

DR ELIA A. TANTELE

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Director of the *infrastructure*² Research Group

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EDUCATION

PhD in Civil Engineering: University of Surrey, Department of Civil Engineering, UK. (2001-2005)

MPhil in Civil Engineering: University of Surrey, Department of Civil Engineering, UK. (2000-2001)

BEng (Honours) in Civil Engineering (First Class Award): University of Surrey, Department of Civil Engineering, UK. (1998-2000)

Diploma in Civil Engineering (Distinction): Higher Technical Institute, Cyprus (1995-1998)

EMPLOYMENT

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|---------------|---|
| 2015- to date | Assistant Professor , Department of Civil Engineering & Geomatics, Cyprus University of Technology, Lemesos-Cyprus |
| 2010-2015 | Lecturer , Department of Civil Engineering & Geomatics, Cyprus University of Technology, Lemesos-Cyprus |
| 2008-2010 | Visiting Lecturer , Department of Civil Engineering & Geomatics, Cyprus University of Technology, Lemesos-Cyprus |
| 2006-2008 | Bridge Engineer , <i>Parsons Brinckerhoff (PB)</i> firm, UK |
| 2005-2006 | Post-doctoral Research Fellow in Civil & Environmental Engineering, Bridge maintenance, University of Surrey, Department of Civil Engineering, UK. |

AWARDS & SCHOLARSHIPS

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| 2007 | Runner-up in the Emerging Professionals Paper Competition within the Parsons Brinckerhoff (PB) offices around the world, "Optimum preventative maintenance strategies for reinforced concrete bridges" |
| 2005-2006 | Full scholarship sponsorship for post-doctoral research from University of Surrey (UK) |
| 2000-2005 | Full scholarship sponsorship for Ph.D from Highways Agency (HA) UK and the Transport Research Laboratory UK |
| 1998-1999 | University of Surrey scholarship for the excellent performance at H.T.I |
| 1999-2000 | University of Surrey scholarship for the excellent performance at H.T.I |
| 1995-1996 | CYPARCO scholarship for the excellent performance at H.T.I |
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INSTITUTIONAL RESPONSIBILITIES

Teaching at the Cyprus University of Technology:

2008-to date Engineering Mechanics- Statics, Structural Analysis I, Reinforced Concrete Structures, Durability of Infrastructures and Risk Management, Final Year Project, Industrial Training, Integrated Design (with other colleagues), Professional Skills (Invited lectures), MSc in Civil Eng. & Sustainable Design: Research Methods, Sustainable management, Risk and Reliability in Engineering, Dissertation

Academic Leadership at the Cyprus University of Technology:

2010- to date Founder and Coordinator of the **infrastructure²** Research Lab/Group

2008- to date Founder and Manager of labs in the Department of Civil Engineering and Geomatics (Sensor and Structural Health Monitoring Lab, Statics/Strength of materials Lab)

Participation in Committees at the Cyprus University of Technology:

2011-2012 Member of the committee of the QUESTE-SI Project (The Quality System of European Scientific and Technical Education- Quality Assurance and Award)

2008- to date Member/ Chair of the Departmental Committees

(Post-graduate studies, undergraduate studies, professional training, research, public relations etc.)

PARTICIPATION IN RESEARCH FUNDED PROJECTS

PPREM_ISES

Unified performance prediction model for structures and infrastructures incorporating diverse monitoring data

Cyprus Research Promotion Foundation (RPF)

Role: Overall Coordinator: Dr. Elia A. Tantele

Total Budget: 145.000 euros

Duration: 2012-2015

http://www.cut.ac.cy/pprem_ises/

Smart Management for Sustainable Human Environment

SmartEN Marie- Curie ITN

Role: Expert scientist /supervisor

Total Budget: 3.700.000 euros

Duration: 2009-2013

<http://www.smart-en-itn.eu/>

RESEARCH INTERESTS

- multi-criteria optimisation of maintenance
- monitoring based maintenance
- corrosion of reinforced concrete
- techniques of risk and reliability
- life-cycle performance
- structural health monitoring
- use of artificial intelligence algorithms-genetic algorithms.

SELECTED JOURNAL AND CONFERENCE PUBLICATION

- Votsis, R.A., Stratford, T.J., Chryssanthopoulos, M.K., Tantele, E.A., Dynamic assessment of a FRP suspension footbridge through field testing and finite element modelling, (2017) *Steel and Composite Structures*, 23 (2), pp. 205-215.
- Tantele, E.A., Votsis, R.A., Danezis, C., Anastasiou, C., Georgiou, N., Mapping the variability of carbonation progress using GIS techniques and field data: a case study of the Limassol district, (2016) *Natural Hazards*, 83, pp. 183-199.
- Kyriakides, N.C., Chrysostomou, C.Z., Tantele, E.A., Votsis, R.A., Framework for the derivation of analytical fragility curves and life cycle cost analysis for non-seismically designed buildings, (2015) *Soil Dynamics and Earthquake Engineering*, 78, pp. 116-126.
- Tantele, E.A., Votsis, R.A., Onoufriou, T., Monitored-based methodology to predict the initiation of corrosion in RC structures, (2015) *Multi-Span Large Bridges*
- Tantele, E.A., Votsis, R.A., Onoufriou, T., Integration of probabilistic effectiveness with a two-stage genetic algorithm methodology to develop optimum maintenance strategies for bridges, (2015) *Open Construction and Building Technology Journal*, 9 (1), art. no. A1, pp. 266-276.
- Votsis, R.A., Kyriakides, N., Chrysostomou, C.Z., Tantele, E.A., Demetriou, T., Ambient vibration testing of two masonry monuments in Cyprus, (2012) *Soil Dynamics and Earthquake Engineering*, 43, pp. 58-68
- Tantele, E.A., Onoufriou, T., Optimization of life-cycle preventative maintenance strategies using genetic algorithm and Bayesian Updating, (2010) *Bridge Maintenance, Safety, Management and Life-Cycle Optimization - Proceedings of the 5th International Conference on Bridge Maintenance, Safety and Management*, pp. 1594-1601.
- Onoufriou, T., Mousoulides, N., Tantele, E.A., Chrysostomou, C., Hadjimitsis, D., Kounoudes, A., Constantinides, A.G., Kalis, A., Research and training challenges within SmartEN Marie Curie ITN, (2010) *Bridge Maintenance, Safety, Management and Life-Cycle Optimization - Proceedings of the 5th*
- Tantele, E.A., Onoufriou, T., Optimum preventative maintenance strategies using genetic algorithms and Bayesian updating, (2009) *Ships and Offshore Structures*, 4 (3), pp. 299-306.
- Tantele, E.A., Onoufriou, T., Mulheron, M., Effectiveness of preventative maintenance for reinforced concrete bridges - A stochastic approach, (2005) *Proceedings of the 5th International Conference on Bridge Management*, pp. 443-451.

SHORT-BIO

Dr Elia A. Tantele is an Assistant Professor in the Department of Civil Engineering and Geomatics. She undertook her PhD studies as well as her Post-Doctoral Research in the area of optimisation of preventative maintenance strategies on reinforced concrete structures using genetic algorithm and bayesian updating, from the University of Surrey, Department of Civil Engineering (UK). Her PhD was sponsored by the Highway Agency and the Transport Research Laboratory (UK). She obtained a First Class BEng (Honours) Degree in Civil Engineering from the University of Surrey, UK. She also obtained a First class HND Diploma in Civil Engineering from the Higher Technical Institute, Cyprus. Dr Tantele worked as a bridge engineer in the consulting firm PB (Parsons Brinckerhoff) where she was specialised in the design, assessment, inspection and maintenance of various types of bridges; PB is one of the world's leading planning, engineering, and program & construction management organisations.

She was the Coordinator of a Cyprus Research Promotion Foundation research project entitled "Unified performance prediction model for structures and infrastructures incorporating diverse monitoring data". She has been responsible for the establishment and operation of the research group "infrastructure²". She is a member of the Cyprus Scientific & Technical Chamber (ETEK). Her research interests include: multi-criteria optimisation of maintenance, monitoring based maintenance, corrosion of reinforced concrete, techniques of risk and reliability, life-cycle performance, structural health monitoring, and use of artificial intelligence algorithms-genetic algorithms.