

# Banihan GUNAY

PROFESSOR OF TRANSPORT

TRAFFIC ENGINEERING  
HIGHWAYS  
ITS  
MODELLING  
DESIGN  
SAFETY



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<https://www.banihangunay.com/>

## **Academic Titles**

Professor, 2014

Associate Professor, 2009

## **Employment**

Academic, Metropolitan University of Tirana, Albania, 2020-

Academic (Freelance), Antalya, Turkey, 2016-2020

Academic, Akdeniz University, Antalya, Turkey, 2010-2016

Lecturer (Permanent Position), University of Ulster, Co. Antrim, UK, 2002-2010

Lecturer (Fixed Term), University of Ulster, Co. Antrim, UK, 200-2002

## **Education**

1. Postgraduate Certificate in University Teaching, University of Ulster, Co. Antrim, UK, 2002

2. PhD, Road Traffic Flow, University of Newcastle, Newcastle upon Tyne, UK, 2000

3. MSc, Transport Engineering and Operations, University of Newcastle, Newcastle upon Tyne, UK, 1996

4. Language School, University of Newcastle, Newcastle upon Tyne, UK, 1994

5. MSc, Transportation (Taught courses only), Istanbul Technical University, 1993

6. BSc, Civil Engineering, Akdeniz University, 1991

## **Research Projects**

1. Calculation of the functional loss on the urban road network of Antalya city due to illegal parking and short/long term recommendations ATSO, 2015-2017 (*Principal Investigator*)

2. Investigation of Chicanes with respect to driver behaviour and road design in Turkey 2015-2017 (*Principal Investigator*)

3. Bus Rapid Transit and flexible public transport, IETT/TUBITAK, 2013-15 (*Consultant*)

## **PUBLICATIONS**

[Journal articles](#)

[Books](#)

[Conference Papers](#)



4. Introducing the concept of Smart Service Vehicles and estimation of their positive effects on the modal shift within a transport system: a computer modelling on a pilot case study area, TUBITAK COST, 2012-14 (**Principal Investigator**)
5. Rationality scales of road networks, Akdeniz University, MSc Project, 2012-13 (**Principal Investigator**)
6. Pedestrian Prioritised City of Antalya, Leonardo da Vinci, 2011-13 (**Technical Assistant**)
7. Average speed limit algorithms by ANPR, Akdeniz University (BAP), 2012-14 (**Principal Investigator**)
8. Co-operative Awards in Science and Technology on pretreatment processes in automotive industry, UK, 2006-10 (**Principal Investigator**)
9. Research into the views of children, young people and their parents in relation to safe journeys to school in Northern Ireland, NICCY, UK, 2005-06 (**Researcher**)
10. Develop an activity-based cost model for demand/supply processes, and to develop/embed an inter-company network for transferring production between sites and consolidating products for delivery (Knowledge Transfer Partnership), UK, 2005-08 (**Researcher**)
11. Co-operative Awards in Science and Technology on de-icing of roads, UK, 2003-07 (**Principal investigator**)

#### **Postgraduate Student Supervision (to completion)**

1. Kadir Akgöl, Rationality scales of road networks (in Turkish), **MSc 2012**
2. M Syed Bukhari, Accessibility & Transport Disadvantage in the city of Belfast **PhD 2010**
3. Md Kamruzzaman, Examination of activity spaces in rural Northern Ireland **PhD 2010**
4. John McGrath, Interchange and travel choice; implications for modal shift **PhD 2010**
5. Bulent Tepe, Evaluation of Pretreatment Process in Powder Painting in Automotive Industry **PhD 2009**
6. John Rodgers, Investigation into non-salt based methods of anti-icing pavements (in collaboration with Aggregate industries) **PhD 2007**
7. Gavin Hamilton How to influence modal shift; Belfast Southern approaches **MPhil 2007**
8. Sharon Gibson (Jamison), Chaotic behaviour in looped car following models **PhD 2007**
9. Jonathan Seymour, A study of the characteristics of school travel with particular interest in car usage **PhD 2004**
10. Imelda Haran, An investigation into the effects of sleep deprivation on driving performance **PhD 2004**

#### **PhD Internal/External Examiner**

1. Mr H Sehmuz Hastemoglu, New Function Proposals to Railways Station Buildings, (*in Turkish*), S. Demirel University, 2013 (*Final viva*)
2. Mr V. Emre Uz, Chip-sealed pavements (*in Turkish*), S. Demirel University, 2012 (*Final viva*)
3. C. John Hillis, Measuring passenger perception of personal safety, 2009 (*Final viva*)
4. Mr David Clarke, Transport, energy use and lifestyle – Managing Transport modal choice: Assessing lifestyle change in Northern Ireland, 2007 (*Confirmation viva*)
5. Mr Zahid Sultan, Creating Sustainable Transportation Policy in Ireland by Integrating Land-Use Planning and Transport Choice, 2007 (*Confirmation viva*)
6. Mr Scott Mackey, Transport Disadvantage in Northern Ireland, 2005 (*Final viva*)
7. Reza Shahmammadi, Development of cold mix asphalts, 2005 (*Final viva*)
8. Mr John Pelan, Modelling asphalt failure. 2005 (*Confirmation viva*)
9. Mr Imam Aschuri, The Performance and Stiffness Model of Asphalt Concrete containing Pozzolan Reclaimed Asphalt Pavement. 2005 (*Confirmation viva*)
10. Mr Declan O'Prey, Sustainable Highway Construction Materials. 2005 (*Confirmation viva*)

11. Miss Haryati Yaakob, Laboratory Investigation On Noise Performance For Surface Dressing. 2005 (*Confirmation viva*)
12. Mr Anil Kashyap, Urban Structure and Energy: A Case of Planned versus Traditional Residential Neighbourhoods in Sonipat (India). 2005 (*Confirmation viva*)
13. Mr Conor Donnelly, Managing Transport Demand: The Land Use Planning System and Business Decisions. 2005 (*Confirmation viva*)
14. Mr Martin Haran, The Role of Property Investment Vehicles in the financing of Urban Regeneration 2005 (*Confirmation viva*)
15. Mr N Nursetiavan, The hydraulic properties of bituminous materials 2005 (*Confirmation viva*)
16. Mr Richard J Ellis, The effect of skidding resistance of microasphalts with the addition of calcined bauxite and lower polished stone value (PSV) aggregates. 2005 (*Confirmation viva*)
17. Mr B Weber, The use of GIS for Brownfield Development. 2004 (*Confirmation viva*)
18. Mr Mustafa Al Sheriani, Economic Globalisation and Urban Development Policy in UAE (A Comparative Study of Dubai and Sharjah City-States) 2004 (*Confirmation viva*)
19. Mr Michael McNicholas, System analysis and modelling applications for some important transportation engineering problems, 2004 (*Final viva*)
20. Mr Joe Jellie, A Study of Factors Affecting Skid Resistance Characteristics, 2003 (*Final viva*)
21. Mr D. Widajat, Predicting the performance of basaltic aggregate for use in unbound road base and sub base layers, 2001 (*Final viva*)
22. Mr Riyad Al-Gassas, Flowable Controlled Strength Fill for Duct Cable Network Trenches, 2001 (*Final viva*)
23. Mr Faruqi Affandi, A study of the performance of bituminous mixes containing refined Asbuton Bitumen, 2001 (*Final viva*)
24. Mr Harry Clements, An Analysis of Stress Absorbing Membrane Interlayers Used to Inhibit Tensile Fatigue Reflective Cracking, 2001 (*Final viva*)
25. Miss Suzanne Obert, Comparative Study of The Generation of Strains in Bituminous Mixtures, 2000 (*Final viva*)

#### **Duties on Scientific Committees and journals**

1. The 19th EURO Working Group on Transportation Meeting (EWGT 2016), Scientific Committee, Istanbul, September 2016.
2. The 4th International Conference on Models and Technologies for Intelligent Transportation Systems (3-5 June 2015), Scientific Committee, Budapest 2015.
3. The 11th Transport Congress (27-29 Mays 2015), Scientific Committee, Istanbul, 2015.
4. International Sustainable Building Symposium-ISBS (28-30/05/2015), Scientific Committee, Ankara, 2015.
5. The 1st Karayolu Akıllı Ulaşım Sistemleri Kongre ve Sergisi, Scientific Committee, Istanbul, 2014.
6. Advisory Board, 10th Congress on Transportation (in Turkish), 25-27 September 2013, İzmir.
7. Panel Chair, 2nd Antalya Transport Problems and Solutions, Dedeman Hotel, 27 May 2013, Antalya
8. 11th Transportation Forum, Pipelines Sub-Committee member, 2012-2013
9. The 2nd International Balkans Conference on Challenges of Civil Engineering, 23-25 May 2013, Tirana
10. Kentsel Altyapı Ulusal Sempozyumu, Antalya, 14-15 October 2011
11. The 5th International Symposium on Wavelet Applications, 5-7 June 2010
12. Advisory Board, International Journal of Engineering and Applied Sciences, 2010-
13. 8. Ulaşım Kongresi, Istanbul, 30 Sept - 1 Oct 2009
14. Editorial Board, Pavement Reservation Journal 2007-09

15. World Conference on Transportation Research, 2004
16. Transportation Research Board
17. Institute of Civil Engineers – Transport
18. Transportation Research Part C
19. Journal of Transportation Engineering ASCE
20. Journal of Advanced Transportation
21. Journal of Zhejiang University-SCIENCE A
22. TÜBİTAK
23. Akdeniz University, Science Park
24. BAP (various Turkish universities)
25. EPSRC

### **Training Courses Taken**

1. ITS Architecture Training for Turkey (by Dr Robert s. Jaffe), Karayolları Genel Müdürlüğü AUS Danışmanlık Projesi Alba Hotel (28/04/2014), Ankara, 2014.
2. Transit assignment, PTV, Martin-Niemöler-Haus, Frankfurt, 22-25 April 2013
3. Tablet PC Use, Jordanstown, 11 December, 2009
4. Introduction to OPUS, 3 October 2007
5. Appraisee briefing for Built Environment, 26 Jan 2007
6. Disability awareness for academic staff, 3 May 2006
7. Placement Management system Workshop, Feb 2006
8. Equality and diversity awareness, Jordanstown, 26 Feb 2005
9. Introduction to PDP in the Faculty of Engineering, 21 June 2004
10. PTRC Transport Modelling Short Course, London, 16-18 March 2004
11. Road Safety Audit, Jordanstown, 12 June 2003
12. Delivery of teaching: Rethinking physical accommodation; student interaction, 19 March 2003
13. AutoCAD, University of Ulster, May 2003
14. Managing your time, Jordanstown, 26 February 2003
15. Supervision of Research Students, Jordanstown, 10 March 2003
16. WebCT, Jordanstown, 29 September 2003
17. Videoconference Training, 21 March 2002
18. Peer observation for Built Environment, 13 Jan 2002
19. Subject development for Engineering, 28 Sep 2001
20. Enhancing the Students' Learning Experience, Quality Inn Carrickfergus, 17 May 2001
21. Academic Induction Follow-up, Jordanstown, 11 May 2001
22. Learning Outcomes and Assessment, Belfast Castle, 30 March 2001
23. Assessment and Plagiarism, Jordanstown, 15 March 2001
24. Learning and Teaching, Jordanstown, 6 February 2001
25. Peer Observation, 29 January 2001
26. Programme Specification, 24 January 2001
27. Academic Induction, Jordanstown, 23 January 2001
28. Student Assessment, Jordanstown, 17 January 2001

### **Admin Experience**

1. Representative of Akdeniz University to the Board of Road Safety Action Plan Coordination, Antalya, 2013-2016

2. Head of Transport Division, Dept. of Civil Engineering, Faculty of Engineering, Akdeniz University, 2010-2016
3. Associate Director, The Graduate School of Natural and Applied Sciences, Akdeniz University, 2012-2016
4. Acting Head of Department of Civil Engineering, Faculty of Engineering, Akdeniz University, 2012-2015
5. Chair, Experts Committee, The Graduate School of Natural and Applied Sciences, Akdeniz University, 2012-2016
6. Representative of Assoc. Professors to the Faculty Board of Engineering, Akdeniz University, 2011-2014
7. Member, Experts Committee, Faculty of Engineering, Akdeniz University, 2011-2014
8. Commission member, Akdeniz University's Five-year Strategic Plan Development, 2012
9. Member, Experts Committee, The Graduate School of Natural and Applied Sciences, Akdeniz University, 2011-12
10. Short Course Organiser for Transport Modelling, University of Ulster, 2007-08
11. Modules Coordination, University of Ulster, 2000-10

### **Teaching Experience**

1. Highway Engineering (*delivered in Turkish*)
2. Highways and Transportation Engineering
3. Earthworks (*delivered in Turkish*)
4. Traffic Engineering
5. Traffic and Transportation Engineering (*guest*)
6. Transport Interfaces
7. Transport Technology
8. Inventory Management & Warehousing
9. IT and Communications Skills
10. Retail Distribution Management
11. Technical English
12. Intelligent Transportation Systems (*delivered in Turkish*) **Postgraduate**
13. Structural Design of Motorways (*delivered in Turkish*) **Postgraduate**
14. Traffic Engineering and Management **Postgraduate**
15. Transportation Planning and Modelling **Postgraduate**

### **Awards**

1. English Proficiency, KPDS: 95/100 (2012)
2. Turkish Roads Association Best Paper Award (2007)
3. English-Turkish Interpreting Certificate (2006)
4. Royal Academy of Engineering Travel Award (2005)
5. The Annual Smeed Prize, UTSG, York (1999)
6. IHT Papers Award, Durham (1997)

### **Membership of Professional Bodies**

8. WCTR Society 1998-2001, 2004-2007, 2010-2013
9. Yollar Türk Milli Komitesi 2006-2013
10. Chartered Member of the Chartered Institute of Logistics and Transportation (CMILT) 2006-2010
11. Member of the Chartered Institution of Highways and Transportation (MIHT) 2001-2010