): Stability Analysis of Blocky Rock Slope Excavation Based on Site Non-Contact Measurement and GeoSMA-3D Modelling. ISRM Regional Symposium - EUROCK 2015, 7-10 October, Salzburg, Austria. International Society for Rock Mechanics.
38. Triantafyllou G.G., Rousakis T.C. & Karabinis A.I. (2016): Flexural response of corroded reinforced concrete beams: experiments and finite element analyses. Concrete Solutions 2016, 6<sup>th</sup> Conference on Concrete Repair, Aristotle University of Thessaloniki, 20-22 June 2016.
39. Charalambidi B., Rousakis T.C. & Karabinis A.I. (2016): Fatigue design of RC beams strengthened in flexure with FRP laminates. Concrete Solutions 2016, 6<sup>th</sup> Conference on Concrete Repair, Aristotle University of Thessaloniki, 20-22 June 2016.
40. Triantafyllou G.G, Rousakis T.C., Karabinis A.I. (2016): Mechanical behavior of rc beams damaged by corrosion under sustained loads. 17<sup>th</sup> International Conference on Experimental Mechanics (ICEM 17), July 3-7, 2016, Rhodes, Greece.
41. Rousakis T., Tsaridis C., Moumtzis I. (2016): Composite Rope Strengthening of Existing Reinforced Concrete Structures - Effects of Infill Wall Position and Strength. 24<sup>th</sup> International Conference on Composites/Nano Engineering (ICCE-24), July 17-23, 2016 Haikou, Hainan Island, China, editor David Hui.
42. Rousakis T., Bibo H., Jiang J.F, Wu Y.F (2016): Advanced Drucker-Prager-type concrete plasticity theory for Finite Element Analyses of Columns Confined with FRP and Composite Rope. 24<sup>th</sup> International Conference on Composites/Nano Engineering (ICCE-24), July 17-23, 2016 Haikou, Hainan Island, China, editor David Hui.

43. Kwiecien A., Gams M., Rousakis T. and Viskovic A. (2016): Use of Deformable Polymers Between RC Frames and Masonry Infills for Improved Seismic Performance. 40th SOLID MECHANICS CONFERENCE Warsaw, Poland, 29.08 - 2.09 2016.
44. Rousakis T. (2016): Resilience Reserve of RC Columns Externally Confined with Composite Rope or FRP Sheet Under Seismic Overloads. Invited paper in International Conference on FRP Composites in Civil Engineering, *CICE 2016*, 14-16 December Hong Kong, China.

All accepted papers were presented orally as well (except for papers 22, 23, 24 that were presented as posters, paper 25 via internet-virtual and papers 41, 42, 44).

### **Papers in Greek Conferences and Workshops (VII)**

1. Karabinis A.I., Rousakis T.C. (2000): Cylindrical Concrete Members Confined with Carbon Fibers Under Axial Load. 1<sup>st</sup> Hellenic Conference of Concrete Composite Materials, 9-10 November 2000, Xanthi, pp. 287-296 (in Greek).
2. Karabinis A.I., Rousakis T.C. (2000): Analytical Model for the Mechanical Behaviour of Concrete Confined by Composite Material Sheets. 1<sup>st</sup> Hellenic Conference of Concrete Composite Materials, 9-10 November 2000, Xanthi, pp. 308-316 (in Greek).
3. Karabinis A.I., Rousakis T.C. (2003): Concrete Members with Square Section Confined with Composite Sheets. 14<sup>th</sup> Concrete Conference (TCG), 15-17 October 2003, KOS, Greece, pp. 354-365 (in Greek).
4. Kiouisis P.D., Rousakis T.C., Karabinis A.I. (2003): Application of Plasticity Theory in Concrete Members with Square Section Confined with Composite Materials. 14<sup>th</sup> Concrete Conference (TCG), 15-17 October 2003, KOS, Greece, pp. 380-391 (in Greek).
5. Karabinis A.I., Rousakis T.C. (2006): Experimental Investigation of the Plastic Behaviour of Uniformly Confined Concrete by FRP Jacket Subjected to Gradually Increasing Loading-Unloading. 15<sup>th</sup> Concrete Conference (TCG), 25-27 October 2006, , Alexandroupolis, Greece, Volume A, pp. 279-290 (in Greek).
6. Rousakis T.C., Karabinis A.I., Kiouisis P.D., Tepfers R. (2006): Analytical Modelling of Plastic Behaviour of Uniformly FRP Confined Concrete. 15<sup>th</sup> Concrete Conference (TCG), 25-27 October 2006, , Alexandroupolis, Greece, Volume A, pp. 347-358 (in Greek).
7. Karabinis A.I., Rousakis T.C., Manolitsi G.E. (2006): Finite Element Modelling of the Behaviour of Reinforced Concrete Columns Confined with FRPs. 15<sup>th</sup> Concrete Conference (TCG), 25-27 October 2006, , Alexandroupolis, Greece, Volume A, pp. 340-351 (in Greek).
8. Καραμπίνης Α.Ι., Μπαλτζοπούλου Α.Δ., Ρουσάκης Θ.Χ. (2006): The Earthquake of Lefkada 14 August 2003. Investigation of the seismic vulnerability of structures. 15<sup>th</sup> Concrete Conference (TCG), 25-27 October 2006, , Alexandroupolis, Greece, Volume A, pp. 330-339 (in Greek).
9. Rousakis T.C., Karabinis A.I. (2008): Seismic Repair of RC Elements With FRPs, after Extensive Damage. 3<sup>rd</sup> Greek Conference in Earthquake Engineering and Technical Seismology, Athens, KA 2107, 6-7 November 2008.

10. Rousakis T.C., Karabinis A.I. (2009): FRP Strengthening of Columns Against Bar's Buckling – Strength Prediction. 16<sup>o</sup> Concrete Conference (TCG), 21-23 October 2009, Paphos, Cyprus (in Greek).
11. Rousakis T., Kardala M. (2012): Antiseismic strengthening of reinforced concrete structures through column confinement with fiber ropes or/and FRPs. Proceedings of the workshop of the Hellenic Society of Earthquake Engineering (ETAM) «The Earthquake Engineering through the scientific perspective of young researchers and engineers», 7 December 2012, Thessaloniki.
12. Rousakis T., Moumtzis I., Stylianiou M. (2012): Strengthening of concrete structures with fiber ropes or FRPs – comparison of their capacity with structures designed with modern codes. Proceedings of the workshop of the Hellenic Society of Earthquake Engineering (ETAM) «The Earthquake Engineering through the scientific perspective of young researchers and engineers», 7 December 2012, Thessaloniki.
13. Triantafyllou G.G, Rousakis T.C., Karabinis A.I (2015): Reinforced Concrete members attacked by Reinforcement Corrosion beyond concrete crack initiation. Scientific Workshop on «Latest Advances in Civil Engineering Research». Democritus University of Thrace, Civil Engineering Department, Xanthi, 15th of May 2015.
14. Charalambidi B.G., Rousakis T.C., Karabinis A.I. (2015): Fatigue Behavior of RC Beams Strengthened in Bending and Shear through FRPs. Scientific Workshop on «Latest Advances in Civil Engineering Research». Democritus University of Thrace, Civil Engineering Department, Xanthi, 15th of May 2015.
15. Baltzopoulou A.D, Eleftheriadou A.K., Rousakis T.C., Karabinis A.I. (2016): Assessment of the Structural Damages of Buildings After Lefkada Earthquakes (2003 & 2015). Safe Evros 2016, new technologies and civil protection, 22-25 June 2016, Alexandroupolis, Greece (in Greek).
16. Eleftheriadou A.K., Baltzopoulou A.D, Rousakis T.C., Karabinis A.I. (2016): Calibration of Post-seismic Damage Of Buildings After Andravida Earthquake (8/6/2008) With Two Damage Scales.. Safe Evros 2016, new technologies and civil protection, 22-25 June 2016, Alexandroupolis, Greece (in Greek).
17. Rousakis T. (2016): RC Columns Confined with Composite Ropes and FRP Sheets – Seismic Damage Redistribution Capacity. 17<sup>th</sup> Greek Concrete Conference (TCG), 10-12 November 2016, Thessaloniki, Greece (in Greek).
18. Nikolaidis D., Rousakis T. (2016): Structural Assessment of Existing Reinforced Concrete Building with the Structural Degradation Coefficient Method ( $r_{eff}$ ). 17<sup>th</sup> Greek Concrete Conference (TCG), 10-12 November 2016, Thessaloniki, Greece (in Greek).
19. Anagnostou E., Rousakis T., Karabinis A. (2016): Seismic Resistant Strengthening of Columns with Transverse Composite Material Jackets. 17<sup>th</sup> Greek Concrete Conference (TCG), 10-12 November 2016, Thessaloniki, Greece (in Greek).
20. Fanaradelli M., Rousakis T., Karabinis A. (2016): Reinforced Concrete Columns of Square and Rectangular Section Confined with FRPs-Prediction of Strength

- and Ultimate Strain. 17<sup>th</sup> Greek Concrete Conference (TCG), 10-12 November 2016, Thessaloniki, Greece (in Greek).
21. Triantafillou G., Rousakis T., Karabinis A. (2016): Behaviour of Reinforced Concrete Beams With Corroded Steel Reinforcement Under Serviceability Load. 17<sup>th</sup> Greek Concrete Conference (TCG), 10-12 November 2016, Thessaloniki, Greece (in Greek).
  22. Triantafillou G., Rousakis T., Karabinis A. (2016): Analytical Modeling of Corroded Beams Strengthened in Flexure with Composite Materials. 17<sup>th</sup> Greek Concrete Conference (TCG), 10-12 November 2016, Thessaloniki, Greece (in Greek).
  23. Charalambidi B., Rousakis T., Karabinis A. (2016): Analytical Modeling of the Fatigue Behaviour of Reinforced Concrete Beams Strengthened with Composite Materials. 17<sup>th</sup> Greek Concrete Conference (TCG), 10-12 November 2016, Thessaloniki, Greece (in Greek).
  24. Charalambidi B., Rousakis T., Karabinis A. (2016): Experimental Investigation of the Fatigue Behaviour of Reinforced Concrete Beams Strengthened in Flexure with Composite Materials. 17<sup>th</sup> Greek Concrete Conference (TCG), 10-12 November 2016, Thessaloniki, Greece (in Greek).
  25. Thomoglou A., Rousakis T., Karabinis A. (2016): Strengthening of Masonry Walls with External FRP or TRM reinforcement. 17<sup>th</sup> Greek Concrete Conference (TCG), 10-12 November 2016, Thessaloniki, Greece (in Greek).
  26. Tsakiris S., Rousakis T., Karabinis A. (2016): Reinforced Concrete Columns of Large Scale With Inadequate Lap Splices of Longitudinal Reinforcements Under Pseudoseismic Loading. 17<sup>th</sup> Greek Concrete Conference (TCG), 10-12 November 2016, Thessaloniki, Greece (in Greek).
  27. Chalioris C., Kitinou V., Rousakis T. (2016): Investigation of Structural System and Retrofit Proposal of Educational Department Buildings in Aexandroupolis. 17<sup>th</sup> Greek Concrete Conference (TCG), 10-12 November 2016, Thessaloniki, Greece (in Greek).

All papers were accepted for oral presentations as well (except for paper 12 that was presented as poster).

### **Master Thesis (VIII)**

**Rousakis T.C. (2000): Concrete elements confined by composite materials, under monotonic axial compression. Master Thesis, D.U.Th., Civil Engineering Department, Xanthi, Greece (in Greek).**

### **Research reports (IX)**

Rousakis T. (2001): Experimental investigation of concrete cylinders confined by carbon FRP sheets, under monotonic and cyclic axial compressive load. Research Report, Chalmers University of Technology, Göteborg, Sweden (in English, 79 citations).

### **PhD Thesis (X)**

**Rousakis T.C. (2005): Mechanical behaviour of concrete confined by composite materials. PhD Thesis, D.U.Th., Civil Engineering Department, Xanthi, Greece (in Greek, 16 citations).**

His Doctoral Thesis was requested by the Science and Engineering Library of the University of Sherbrooke (Quebec) Civil Engineering Department,

by the Institute for Infrastructure and Environment, School of Engineering and Electronics, University of Edinburgh, United Kingdom,

from Barr Smith Library - The University of Adelaide, Australia and

from Civil Engineering Institute, Dalian University of Technology, China.

### **Lecture notes (XI)**

Lecture notes - handouts and exercises in postgraduate course “Research Methodology in Reinforced Concrete”.

Lecture notes - handouts and exercises in undergraduate courses “Reinforced Concrete 1c”, “Reinforced and Prestressed Concrete Bridges”, “Assessment and Retrofit of Structures”, “Masonry Structures”.

### **Member of the editorial board of SCOPUS indexed journals (XIII)**

**Member of the Editorial Board of the international journal Composites Part B: Engineering, Elsevier (invited).**

<http://www.journals.elsevier.com/composites-part-b-engineering>

five-year impact factor 3.24, currently rank 5 out of 83 SCI journals (top 6%) in Engineering Multidisciplinary category by ISI

**Member of the Editorial Board of the World Journal of Engineering (invited).**

Published quarterly • ISSN 1708-5284, indexed in Scopus. <http://www.multi-science.co.uk/wje.htm>

Guest Editor of the Open Special Issue on **Structural Modelling at the Micro-, Meso-, and Nanoscales, of the Open Journal of Modelling and Simulation in Engineering, Hindawi.**

<http://www.hindawi.com/journals/mse/osi/>

### **Reviewer of journals (XIV)**

**Reviewer of the following 27 journals:**

- Journal of Composites Part B: Engineering, Elsevier
- Materials and Structures Journal, RILEM
- Journal of Composites for Construction, ASCE
- Journal of Materials in Civil Engineering, ASCE
- Journal of Engineering Mechanics, ASCE
- Journal of Structural Engineering, ASCE
- Engineering Structures Journal, Elsevier
- Construction and Building Materials, Elsevier
- Journal of Environmental Management, Elsevier
- Journal of Advances in Engineering Software, Elsevier
- International Journal of Fatigue, Elsevier
- Journal of Thin-Walled Structures, Elsevier
- Journal of Materials and Design, Elsevier
- Structural Concrete, Journal of the *fib*, Ernst and John, a Wiley Brand
- Structural Engineering International, IABSE
- Journal of Reinforced Plastics and Composites, SAGE
- Computers and Concrete, An international Journal, Techno Press
- Steel and Composite Structures, An international Journal, Techno Press
- Structural Engineering and Mechanics, *An International Journal*, Techno Press
- Proceedings of Institution of Civil Engineers (ICE) Journal - Structures and Buildings, Thomas Telford
- Scientia Iranica Journal
- Polymers — Open Access Polymer Science Journal, MDPI
- Fibers — Open Access Polymer Science Journal, MDPI
- Journal of Structures, Hindawi (open access journal)
- The Open Construction & Building Technology Journal, Bentham OPEN
- Structure and Infrastructure Engineering, Taylor and Francis
- Journal of Zhejiang University-Science A. Applied Physics and Engineering, Springer

...

**Certificate of Outstanding Reviewer awarded by**

- Engineering Structures Journal, Elsevier (2014)
- Journal of Composites Part B: Engineering, Elsevier (2015)
- Journal of Construction and Building Materials (2015)
- Journal of Materials and Design, Elsevier (2015)

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### **Inclusion in databases**

He is included in two biography databases – publications:

Biography in the publications of Who's Who in the World since the 2009 - Edition of Who's Who in the World, Marquis.

[https://cgi.marquiswhoswho.com/OnDemand/Default.aspx?last\\_name=Rousakis&first\\_name=Theodoros](https://cgi.marquiswhoswho.com/OnDemand/Default.aspx?last_name=Rousakis&first_name=Theodoros)

Biography in the publications of the International Biographical Center (IBC) Cambridge since 2009.

### **Participation in Scientific Committees of Conferences (XV)**

2012 (3-7/12): Member of the Scientific Committee of international virtual conference «The 1<sup>st</sup> Virtual International Conference on Advanced Research in Scientific Areas (ARSA-2012)». <http://www.arsa-conf.com/archive/?vid=1&aid=1&kid=60101>

2013 (8-12/4): Invited member of the Scientific Committee and committee of reviewers of international virtual conference «The 1<sup>st</sup> Global Virtual Conference 2013 (GV-CONF 2013)», April 8. - 12., 2013. <http://www.gv-conference.com/archive/?vid=1&aid=1&kid=30101>

2013 (8-12/4): Member of the Scientific Committee and committee of reviewers of international virtual conference «ScieConf, Scientific Conference 2013», June 10-14, 2013. <http://www.scieconf.com/archive/?vid=1&aid=1&kid=90101>

2013 (20-22/11): **Invited member of the Scientific Committee of Technical Program of “2nd Global Conference on Materials Science and Engineering (CMSE 2013)”**, Hubei University of Science and Technology, Xianning(Hubei, China), Nov. 20-22, 2013. <http://www.cmseconf.org/Committee.html>

2013 (18-22/11): Invited member of Reviewer Committee in International Virtual Conference: “1st Research Conference In Technical Disciplines 2013”. <http://www.rcitd.com/about-conference/>

**2014 (13-19/7): Technical Co-chair and member of the Editorial Advisory Board of The Twenty-second Annual International Conference on COMPOSITES/NANO ENGINEERING (ICCE-22)**, 13 - 19 July, Malta. Chairing of sessions.

- 2014 (20-23/10): **Invited member of the Scientific Committee of Technical Program of “3rd Global Conference on Materials Science and Engineering (CMSE 2014)”**, Shanghai, China, Oct. 20-23, 2014.  
<http://www.cmseconf.org/2014/Committee.html>
- 2015 (/3): **Invited member of the Committee of Reviewers of “The International Conference on Materials Science (ICMS2015)”**, (Shanghai China), March 29-31, 2015.  
<http://www.icmsconf.org/>
- 2015 (/5): **Member of the Scientific Committee of the Scientific Workshop on «Latest Advances in Civil Engineering Research»**. Democritus University of Thrace, Civil Engineering Department, Xanthi, 15th of May 2015.
- 2015 (12-18/7): Technical Co-chair and member of the Editorial Advisory Board of The Twenty-third Annual International Conference on COMPOSITES/NANO ENGINEERING (ICCE-23)**, 12 - 18 July, Chengdu, China. Chairing of sessions. <http://www.icce-nano.org/>
- 2015 (3-6/8): **Invited member of the Scientific Committee of Technical Program of “4th Global Conference on Materials Science and Engineering (CMSE 2015)”**, Macau, China, Aug. 3-6, 2015.  
<http://www.cmseconf.org/Committee.html>
- 2016 (17-23/7): Technical Co-chair of The Twenty-third Annual International Conference on COMPOSITES/NANO ENGINEERING (ICCE-24)**, 17 - 23 July, Haikou, Hainan, China. <http://www.icce-nano.org/>
- 2016 (3-6/8): **Invited member of the Scientific Committee of Technical Program of “5th Global Conference on Materials Science and Engineering (CMSE 2016)”**, Taiwan, November 8-11, 2016.  
<http://www.cmseconf.org/Committee.html>
- 2016 (10-12/11): **Invited member of the Scientific Committee of “17th Greek Concrete Conference”**, Thessaloniki, November 10-12, 2016.

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### **Invited Scientific Lectures (XVI)**

#### Eurocode seminars:

Invited during 2011 by the Organization for Antiseismic Planning and Protection (OASP, together with Technical Chamber of Greece and SPME) to prepare and introduce to the professional engineers the new requirements of Eurocodes 0 & 1 or 2 & 8 in four different seminars in Xanthi (29/3/2011), Alexandroupolis (30/3/2011), Tripoli (9/4/2011) and Kozani (18/6/2011).



Invited during 2012 and 2013 by the Technical Chamber of Greece – Section of Thrace and by the Technical Chamber of Greece – Section of Central and Western Thessaly to prepare and introduce to the professional engineers: a) the new requirements of Eurocode 8 part 3 for the Design of the Retrofit of Structures with Composite Materials and the Quality Control, b) the Pre-seismic and Post-seismic Control (Inspection) of Structures through Rapid Visual Screening in the Regions of Lefkada, Iliia, Eastern Macedonia and Thrace in a seminar in Xanthi (7/12/2012) and in Larissa (22/2/2013).

2013 (4/12): Invited presentation on: “Confinement with FRPs” belonging to entity of “Presentations on priority areas: State-of-the-art and challenges - Strengthening of reinforced concrete structures”, during Core Group Meeting of Action COST TU 1207 “Next Generation Design Guidelines for Composites in Construction”, University of Sheffield Sheffield, United Kingdom.

2014 (20/2): Seminar within the framework of granted Short Time Scientific Mission, STSM of European COST (European Cooperation in Science and Technology) Action TU1207: «Next Generation Design Guidelines for Composites in Construction», in La Sapienza University, Rome, on the following topics:

1. Introduction to COST Action TU1207 “Next Generation Design Guidelines for Composites in Construction” and to Short Time Scientific Missions (STSM).
2. “Experimental and analytical database in FRP confined concrete members” within the framework of the COST Action TU 1207 STSM.
3. “Drucker–Prager-type plasticity modelling of FRP confined concrete mechanical behaviour and FEA applications”.

2014 (13/3): Invited presentation on: “New Composite Materials and Techniques in Strengthening of Reinforced Concrete Members -Design issues” in session of “New Composite-based Materials, Systems and Strengthening Techniques”, during TU 1207 COST Action Meeting “Next Generation Design Guidelines for Composites in Construction”, in Lyon, France.

2014 (6/6): Invited speaker in module Frontier 111: Innovation Infrastructure Accelerating Advanced Material Discovery, presenting “New Composite Materials and Techniques in Strengthening of Concrete Structures - COST Action TU1207: Next Generation Design Guidelines for Composites in Construction” in conference: BIT’s 3<sup>rd</sup> Annual World Congress of Advanced Materials (WCAM-2014), 6-9 / 6 / 2014, Chongqing, China. <http://www.bitcongress.com/wcam2014/Program-1.asp>

2015 (10/1): Invited seminar organized by the Technical Chamber of Greece – Section of Central and Western Thessaly, for the professional engineers. The following topics have been presented: a) Conventional Retrofit Techniques and Examples, b) Strengthening with Advanced Composite Materials (FRPs) and Examples, c) Quality Control of Strengthening Applications.

2015 (21/5): Invited presentation on: “Analytical modeling of externally strengthened RC columns with degrading stress-strain behaviour” in session of “New Composite-based Materials, Systems and Strengthening Techniques”, during TU1207 COST Action Meeting “Next Generation Design Guidelines for Composites in

Construction”, in Lecce, Italy. Chairing of session: Strengthening with Composites: Reinforced Concrete Structures.

2015 (8/10): Invited presentation on: “Utilization of reverse MCFT analyses towards advanced design model for RC beams strengthened in shear with FRPs” in session of “Shear Design of New and Strengthened Elements with FRP: design philosophies”, during TU1207 COST Action Meeting “Next Generation Design Guidelines for Composites in Construction”, in Barcelona, Spain. Chairing of session: Composites in Construction: Innovative Systems and Solutions.

2016 (4/4): Invited presentation on: “Fatigue Behavior and Design of Reinforced Concrete Beams Strengthened in Flexure with FRP” in session of “Externally Bonded Reinforcement/Innovative Solutions”, during TU1207 COST Action Meeting “Next Generation Design Guidelines for Composites in Construction”, in Barcelona, Spain. Chairing of the session.

2016 (2/11): Invited presentation on: “Corroded RC Beams Patch Repaired and Strengthened with CFRP Laminates” in session of “EBR strengthening”, during TU1207 COST Action Meeting “Next Generation Design Guidelines for Composites in Construction”, in Prague, Czech. Chairing the session.

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### **Participation in committees, meetings, conferences and seminars (XVII)**

Participation in the work of *fib* Task Group 5.1 (former 9.3) «FRP (Fibre Reinforced Polymer) reinforcement for concrete structures» in Externally Applied Reinforcement (EAR, former EBR) since 2000. He has participated in 12 meetings (6th, 9th, 11th, 18th meeting and invited in 23<sup>rd</sup>, 24<sup>th</sup>, 27<sup>th</sup>, 28<sup>th</sup>, 29<sup>th</sup>, 30<sup>th</sup>, 32<sup>nd</sup>, 33<sup>rd</sup>, 34<sup>th</sup> meetings).

Research visit to Sapienza University of Rome to collaborate with Professor Nicola Nistico (20&21/9/2010).

Participation after invitation in 7 meetings of the Management Committee and of the Core Group of European Action COST TU 1207 “Next Generation Design Guidelines for Composites in Construction” since 2013.

Participation in 5 Greek Conferences since 2000, 1 workshop of Hellenic Society of Earthquake Engineering and other workshops and in 12 international conferences on FRP strengthening and seismic design of RC structures with oral presentations (Co-chaired Confinement Session in 6<sup>th</sup> International Conference on FRP Composites in Civil Engineering – CICE 2012. Rome 13 - 15 of June 2012, Italy).

Research visit to La Sapienza University of Rome to collaborate with Professor Nicola Nistico from 17-21/2/2014, within the framework Short Time Scientific Mission, STSM), of the European COST (European Cooperation in Science and Technology) Action TU1207: Next Generation Design Guidelines for Composites in Construction».

Research visit to City University of Hong Kong to collaborate with Professor Yufei Wu from 13-25/4 2015 on concrete confinement and FRP applications in civil/structural engineering.

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### **Participation in scientific- technical organizations (XVIII)**

Member of the Technical Chamber of Greece, of the Association of Greek Civil Engineers, of the American Concrete Institute ACI, of the Hellenic Society of Earthquake Engineering ETAM, of the International Association for Bridge and Structural Engineering IABSE, of the International Institute for FRP in Construction, IIFC and member of the *fib*, Fédération internationale du béton.

Member of the Task Group 5.1 (formerly Task Group 9.3) of *fib* «FRP reinforcement for concrete structures»

### **Awards – Scholarships (XIX)**

Scholarship from the Greek State Scholarships Foundation during first year in Civil Engineering Department, Democritus University of Thrace (rank 5/180 in my class).

Scholarship during the Postgraduate Program studies in Civil Engineering Department , Democritus University of Thrace entitled: ‘Advanced Materials and Novel Technologies in Design of Reinforced Concrete Structures’.

Awarded grant within the framework of European Action TUD COST (European Cooperation in Science and Technology) Action TU1207: «Next Generation Design Guidelines for Composites in Construction» for a Short Term Scientific Mission. The Mission concerns research visit to University of Rome La Sapienza to collaborate with Professor Nicola Nistico (17/2/2014 - 21/2/2014).