

Prof. Dr. Pelin GÜNDEŞ BAKIR



Former Member of the Turkish Parliament

Former Member of the Parliamentary Assembly of the Council of Europe

Full Professor in the Mechanics Division of the Department of Civil Engineering
of Istanbul Technical University

PERSONAL:

Birthday : 13.03.1972

Birth Place : Istanbul, Türkiye

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ACADEMIC INFORMATION

1	2003-2006	Katholieke Universiteit Leuven, Department of Civil Engineering, Belgium, Post-doctoral research associate in “Structural Mechanics Division”.
2	2002	Istanbul Technical University, Department of Civil Engineering, Mechanics Division, Doctoral degree (PhD).
3	1995	Imperial College of Science Technology and Medicine, University of London, Department of Civil Engineering, UK. Master of Science (MSc) degree in “Concrete Structures”.
4	1995	Imperial College of Science Technology and Medicine, University of London, Department of Civil Engineering, UK, Diploma (DIC).
5	1993	Yıldız Technical University, Department of Civil Engineering (BSc).
6	1989	Kadıköy Anadolu Lisesi, Division of Mathematics.

JOB EXPERIENCE

2013 November - 2015 June	Member of the European Union-Turkey Joint Parliamentary Committee
2013 November - 2015 June	Member of the European Union Harmonization Committee
2011-2013	Member of the Parliamentary Assembly of the Council of Europe
2013	Parliamentary Assembly of the Council of Europe, Vice President of the sub-committee on “Energy and Environment”
2011	Parliamentary Assembly of the Council of Europe-Member of the Committee on Equality and Non-discrimination
2011	Parliamentary Assembly of the Council of Europe-Member of the Committee on Culture, Science, Education and Media
2012	Parliamentary Assembly of the Council of Europe-Prof. Bakır was elected to the Bureau of the European Democrat Group (European Conservatives)
2013	Prof. Bakır was elected the second time to the Bureau of the European Democrat Group

2012-2013	Parliamentary Assembly of the Council of Europe-Member of the Committee on Migration, Refugees and Displaced Persons
2012 January -2013 November	Parliamentary Assembly of the Council of Europe-Member of the sub committee on co-operation with non European countries of origin and transit
2012-2013	Parliamentary Assembly of the Council of Europe-Member of the Committee on Social Affairs, Health and Sustainable Development
2012	President of the Justice and Development Party Working Group on "Higher Education" established by the Political and Judicial Division of the Party
2011-2015	Member of the Committee on Public Works, Development, Transportation and Tourism in the Grand National Assembly of Turkey
2011-2015	Member of the Grand National Assembly of Turkey (MP representing the metropolitan city of Kayseri in the Turkish Parliament)
2015-until today	Full Professor in the Mechanics Division of the Department of Civil Engineering of Istanbul Technical University
2010-2011	Full Professor in the Mechanics Division of the Department of Civil Engineering of Istanbul Technical University
2004-2010	Associate Professor in the Mechanics Division of the Department of Civil Engineering of Istanbul Technical University
2008-2011	Professor (Part time) in the Department of Civil Engineering of Boğaziçi University
2008-2011	Part time teaching in Berlin Technical University within the context of Erasmus agreements
2010	Part time teaching in Alexander Technological Educational Institute of Thessalonika, Greece within the context of Erasmus agreements
2003-2004	Assistant Professor in the Mechanics Division of the Department of Civil Engineering of Istanbul Technical University
2003-2006	Post-doctoral fellow in the "Structural Mechanics" division of the Katholieke Universiteit Leuven, Belgium (her post doctoral fellowship was sponsored by the Flemish Research Foundation FWO and was awarded a "very good" degree).
2002-2003	Lecturer in the Mechanics Division of the Department of Civil Engineering of Istanbul Technical University
1999-2002	Research Assistant in the Mechanics Division of the Department of Civil

	Engineering of Istanbul Technical University
1995-2000	Member of the Executive Board of Gundes Construction Company- Project Design and Supervision of Many Reinforced Concrete Business Centers as well as Residences.

COURSES GIVEN

Berlin Technical University, “Structural Mechanics” Division, Germany (2008-2011)

- Vibration based structural health monitoring (2008 June.)
- Probabilistic and stochastic methods in structural dynamics (2009 June.)
- Dynamic system identification (2010 May.)

Alexander Technological Educational Institute of Thessaloniki, Greece (2010)

- Vibration based structural health monitoring (2010 June.)

Boğaziçi University (2008-2011)

- Vibration based structural health monitoring
- Numerical Optimization

Istanbul Technical University, Department of Civil Engineering, Mechanics Division, (full time since 1999)

- Strength of Materials I
- Strength of Materials II
- Statics
- Dynamics
- Statics and Strength of Materials
- Introduction to Scientific and Engineering Computing
- Linear Algebra
- Advanced Engineering Mathematics

AWARDS

- ✓ Recipient of the 2009 “[*FABED*](#) Outstanding Young Scientist Award” in Structural and Earthquake Engineering.
- ✓ Recipient of the “*Postdoctoral Fellowship of the Flemish National Fund for Scientific Research –Belgium (FWO)*” for postdoctoral research in the field of

“Damage identification in existing buildings using dynamic system identification and finite element model updating”, 2006.

MEMBER OF THE EDITORIAL BOARD

- ✓ Journal of Advanced Materials, USA (indexed by SCI) between 2002-2006 January.
- ✓ Atmospheric Science Journal, Bentham Publishers since 2008.
- ✓ Acoustics Journal, Bentham Publishers in 2010.

SCIENTIFIC PUBLICATIONS

Papers Indexed by Science Citation Index (sum of the times cited: 249, h index=10)

1. Gündeş Bakır Pelin and Vaccaro R.J., ‘Displacements, damage measures and response spectra obtained from synthetic accelerograms processed by causal and a causal Butterworth filters’, *Structural Engineering and Mechanics, An International Journal*, 23(4):409-430, 2006.
2. Gündeş Bakır Pelin, De Roeck G., Degrande G. and Wong K.K.F., ‘Seismic risk assessment for the mega-city of Istanbul: Ductility, strength and maximum interstory drift demands’, *Soil Dynamics and Earthquake Engineering* 27 (12): 1101-1117 DEC 2007.
3. Gündeş Bakır Pelin, Reynders E., and De Roeck G., ‘Sensitivity based finite element model updating using constrained optimization with a trust region algorithm’, *Journal of Sound and Vibration*, 305(1-2):211-25, July 2007.
4. Gündeş Bakır Pelin, Reynders E., and De Roeck G., ‘An improved finite element model updating method by the global optimization technique 'Coupled Local Minimizers'', *Computers and Structures*, 86(11-12), Pages: 1339-1352, June 2008.
5. Gündeş Bakır Pelin and Boduroğlu M.H., ‘Earthquake Risk and Hazard Mitigation in Turkey’, *Earthquake Spectra*, 2002, 18(3):427-447.
6. Gündeş Bakır Pelin and Boduroğlu HM., ‘Mechanical behaviour and non-linear analysis of short beams using softened truss and direct strut & tie models’, *Engineering Structures*, 2005, 27(4):639-51.
7. Gündeş Bakır Pelin, ‘Seismic Resistance and Mechanical Behaviour of Exterior Beam-Column Joints with Crossed Inclined Bars’, *Structural Engineering and Mechanics, An International Journal*, 2003, 16(4):493-517.
8. Gündeş Bakır Pelin, ‘Proposal for a national mitigation strategy against earthquakes in Turkey’, *Natural Hazards*, 2004, 33(3):405-425.

9. Gündeş Bakır Pelin and Boduroğlu M.H., 'Predicting the Failure Modes of Monotonically Loaded Reinforced Concrete Exterior Beam-Column Joints', *Structural Engineering and Mechanics, An International Journal*, 2002, 14(3): 307-330.
10. Gündeş Bakır Pelin and Boduroğlu H.M., 'Effect of web reinforcement, size effects and high strength concrete on the shear strength of RC short beams', *Journal of Advanced Materials* 39 (1): 46-62 JAN 2007
11. Gündeş Bakır Pelin, 'Shear Transfer Mechanisms in Monotonically Loaded Exterior Beam-Column Joints', *Journal of Advanced Materials*, 2006, 38(4):10-24.
12. Gündeş Bakır Pelin and Boduroğlu M.H., 'A New Design Equation for Predicting the Joint Shear Strength of Monotonically Loaded Exterior Beam-Column Joints'. *Engineering Structures*, 24(8), 1105-1117, August 2002.
13. Gündeş Bakır Pelin, 'Mechanical behaviour and non-linear analysis of deep beams using softened truss model', *Journal of Advanced Materials*, April (Issue 2), 2007.
14. Gündeş Bakır Pelin and Boduroğlu H.M., "Nonlinear Analysis of Beam-Column Joints Using Softened Truss Model", *Mechanics Research Communications*, 33 (2): 134-147 Mar-Apr 2006.
15. Gündeş Bakır Pelin, De Roeck G., Degrande G. and Wong K.K.F., 'Site dependent response spectra and analysis of the characteristics of the strong ground motion due to the 1999 Duzce earthquake in Turkey' *Engineering Structures*, 29(8), 1939-56, August, 2007.
16. Reynders E., De Roeck G., Gündeş Bakır Pelin and Sauvage C., 'Damage identification on the Tilff bridge by vibration monitoring using optical fiber strain tensors', *ASCE Journal of Engineering Mechanics*, 133 (2): 185-193 FEB 2007.
17. Gündeş Bakır Pelin, De Roeck G., Degrande G. and Reynders E., 'Seismic demands and analysis of site effects in the Marmara region during the 1999 Kocaeli earthquake', *Natural Hazards* , 42(1),169-91, July 2007.
18. Gündeş Bakır Pelin, Alkan S., Eksioğlu EM, 'A comparative study on the subspace based system identification techniques applied on civil engineering structures', *Smart Structures and Systems, An International Journal*, Vol.7, No.2, 2011.
19. Gündeş Bakır Pelin, 'The Combined Deterministic stochastic subspace based system identification in buildings', *Structural Engineering and Mechanics, An International Journal*, Vol.38, No.3, 2011.
20. Gündeş Bakır Pelin, "Automation of the stabilization diagrams for subspace based system identification", *Expert Systems with Applications*, Volume 38, Issue 12, Pages 14390-14397, December, 2011.

21. Gündeş Bakır Pelin, Eksioğlu E.M. and Alkan S. 'Reliability analysis of the complex mode indicator function and Hilbert Transform techniques for operational modal analysis', *Expert Systems with Applications*, 39(18), December 15, 2012.
22. Bakır Pelin, 'Instrumentation and system identification of a typical school building in Istanbul', *Structural Engineering and Mechanics, An International Journal*", Vol. 43, No. 2, 2012.
23. Gündeş Bakır Pelin, Eksioğlu E.M. and Alkan S., 'System identification of a reinforced concrete building using the complex mode indicator function and the Hilbert Transform Techniques', *Journal of testing and evaluation*, 40(3), 2012.
24. Bakır P.G. and Erdogan, Y. S. (2013), Damage identification in reinforced concrete structures by finite element model updating using parallel and hybrid genetic algorithms, *International Journal for Computational Methods*, 10(3), 20 pages.
25. Erdogan, Y.S. and Bakır P.G. (2013), Inverse propagation of uncertainties in finite element model updating through use of fuzzy arithmetic, *Engineering Applications of Artificial Intelligence*, 26(1), 357-367.
26. Erdogan, Y.S. and Bakır P.G. (2013), Evaluation of the different genetic algorithms parameters and operators for the finite element model updating problem, *Computers & Concrete*, 11(6), 541-570.
27. Erdogan, Y.S., Gul, M., Catbas N. and Bakır P.G., (2014), Uncertainty quantification of model outputs for finite element model updating using structural health monitoring data, *Journal of Structural Engineering, ASCE*, 140(11).
28. Kudu, F. N., Bayraktar, A., Bakır, P. G., Turker, T., & Altunisik, A. C. (2014). Ambient vibration testing of Berta Highway Bridge with post-tension tendons. *Steel and Composite Structures*, 16(1), 23-46.
29. Erdogan Y.S., Catbas N. and Gundes Bakir P. (2014), 'Structural identification (St-Id) using finite element models for optimum sensor configuration and uncertainty quantification', *Finite Elements in Analysis and Design*, Vol. 81, April, pages: 1-13.

Other Papers

30. Ozbay E.Ö., Gündeş Bakır P., "Dynamic Soil Structure Interaction Under Wave Propagation Via an Improved Coupled Finite Element-boundary Element Methodology", *Journal of Istanbul Technical University*, 2010 (in Turkish).
31. Gündeş Bakır P., 'Evaluation of Optimal Sensor Placement Techniques for Parameter Identification in Buildings', *Mathematical and Computational Applications*, Vol. 16, No. 2, pp. 456-466, 2011.

32. Gündeş Bakır P., 'The law regarding the transformation of the areas under disaster risk: what are the consequences?', Journal of Architects and Engineers, No: 65, pp.62-67, March 2012 (in Turkish).
33. Gündeş Bakır P., "Transformation to Disaster Resilient Cities", Journal of Architects and Engineers, No: 67, pp. 86-88, September 2012.
34. Gündeş Bakır P., 'New Turkey and the Future of Turkey-EU Relations', New Turkey Journal, 56, January-February 2014.

Conference Papers

35. Gündeş Bakır P. "The road map for damage identification in strategically important existing structures in Turkey", 14 ECEE, Ohrid, FYR of Macedonia, 2010.
36. Gündeş Bakır P., Alkan S. and Eksioğlu E.M., "Evaluation of subspace based system identification techniques on civil engineering structures", 14 ECEE, Ohrid, FYR of Macedonia, 2010.
37. Gündeş Bakır P., Reynders E., De Roeck G. and Degrande G., 'Seismic damage detection in existing buildings by finite element model updating', Proceedings of ISMA2006, Vols.1-8, Pages: 1725-1739, 18-20 September-2006, Leuven, Belgium, 2006.
38. Reynders E, De Roeck G., Teughels A. and Gündeş Bakır P., 'Damage identification on the Tilff bridge by vibration monitoring using optical fiber strain sensors', Structural Dynamics, Proceedings of EUROLYN 2005, 4-7-September-2005, Vols 1-3, Pages: 299-304, Paris, France, 2005.
39. Gündeş Bakır P. and Boduroğlu M.H., 'Review of Strut and Tie Models for Exterior Beam-Column Joints', ERES2001, Earthquake Resistant Engineering Structures III Book Series: Advances in Earthquake Engineering Volume: 9 Pages: 357-366 Published: 2001, Spain.
40. Gündeş Bakır P. and Boduroğlu M.H., 'Performance Based Modeling and Evaluation of Joint Mechanics', ERES2001, Earthquake Resistant Engineering Structures III Book Series: Advances in Earthquake Engineering Volume: 9 Pages: 427-436 Published: 2001, Spain.
41. Gündeş Bakır P. and Boduroğlu M.H., 'Re-evaluation of Seismic Capacity of Interior Beam-Column Joints', ERES2001, Earthquake Resistant Engineering Structures III Book Series: Advances in Earthquake Engineering Volume: 9 Pages: 111-120 Published: 2001, Spain.
42. Gündeş Bakır P., 'An integrated methodology for damage identification in existing buildings in seismically active areas', 14th World Conference on Earthquake Engineering, 12-17 October 2008, Beijing, China.

43. Gündeş Bakır P., Reynders E., De Roeck G. and Degrande G., 'Damage detection and localization in existing buildings under low and moderate seismic excitations', 1st European Conference on earthquake engineering and seismology, 3-8 September-2006, Geneva, Switzerland.
44. Gündeş Bakır P., Degrande G. and De Roeck G., 'Evaluation of the ductility and strength demands for the existing buildings in Turkey, 1st European Conference on earthquake engineering and seismology, 3-8 September-2006, Geneva, Switzerland.
45. Gündeş Bakır P., De Roeck G., Degrande G. and Iyisan R., 'Site effects, data processing, and response spectra due to the 1999 Kocaeli and Duzce earthquakes, 1st European Conference on earthquake engineering and seismology, 3-8 September-2006, Geneva, Switzerland.
46. Gündeş Bakır P. and Boduroğlu M.H., 'A Comprehensive model for earthquake risk reduction in Turkey', 13. World Conference on Earthquake Engineering, 1-6 August 2004, Vancouver, Canada.
47. Gündeş Bakır P. and Boduroğlu M.H., 'Mitigating Against Earthquakes in Turkey', Twelfth European Conference on Earthquake Engineering, 9-13 September, 2002, Barbican Centre, London, UK.
48. Boduroğlu M.H. and Gündeş Bakır P., 'Proposals for Earthquake Planning in Turkey', Twelfth European Conference on Earthquake Engineering, 9-13 September, 2002, Barbican Center, London, UK.
49. Gündeş Bakır P. and Boduroğlu M.H., 'A Simple Computational Model for the Design of Exterior Beam-Column Connections', ECCM 2001, 2nd European Conference on Computational Mechanics, 26-29- Temmuz-2001, Cracow, Poland.
50. Gündeş Bakır P. and Boduroğlu M.H., 'Predicting the Shear Strength of Corbels.' ECAS 2002, International Symposium on Structural and Earthquake Engineering, 14-October, 2002, Ed. Can Balkaya, pp.229-236, Middle East Technical University /Culture and Congress Center, Ankara.
51. Gündeş Bakır P. and Boduroğlu M.H., 'Joint Mechanics and Factors Affecting the Joint Shear Strength.' ECAS 2002, International Symposium on Structural and Earthquake Engineering, 14-October, 2002, Ed. Can Balkaya, pp.229-236, Middle East Technical University /Culture and Congress Center, Ankara.
52. Gündeş Bakır P. and Boduroğlu M.H., 'Seismic Resistance of Joints with Crossed Inclined Bars', Fifth International Congress on Advances in Civil Engineering, 25-Ed. S. Pala, pp. 665-674, 25-27 September, 2002, ITU, Süleyman Demirel Cultural Center, Istanbul.

53. Gündeş Bakır P. and Boduroğlu M.H., 'Predicting the Critical Cumulative Ductility Factor of Concrete Members', Fifth International Congress on Advances in Civil Engineering, Ed. S. Pala, pp. 685-694, 25-27 September, 2002, ITU, Süleyman Demirel Cultural Center, Istanbul.
54. Boduroğlu M.H. and Gündeş Bakır P., 'Energy Index Approach for Concrete Members Subject to Seismic Loads', Fifth International Congress on Advances in Civil Engineering, Ed. S. Pala, pp. 627-634, 25-27 September, 2002, ITU, Süleyman Demirel Cultural Center, Istanbul.
55. Gündeş Bakır P. and Boduroğlu M.H., 'Parametric Studies on Cyclically Loaded Exterior Beam-Column Joints', The Sixth International Conference on Computational Structures Technology, 4-6 September, 2002, Prague, Czech Republic.
56. Gündeş Bakır Pelin and Boduroğlu M.H. 'Design Equation for Predicting the Shear Strength of Short Beams', The Sixth International Conference on Computational Structures Technology, 4-6 September, 2002, Prague, Czech Republic.
57. Gündeş Bakır P. and Boduroğlu M.H., 'Energy Dissipation Capacity of Reinforced Concrete Members', The Sixth International Conference on Computational Structures Technology, 4-6 September, 2002, Prague, Czech Republic.
58. Gündeş Bakır P. and Boduroğlu M.H., 'Predicting the Shear Strength of Deep Beams', 27th OWICS, Twenty Seventh International Conference- Our World in Concrete Structures, Eds. C Tam, W.S. Ho, P. Paramasivam, T.H. Tan, organised by ACI Singapore Chapter pp:175-178, August, 2002, Singapore.
59. Gündeş Bakır P. and Boduroğlu M.H., 'Shear Strength of Reinforced Concrete Flexural Members under Monotonic Loading', 27th OWICS, Twenty Seventh International Conference- Our World in Concrete Structures, Eds. C Tam, W.S. Ho, P. Paramasivam, T.H. Tan, organised by ACI Singapore Chapter, pp:169-174, August, 2002, Singapore.
60. Gündeş Bakır P. and Boduroğlu M.H., 'The Ultimate Load Carrying Capacity of Concrete Members with Headed Bars', 27th OWICS, Twenty Seventh International Conference- Our World in Concrete Structures, Eds. C Tam, W.S. Ho, P. Paramasivam, T.H. Tan, organised by ACI Singapore Chapter, pp:163-168, August, 2002, Singapore.
61. Gündeş Bakır P. and Boduroğlu M.H., 'Strut and Tie Model for Deep Beams', ESDA, 6th Biennial Conference of American Society of Mechanical Engineers- ASME, 8-12 July, 2002, Istanbul.

62. Gündeş Bakır P. and Boduroğlu M.H., 'A Computational Model for Short Beams without Shear Reinforcement', ESDA, 6th Biennial Conference of American Society of Mechanical Engineers-ASME, 8-12 July, 2002, Istanbul.
63. Gündeş Bakır P. and Boduroğlu M.H., 'A Computational Model for Concrete Members with Headed Bars', ESDA, 6th Biennial Conference of American Society of Mechanical Engineers-ASME, 8-12 July, 2002, Istanbul.
64. Gündeş Bakır P. and Boduroğlu M.H., 'Parametric Studies on Exterior Beam-Column Connections', USNCCM VI, 5th United States National Congress on Computational Mechanics, 1-2-3-4-August-2001, USA.
65. Gündeş Bakır P. and Boduroğlu M.H., 'Evaluation of Exterior Beam-Column Connections according to the 1997 Earthquake Resistant Design Code', International Uğur Ersoy Symposium on Structural Engineering, Eds. S.M. Uzumeri, G. Özcebe, 1999, Ankara.
66. Gündeş Bakır P. and Boduroğlu M.H., 'Design of Exterior Beam-Column Connections by Strut and Tie Models', 2nd Japan Turkey Workshop, 2000, Istanbul.
67. Erdogan, Y. S., Catbas, F. N., and Gundes Bakir, P.G., (2012), Load rating prediction for bridges by means of fuzzy finite element model updating, First International Conference on Performance-based and Life cycle Structural Engineering (PLSE), December 5-7, 2012, Hong Kong, China.
68. Erdogan, Y. S., Gul, M., Catbas, F. N., and Gundes Bakir, P. G., (2013) "Quantification of parametric model uncertainties in finite element model updating problem", International Modal Analysis Conference (IMAC), February 11-14, 2013, California, USA.
69. Erdogan, Y. S. and Bakir, P. G. "Identification of structural damage induced by earthquake using heuristic optimization A comparative study", 09/2012, 15th World Conference on Earthquake (WCEE), September 24-28, Lisbon, Portugal.
70. Erdogan, Y. S., Gul, M., Catbas, F. N., and Bakir, P. G. (2013) "Investigation of the effect of model uncertainties on structural response using structural health monitoring data". 11th Conference on Structural Safety & Reliability (ICOSSAR 2013) 17 – 20 Haziran 2012, New York, USA.
71. Erdogan, Y. S., Catbas, F. N., and Bakir, P. G. (2013). "A methodology for optimal sensor placement in structural identification and verification by fuzzy finite element model updating", 11. International conference on vibration problems (ICOVP 2013), 9-11, September, Lisbon, Portugal.

Books

72. "Emergency Management Operations", Emergency Management Center, Istanbul Technical University, 2001 (in Turkish).

73. "Principles of Emergency Management", Emergency Management Center, Istanbul Technical University, 2001 (in Turkish).
74. "Emergency Management Planning Tools", Emergency Management Center, Istanbul Technical University, 2001 (in Turkish).
75. "Planning Emergency Management", Emergency Management Center, Istanbul Technical University, 2001 (in Turkish).
76. "Notes from Council of Europe", Grand National Assembly of Turkey Press, 2016 (in press).

Reports

77. Reynders E., Lombaert G., Gündeş Bakır Pelin, DeRoeck G, 'Vibration measurements on the footbridge across the E40 highway at Wetteren', Report BWM-2005-04, KULeuven, Faculty of applied sciences, Civil Engineering Department, Structural Mechanics, Kasteelpark Arenberg 40, B-3001, Heverlee, Mart, 2005, Belgium.
78. Arman E.O., Reynders E., Gündeş Bakır P, De Roeck G., 'Vibration measurements on the TNT parking place near the airport of Liege', Report BWM-2006, KULeuven, Faculty of applied sciences, Civil Engineering Department, Structural Mechanics, Kasteelpark Arenberg 40, B-3001, Heverlee, March, 2006, Belgium.
79. Gündeş Bakır P., "Restructuring Higher Education in Turkey", Headquarter of Justice and Development Party, Ankara, July 2012. (in Turkish)

National Conference Proceedings

80. Gündeş Bakır P., Boduroğlu M.H., 'Design of the beam-column joints subject to seismic and monotonic loading', Technical Congress of the Chambers of Civil Engineers, November 2011, Ankara.
81. Gündeş Bakır P., Boduroğlu M.H., 'Evaluation of models suggested for monotonically loaded beam-column joints', Technical Congress of the Chambers of Civil Engineers, November 2011, Ankara.
82. Gündeş Bakır P., Boduroğlu M.H., 'Modelling beam-column joints for shear', XII. National Mechanical Congress, September 2001, Selcuk University, Konya.
83. Gündeş Bakır P., "Mitigating earthquake risk in critical structures in Istanbul", İZAS 2010, Istanbul, 2010.

84. Ozbay Elif Özsoy, Gündeş Bakır P., “Dynamic Soil Structure Interaction Under Wave Propagation Via An Improved Coupled Finite Element-boundary Element Methodology”, İZAS 2010, İstanbul, 2010.
85. Ozbay Elif Özsoy, Gündeş Bakır P., “A drift based damage detection approach in multistorey structures taking into account the soil-structure interaction”, 7th National Earthquake Engineering Conference, 2011.
86. Gündeş Bakır P. “Structural Health Monitoring and New Technologies in the Earthquake Resistance Analysis of Strategically Important Buildings”, 7th National Earthquake Engineering Conference, 2011.
87. Gündeş Bakır P. ‘Damage Detection and the application of the Finite Element Model Updating Technique in Existing Structures”, 7th National Earthquake Engineering Conference, 2011.

PROJECTS

1. A Cooperative Hazard Impact reduction Effort Via Education (ACHIEVE); Following the 1999 Kocaeli and Düzce earthquakes, within the context of an agreement signed between the Federal Emergency Management Agency of the United States of America and the Ministry of Interior of Turkey, Prof. Dr. Pelin Gundes Bakir was selected among 31 other academicians in Turkey to be trained on earthquakes and emergency management. (2000-2003).
2. Post Doctoral Fellowship Project on “damage detection in existing buildings subjected to earthquakes”, sponsored by the Flemish Research Fund FWO, 2003-2006. The project was carried out in Katholieke Univeriteit Leuven and was completed in 2006.
3. Project manager in the TUBITAK (Turkish Research Foundation) Project 107M573 on “damage detection in existing buildings subjected to earthquakes”, 2008-2011. The project was completed in 2011.
4. Istanbul Technical University Super Computing Center, project no:20682009

ADVISOR FOR THE DOCTORAL AND MASTER DISSERTATIONS OF:

1. Serhat Erdogan: ‘Damage Detection and Parameter Identification by Finite Element Model Updating Technique using Genetic Algorithms”, Masters Thesis, 2007.
2. Yılmaz Avcı: ‘Damage Detection of Mechanical Systems Using Finite Element Model Updating Technique and Simulated Annealing Algorithm, Masters Thesis, 2008.
3. Gözde Sezgin: “Determination of the Performance Level of an Existing Reinforced Concrete Structure using Pushover Analysis and according to different soil Types”, Masters Thesis, 2008.

4. Ozan Kaplan: "The models of vibrating structures and determining of the modal parameters with the stochastic system identification methods", Masters Thesis, 2009.
5. Pınar Karakan: "Determination of the Performance Level of an Existing Reinforced Concrete Structure using Pushover Analysis and according to different soil Types", Masters Thesis, 2009.
6. Serhat Alkan: "Evaluation of the different subspace based dynamic system identification techniques on civil structures", Masters Thesis, 2010.
7. Elif Ozsoy: "Dynamic analysis of the soil-structure system using the coupled finite element-boundary element methodology" Doktoral Thesis, 2011.

MEDIA EXPERIENCE

Professor Bakir was invited to give speeches on topics like terrorism, Middle East, human rights, foreign policy, refugees and internally displaced people in many live TV programmes in BBC, Channel 4 News London, Irish State television and radio as well as Turkish popular channels such as TRT, NTV, A haber, TVnet, Ulke TV, Kanal 24, TGRT Haber and Haberturk.

WORK ACCOMPLISHED IN COUNCIL OF EUROPE (2011-2013)

61 amendments to Council of Europe resolutions were submitted, 12 amendments she proposed were approved as the Council of Europe resolution.

INVITED SPEAKER IN WORLD PARLIAMENTS, GENERAL ASSEMBLY SPEECHES AND OPENING SPEECHES IN CONFERENCES

- ✓ "The role of Turkey in Syria and the Middle East", United States Congress, The Capitol Hill Club, Capitol Hill Club, Washington DC, USA, 29 October 2012.
- ✓ "The role of Europe on the normalization of Turkey-Armenia relations-the position of France", French Parliament, Paris, France, 28 May 2015 (in English).
- ✓ "European Union-Turkey readmission agreement and the visa liberalization dialogue", European Parliament, 11 November 2014, Brussels (in English).
- ✓ "Terrorist threats and the current situation in the Middle East", European Parliament, Brussels, 11 November 2014, (in English).
- ✓ "The current situation in the European Union-Turkey relations and the accession negotiations", European Parliament, Brussels, 11 November 2014 (in English).
- ✓ "The events of 1915", European Union-Turkey Joint Parliamentary Committee, 76th General Assembly, Istanbul, 19 March 2015 (in English).
- ✓ "Islam Law in Austria", European Union-Turkey Joint Parliamentary Committee, 76th General Assembly, Istanbul, 19 March 2015 (in English).

- ✓ “Popular protest and challenges to freedom of assembly, media and speech”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 27 June 2013 (in English).
- ✓ “The situation in the Middle East”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 25 June 2013 (in English).
- ✓ “Management of mixed migration and asylum challenges beyond the European Union’s eastern border”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 25 April 2013 (in English).
- ✓ “Request for the opening of a monitoring procedure in respect of Hungary”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 25 April 2013 (in English).
- ✓ “Post-monitoring dialogue with Turkey”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 23 April 2013 (in English).
- ✓ “Violence against religious communities”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 24 April 2013 (in English).
- ✓ “Women shaping society”, Balkan Leaders Conference, Waldorf Astoria Hotel, New York, USA, 25 September 2012, (in English).
- ✓ “The situation in Kosovo and the role of the Council of Europe”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 22 January 2013 (in English).
- ✓ “The state of media freedom in Europe”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 24 January 2013 (in English).
- ✓ “Urgent debate: migration and asylum: mounting tensions in the Mediterranean”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 24 January 2013 (in English).
- ✓ “Austerity measures-a danger for democracy and social rights”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 26 June 2012 (in English).
- ✓ “The situation in Syria”, speech on behalf of the European Democrat Group, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 25 June 2012 (in English).
- ✓ “Multiple discrimination against Muslim women in Europe: for equal opportunities”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 26 June 2012 (in English).
- ✓ “The consolidation and international openness of the European Higher Education Area and governance of higher education institutions in the European Higher Education Area”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 5 October 2012 (in English).

- ✓ “Decent pensions for all”, speech on behalf of the European Democrat Group, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 27 April 2012 (in English).
- ✓ “Debate under urgent procedure: the situation in Syria”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 26 April 2012 (in English).
- ✓ “Promoting an appropriate policy on tax havens”, speech on behalf of the European Democrat Group, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 27 April 2012 (in English).
- ✓ “The functioning of democratic institutions in Ukraine”, speech on behalf of the European Democrat Group, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 26 January 2012 (in English).
- ✓ “Enforced population transfer as a human rights violation”, speech on behalf of the European Democrat Group, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 27 January 2012 (in English).
- ✓ “Co-operation between the Council of Europe and the Emerging Democracies in the Arab World”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 4 October 2011 (in English).
- ✓ “The honouring of obligations and commitments by Serbia”, Parliamentary Assembly of the Council of Europe, Strasbourg, France, 25 January 2012 (in English).
- ✓ “Urban Transformation”, Structural Supervision, Earthquake and Statics Symposium, Structural Supervision Union Ankara Branch, Ankara, Turkey, 26 December 2016.
- ✓ “Sustainable urban transformation- implementations in Turkey”, World Intelligent Cities Summit, EurAsia Strategies, Conrad Hotel, Istanbul, 10 December 2014 (in English).
- ✓ “Urban Transformation”, The Centre of Tourism, Economy, Scientific Research and Publicity (TEBİAT), Afyonkarahisar, Turkey, 14 January 2012.
- ✓ “The Expected Istanbul Earthquake and Urban Transformation”, University of Istanbul, 17 August 2012 (in English).
- ✓ “Urban Transformation and Earthquake Conference”, Fatih Municipality, Istanbul, 16 August 2012 (in English).
- ✓ ‘Hocalı Massacre’, Necip Fazıl Kısakürek Culture Center, Bahçelievler Municipality, 25-February-2012.
- ✓ ‘Urban Transformation’, Opening Speech of the Building Supervision Workshop, Swiss Hotel the Bosphorus, 30-May-2012
- ✓ “Urban transformation”, Opening speech for the Workshop: “determining methods

for the evaluation of risky structures”, Swiss Hotel the Bosphorus, Istanbul, 31-March-2012.

- ✓ ‘Urban Transformation”, Earthquakes, Men and Structures Panel, Kayseri Chamber of Geophysical Engineers, Kayseri, 27-November-2011.
- ✓ ‘Earthquake performance evaluation of existing buildings”, 18-January-2010, Bakirkoy Sadi Konuk Hospital, Istanbul.
- ✓ ‘Mitigation of earthquake risk in existing structures”, İstanbul Metropolitan City Municipality, Urban Transformation Directorate, 16-April-2010, Beyazıt, Istanbul.
- ✓ “Structural health monitoring”, Turkey Chamber of Civil Engineers, Bakırköy Branch, 2-November-2010.
- ✓ “Structural health monitoring”, Turkey Chamber of Civil Engineers, Kadıköy Branch, 3-November-2010.
- ✓ “Structural health monitoring”, Turkey Chamber of Civil Engineers, Harbiye Branch, 4-November-2010.
- ✓ “Structural health monitoring of existing structures subjected to earthquakes”, İstanbul Metropolitan City Municipality, Urban Transformation Directorate, 10-December-2009, Istanbul.
- ✓ ‘Earthquake performance analysis of existing structures”, 10-December-2009, Zeytinburnu Municipality, Istanbul.
- ✓ “Structural Health Monitoring of Critically Important Structures”, İstanbul Metropolitan Municipality, 5-February-2008, Istanbul.
- ✓ ‘Vibration based damage identification in civil engineering structures’, 26-December-2007, Bogaziçi University, Istanbul.
- ✓ ‘Influence of uncorrected accelerogram processing techniques on linear and non-linear response of dynamic systems: Examples from 1999 Kocaeli earthquake’, Katholieke Universiteit Leuven, Belgium, February 2005.
- ✓ “Design and analysis of beam-column joints”, Istanbul Technical University, May 2001.

CONFERENCE ORGANISATION & MEMBERSHIPS OF THE SCIENTIFIC AND ADVISORY BOARDS

- ✓ Advisor to the President of the Emergency Management Agency Mehmet Ersoy, 2010-2011.
- ✓ Member of the Organising Committee of the Global Donor’s Forum, 25-26 May 2016, Istanbul.
- ✓ Member of the Organising Committee of *the 5th National Conference on Earthquake Engineering* (5th NCEE), May 26-30, 2003, Istanbul.

- ✓ Member of the Organizing Committee of the International Operational Modal Analysis Conference, IOMAC 2011, May 9-11, 2011, Istanbul.
- ✓ Kayseri Higher Education Workshop, Kayseri, President of the Organizing Committee, 27-May-2012, Istanbul.
- ✓ 2nd European Conference on Earthquake Engineering and Seismology, Member of the Advisory Board, 24-29 August 2014, Istanbul.
- ✓ Member of the Scientific and Advisory Board of the 7th National Conference on Earthquake Engineering, Istanbul, 2010
- ✓ Reviewer in the TÜBİTAK Industrial Research and Development Projects
- ✓ Session Chairman in the 14. European Conference on Earthquake Engineering, Ohrid, FYR of Macedonia, 2010.
- ✓ Panelist in the Earthquake Engineering Projects of TÜBİTAK, 2011.
- ✓ Member of the Scientific Committee for the Seismic Retrofitting and Preservation of Architect Sinan's Historical Suleymaniye Compound.

PROFESSIONAL CONSULTANCY (SELECTED EXAMPLES 1995-1999)

- ✓ Business Center Project. Address: Kolağası Plaza, Gündeş Sitesi, Adnan Saygun Caddesi, No:15, Ulus-Istanbul-Turkey.
- ✓ Project and technical application responsibility of a 7 storey business center and residence - Fatih, Istanbul-Turkey.
- ✓ Project and technical application responsibility of a 7 storey residence - Fatih, Istanbul-Turkey.
- ✓ Project and technical application responsibility of a 7 storey business center - Fatih, Istanbul-Turkey.
- ✓ Project and technical application responsibility of a 5 storey business center and residence -Topkapi, Istanbul-Turkey.
- ✓ Seismic performance evaluation of Hospital building in Bakırkoy, Istanbul.
- ✓ Seismic performance evaluation of Hospital building in Zeytinburnu, Istanbul.
- ✓ Seismic performance evaluation of 7 storey, 2 block Business Center in Altunizade, Istanbul.
- ✓ Seismic performance evaluation of 11 storey Business Center in Harbiye, Istanbul.
- ✓ Seismic performance evaluation of 7 storey residence at Suadiye, Istanbul.
- ✓ Seismic performance evaluation of of 8000 m2 factory buildings at Nevşehir, Turkey.

- ✓ Seismic performance evaluation of 7 storey business center at Bakırkoy district, İstanbul.
- ✓ Seismic performance evaluation of 2 block business center in Altunizade
- ✓ Seismic performance evaluation of 7 storey business center and residence in Bagdat Street, İstanbul.

REVIEWER IN INTERNATIONAL SCIENTIFIC JOURNALS

- ✓ ACI Structural Journal
- ✓ ACI Materials Journal
- ✓ Tüm ASME (Amerikan Makina Mühendisleri Odası) dergileri
- ✓ Bulletin of Earthquake Engineering
- ✓ Earthquake Spectra
- ✓ ICE Construction Materials Journal
- ✓ Structural Engineering and Mechanics, *An International Journal*
- ✓ AIAA Journal
- ✓ Journal of Sound and Vibration
- ✓ Journal of Advanced Materials, USA
- ✓ Engineering Structures
- ✓ TOACIJ
- ✓ ISET Journal of Earthquake Technology
- ✓ Turkish Journal of Engineering & Environmental Sciences
- ✓ Journal of Gazi University Faculty of Engineering and Architecture
- ✓ Mechanical Systems and Signal Processing
- ✓ Operational Research Journal, Bentham Publishers
- ✓ Atmospheric Science Journal, Bentham Publishers
- ✓ Advances in Structural Engineering, An International Journal
- ✓ Journal of Structure and Infrastructure Engineering
- ✓ Soil Dynamics and Earthquake Engineering

CERTIFICATES

- Certificate of Emergency Management, Federal Emergency Management Agency (FEMA) of the United States, Maryland, USA, 2000.
- Certificate on Earthquakes, Federal Emergency Management Agency (FEMA) of the United States, Maryland, USA, 2001.
- Nonlinear Finite Element Modelling, Graduate School of Mechanics, University of Liege, 2004, Belgium.
- Subspace Based Signal Processing Methods, Graduate School of Mechanics,

Katholieke Universiteit Leuven, 2005, Belgium.

- Theoretical and Experimental Modal Analysis, ISMA Course, Katholieke Universiteit Leuven, Belgium, 2004.
- Linear Algebra, Graduate School of Mechanics, Universite de Libre de Bruxelles, 2004, Belgium.
- Support Vector Machines, Katholieke Universiteit Leuven, Department of Electronical Engineering, Belgium, 2005.
- Iterative methods for large scale problems, Graduate School of Mechanics, Katholieke Universiteit Leuven, Belgium, Mayis, 2005.
- Advanced Continuum Mechanics, Graduate School of Mechanics, Belgium, November, 2005.
- EU FP7 Project Training, 26-January-2007- Istanbul.
- EU FP7 Project Management Training, 22-August-2006,
- Introduction to Stochastic Analysis of Structural Vibrations, Boğaziçi University, Kandilli Observatory, Istanbul, 2007.
- Nonlinear Computational Mechanics for Concrete Structures, Erasmus Course, Istanbul Technical University, 2008.
- Stochastic Structural Mechanics and Structural Reliability', Erasmus Course, Istanbul Technical University, 2009.

MEMBERSHIPS IN NATIONAL AND INTERNATIONAL AGENCIES AND PROFESSIONAL SOCIETIES

Society	Adress	Period	Degree
EERI- Earthquake Engineering Research Institute	499 14 th Street Suite 320 Oakland, California USA	2001-2011	Member
SSA- Seismological Society of America	201 Plaza Professional Building El Cerrito, California 94530	2004-2011	Member
ASCE- American Society of Civil Engineers	1801 Alexander Bell Dr. Reston, VA 20191-USA	2001-2006	Member
Turkish Society of Civil Engineers	Selanik Cad. 19/1 Kizilay, Ankara	1993- until today	Member
SAMCO- Structural Assessment, Monitoring and Control	Hadikgasse 60, 1140 Wien, Austria	2006-2011	Member
MMG- Architects and	Kuştepe Mh. Biracılar Sk.	2011- until	Member of

Engineers Group	No:7 Şişli İstanbul Turkey 34387	today	the Advisory Board
Turkey Parliamentarian Union	TBMM Milletvekili Hizmet Binası Zemin Kat No: 49 ve 50, Bakanlıklar, Ankara	2011-until today	Member

MEMBER OF THE JUREE FOR THE DOCTORAL AND MASTERS THESIS OF:

- 1) Erinç Giniş, İstanbul Technical University, Department of Civil Engineering, Doctoral Thesis.
- 2) Parvin Zahirtar İstanbul Technical University, Department of Civil Engineering, Doctoral Thesis.
- 3) Bindhu K.R., Anna University Chennai-600 025, Faculty of Civil Engineering, India, Doctoral Thesis.
- 4) Resat Atalay Olguc, İstanbul Technical University, Department of Civil Engineering, Doctoral Thesis.
- 5) Ekrem Sirmen, İstanbul Technical University, Department of Civil Engineering, Masters Thesis, 2010.
- 6) Mehmet Can Seyman, İstanbul Technical University, Department of Civil Engineering, Masters Thesis, 2010.
- 7) Burcu Kutucu, İstanbul Technical University, Department of Civil Engineering, Masters Thesis, 2010.
- 8) Senem Hançer, İstanbul Technical University, Department of Civil Engineering, Masters Thesis, 2010.
- 9) Hafız Mehmet Erkal, Yıldız Technical University, Department of Civil Engineering, Masters Thesis, 2010.

MISCELLANEOUS

Language: English- advanced (TOEFL=610), Turkish (mother tongue)

Computer: MATLAB, ANSYS, LSSVMLab (Toolbox for Least Squares Support Vector Machines), SVM (Toolbox for Support Vector Machines), SPICE (System Identification Toolbox), SDT (Structural Dynamics Toolbox of MATLAB), SAP2000, SeismoStruct, CorelDraw, LATEX, Basic, Fortran