

CURRICULUM VITAE

Assoc. Prof. Dr. MEHMET CEMAL GENES

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Engineering Faculty, Civil Engineering Department
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Personal information:

Born April 25th 1972 in Hatay-Turkey

Turkish nationality.

Married, have two own children and one adopted children

Education:

Post Doc. Rice University, Department of Mechanical Engineering and Materials Science (Feb/2003-Aug/2003), Houston, Texas, USA. (A member of the Team for Advanced Flow Simulation and Modeling (*T*AFSM*)) (with the grant of TUBITAK (Nato-B1))

Research Title: Parachute simulation (FSI) and Lightweight membrane structures simulation used as wide area roofage.

Ph.D. Cukurova University, Engineering and Applied Science Institute, Civil Engineering Department, (1997-2001), Adana, Turkey.

Thesis Title: Soil-structure interaction models for 2-D and 3-D problems and applications on parallel platforms.

M.Sc. Cukurova University, Engineering and Applied Science Institute, Civil Engineering Department, (1994-1996), Adana, Turkey.

Thesis Title: Geometric nonlinear analysis of semi-rigid connected planar **steel frames**.

B.S. University of Gaziantep, Civil Engineering Department, Faculty of Engineering, (1989-1994), Gaziantep, Turkey.

Basic education: Belen High School, (1983-1989), Turkey.

Experience:

February 2017-present Associate Professor at Civil Engineering Department, Engineering Faculty, Eastern Mediterranean University, Famagusta, North Cyprus.

January-February 2017 Visiting Researcher at Earthquake Damage Analysis Center, Engineering Faculty, Bauhaus University, Weimar, Germany.

August 2012 – July 2016 Associate Professor at Civil Engineering Department, Engineering Faculty, Zirve University, Gaziantep, Turkey.

January-February 2007 Visiting Researcher at Structural Mechanics Division, Engineering Faculty, Karlsruhe University, Karlsruhe, Germany.

August 2003-2012 Assistant Professor at Civil Engineering Department, Engineering and Architectural Faculty, Mustafa Kemal University, Hatay, Turkey.

February 2003-August 2003 Visiting Assistant Professor at Mechanical Engineering and Materials Science Department, Rice University, Houston, TX.

January 2002-February 2003 Assistant Professor at Civil Engineering Department, Engineering and Architectural Faculty, Mustafa Kemal University, Hatay, Turkey.

October 2000-January 2002 Research Assistant at Engineering and Applied Science Institute, Cukurova University, Adana, Turkey.

January 1995-October 2000 Research Assistant at Civil Engineering Department, Engineering and Architectural Faculty, Mustafa Kemal University, Hatay, Turkey.

Research Interests:

Earthquake Engineering

- Performance Analysis of RC and Masonry Structures
- Vulnerability assessment
- Instrumental investigation of dynamic characteristics of buildings
- Strong motion instrumentation and analysis of seismic ground motion

Computational Mechanics

Parallel Scientific Computation

High Performance Computing

- Parallel Computing paradigms and frameworks
- Parallel algorithms and their efficiency issues on different architectures

Numerical solutions of nonlinear ODEs and PDEs

- Soil-Structure Interaction
- Computational Elasticity & related problems
- Fluid-Structure Interactions
- Computational Fluid Dynamics (CFD)

Numerical Analysis & Numerical Linear Algebra

Teaching Courses:

Under Graduate

Static, Strength of Materials, Structural Analysis, Steel Structures, Numerical Methods for Engineers, Computer Programming, Structural Dynamics, Fundamentals of Reinforced Concrete, Earthquake Resistant Design

Graduate

Finite Element Method, Numerical Methods in Engineering, Analytical Methods in Engineering, Soil-Structure Interaction, Parallel Programming, Fluid-Structure Interaction, Performance Based Analysis

Graduate Thesis Supervision

Ongoing Ph.D. Theses

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Ongoing M.S. Theses

Ahmed Alhashimi (Since February 2017)

Mohammed Alaraj (Since February 2017)

Completed M.S. Theses

1) Özgür Doğan (2004 – Nisan 2007)

Sismik Taban İzolasyon Sistemleri ve Uygulaması (Supervisor)

2) Kazım Teköz (2006 – Nisan 2009)

Konut Tipi Çok Katlı Betonarme Yapıların Hasar Görebilirliğinin Pushover Analizine Göre Belirlenmesi (Supervisor)

3) Özcan Demir (2006 – Ocak 2010)

Antakya'daki Betonarme Çerçevesiz Binaları Temsilen Seçilmiş Yapıların Performans Analizi (Supervisor)

4) Tuba Nedime Ovalı (2007 – Eylül 2010)

Antakya İçin Bölgesel Zemin Etkilerine Bağlı Sismik Yer Hareketinin Hasar Potansiyelinin Belirlenmesi (Supervisor)

5) Ela Doğanay (2008 – Aralık 2011)

Betonarme Yapıların Hasar görebilirliğinin Aletsel Verilere ve Statik İtme Analizine Göre Belirlenmesi (Supervisor)

6) Abdullahi Sagir (2012 - June 2014)

Real-Time Monitoring Of A Steel Building And Its Performance Analysis (Supervisor)

7) Sakine Sinem YÜCEL (2012 - Temmuz 2016)

Yığma Tipi Yapıların Deprem Etkisi Altında Aletsel Veri Ve Hesaplamalara Göre Değerlendirilmesi (Co-Supervisor)

Skills:

Languages: Turkish (native speaker), English (moderate), Arabic (moderate).

Operating Systems: User level experience (MS Office and various image manipulation programs mainly) for MS-DOS/Windows and Linux family systems

Programming Languages: Mainly user of Fortran77 and also Fortran 90/95. Extensive familiarity with mixed language programming and using ready libraries such as LAPACK, ARPACK, EISPACK. Old time user of Borland Turbo Pascal.

Computer Algebra: Mathematica, MatLab

Parallel Processing: User of PVM3 and MPI for Unix operating system.

Document Processing: Word Processing in Microsoft Word and clones, HTML

Package Program usage skills: Moderate level knowledge for modelling structures with ANSYS, SAP2000, ETABS and 3MURI.

Certifications or Professional Registrations:

1. Participation to the Workshop on **Updating Turkish Earthquake Code, 2013.**
2. Member of the Scientific Committee for **R&D Project Fair and Contest on 5th Eastern Mediterranean Universities.**
3. Participation to the training related to **Guidelines Related to Determination of Structures under Risk.**
4. Participation to the **Training Workshop related to MUDEK.**
5. Trainer Certificate related to **Workplace Medicine and Labor Security Education.**

Service Activities (within and outside of the institution):

1. Organizer of *Workshop on SERAMAR Project*, 2010-Hatay, Turkey.

<http://seramar.edac.biz/seramar1/html/index.html>

2. Organizer of *Special Team Session on SERAMAR Project*. 15th WCEE, 2012-Lisboa, Portugal.

<http://seramar.edac.biz/mku2/html/index.html>

3. Organizer of *2nd Turkish Conference on Earthquake Engineering and Seismology*. TDMSK - 2013, Hatay-Turkey.

<http://www.tdmd.org.tr/TR/Genel/Konferans.aspx?F6E10F8892433CFFAAF6AA849816B2EF76748A22998D156C>

4. A committee member for updating Turkish Earthquake Code related to Masonry Structures.

Studied Projects :

1. **1995-1996:** Title: **“Geometric Nonlinear analysis of Semi-rigid connected planar steel frames”**, The grant was supplied from Cukurova University (Project #: FBE.95.YL106). Position: **Reseracher**.
2. **1997-2002:** Title: **“The models for analysis of 2D and 3D Soil-Structure interaction problams and applications on Parallel platforms”**. The grant was supplied from Cukurova University (Project #: FBE.97.D.176). Position: **Researcher**.
3. **2002-2004:** Title: **“Simulation of Fluid-Structure Interaction Problems on Parallel Platforms”**. The grant was supplied from Mustafa Kemal University (Project #:02 D 0202). Position: **Researcher**.
4. **2003-2003:** Title: **“Parallel Implementations of Finite Element Methods for Non-linear Fluid-Lightweight Structure Interaction”**. The grant was supplied from The Scientific and Technological Research Council of Turkey (TUBITAK)-NATO (B1). Rice University, Mechanical Engineering and Materials Science. Position: **Coordinator. (Budget: 10.000 \$)**
5. **2003-2003:** Title: **“Simulation of Post soft landing of T10 parachute”**. The grant was supplied from Army Natick Soldier Centre and NASA JSC. Rice University, Mechanical Engineering and Materials Science. Position: **Researcher**.
6. **2006-2008:** Title: **“Coupled Models for the Dynamic Analysis of Large-Scale Three Dimensional Soil-Structure Interaction Problems on Parallel Computing Platforms”** The grant was supplied from TUBITAK. (Project #: 106M258). Position: **Coordinator. (30.000 \$)**
7. **2007-2007:** Title: **“Coupled Models for the Dynamic Analysis of Large-Scale Soil-Structure Interaction Problems on High Performance Computing Platforms (MDALaSSI)”**. The grant was supplied from HPC-Europa project (Project #: HPC Europa-0795). University of Stuttgart. Position: **Coordinator**.
8. 2006-2009: Title: **“Building Seismic Characteristics, Vulnerability and Loss Estimation Studies for the Earthquake Preparedness of Antakya”**. The grant supplied from TUBITAK. (Project #: 106M420). Position: **Researcher. (100.000 \$)**
9. 2007-2010: Title: **“Damage and seismic response prognosis for RC frame structures on the basis of hybrid approach combining instrumental and numerical data”**. The grant was supplied from TUBITAK. (Project #: 107M445). Position: **Coordinator**.
10. **2008-2009:** Title: **“Establishment of Antakya Basin Strong Motion Monitoring System”**. The grant was supplied from TUBITAK. Project #: 108M170. Position: **Researcher. (15.000 \$)**
11. **2009-2010:** Title: **“Determination of earthquake damage potential of Antakya according to local soil characteristics”**. The grant was supplied from Mustafa Kemal University. Project #: 02Y0104. Position: **Researcher**.
12. **2011-2014.** Title: **"Empirical and analytical assessment of masonry structures under seismic action"**, The grant was supplied from TUBITAK-IntenC - 2527 (TUBITAK and International Bureau of the BMBF, Germany) Project #:110M748, Position: **Coordinator. (Budget: 120.000 \$)**

Publications:

Papers in Refereed Journals:

1. **Genes, M.C.**, Fettahoğlu A. (2017). Design Charts For Linear Elastic Pavements. Journal of Materials in Civil Engineering (ASCE). (Under Review).
2. **Genes, M.C.**, Bikce, M. (2017). Effect of brick infill walls to the performance of a RC frame building as inferred from full-scale dynamic testing during construction. Structural Control and Health Monitoring. (Under Review).
3. Bikce, M., **Genes, M.C.** (2017). Investigation of collapsed RC structures by the material quality and poor workmanship in October 23, 2011 and November 9, 2011 Van earthquakes. Failure Analysis. (Under Review).
4. Fettahoğlu, A., **Genes M.C.**, Kunt, M.M. (2017). Creep Compliance And Relaxation Moduli Of Pmb 25 A And Pmb 45 A Gußasphalts At Different Temperatures. Journal of Materials in Civil Engineering (ASCE). (Accepted).
5. Büyüksaraç, A., Över, S., **Genes, M.C.**, Bikçe M., Kaçın S., Bektaş, Ö. (2014). Estimating shear wave velocity using acceleration data in Antakya (Turkey). *Earth Sciences Research Journal* 18(2): 99-105.
6. Abrahamczyk, L., Schwarz, J., Langhammer, T., **Genes, M.C.**, Bikce, M., Kacin, S., Gülkan P. (2013). Seismic Risk Assessment and Mitigation in the Antakya-Maras Region (SERAMAR): Empirical Studies on the basis of EMS-98. *Earthquake Spectra*, 29(3): 683–704.
7. **Genes, M. C.**, (2012). Dynamic analysis of large-scale SSI systems for layered unbounded media via a parallelized coupled finite-element/boundary-element/scaled boundary finite-element model. *Engineering Analysis with Boundary Elements* 36: 845–857.
8. **Genes, M.C.**, Kocak, S. (2005). Dynamic Soil-Structure Interaction Analysis of Layered Unbounded Media via a Coupled Finite-Element/Boundary-Element/Scaled Boundary Finite-Element Model, *International Journal for Numerical Methods in Engineering*, 62:798-823.
9. **Genes, M.C.**, Kocak, S. (2002). A Combined Finite Element Based Soil-Structure Interaction Model for Large-Scale Systems and Applications on Parallel Platforms, *Engineering Structures*, 24(9), 1119-1131.
10. **Genes, M.C.**, Aksogan, O. (1998). Geometric nonlinear analysis of semi-rigid planar steel frames. Cukurova University Journal of Faculty of Engineering and Architecture, 13 (1-2), 35-48.

Papers at Refereed Conferences:

1. **Genes, M.C.**, Abrahamczyk, L., Kacin S., Erberik, M.A. (2017). A Method Based On Empirical And Analytical Assessment Of Masonry Structures Under Seismic Action. 4th ICEES-International Earthquake Engineering and Seismology Conference 11-14 Oct. 2017, Eskisehir, Turkey.
2. **Genes, M.C.** (2016). Advanced Models for Soil-Structure Interaction Problems. 2nd International Engineering Conference On Developments in Civil & Computer Engineering Applications. 20-21 Feb. 2016, Erbil, Iraq.
3. Erdem, M.M., Bikçe, M., **Genes, M.C.**, Türker, H.T. and Kaçin, S. (2015). Investigation Of Material Properties Of Collapsed Buildings During 23 October 2011 Van Earthquake. Eighth National Conference on Earthquake Engineering, 11-14 May 2015, Istanbul, Turkey.
4. Abrahamczyk, L., Schwarz J. and **Genes, M.C.** (2015). Analytical Assessment Of Existing Masonry Structures Under EQ Loading By The Use Of Ambient Vibration Measurements, 3rd Turkish Conference on Earthquake Engineering and Seismology, 14-16 October 2015, Izmir, Turkey.
5. **Genes, M.C.**, Sagir, A., Bikce, M., Kacin, S. (2015). Real-Time Monitoring of A Steel Structure for Its Performance Analysis. International Conference on Earthquake Engineering and Seismology, 12-15 May 2015, Kiel, Germany.
6. Abrahamczyk L., Schwarz J., and **Genes M.C.** (2014). Qualification of Seismic Risk Studies on the Basis of Instrumentally Verified Vulnerability Functions For R.C. Building Types. Tenth U.S. National Conference on Earthquake Engineering Frontiers of Earthquake Engineering July 21-25, Anchorage, Alaska.
7. **Genes, M.C.**, Bikce, M. and Bankir S. (2014). Full-Scale Dynamic Testing Of A RC Frame Building By Investigation The Effect Of Brick-Infilled Frames. International Civil Engineering & Architecture Symposium for Academicians, ICESA 2014, 17-20 May 2014, Antalya, Turkey.
8. Abrahamczyk, L., Schwarz, J. and **Genes, M.C.** (2014). Qualification Of Seismic Risk Studies On The Basis Of Instrumentally Verified Vulnerability Functions For R.C. Building Types. Tenth U.S. National Conference on Earthquake Engineering Frontiers of Earthquake Engineering, 21-25 July 2015. Anchorage, Alaska.
9. Abrahamczyk, L., Schwarz J., Langhammer, T., **Genes, M.C.**, Bikce, M., Kacin S., Yakut, A., Erberik, A.M., Gülkan, P. (2012). Empirical and Analytical Vulnerability Assesment of the Masonry Building Stock in Antakya (Hatay/Turkey). 15th World Conference on Earthquake Engineering (WCEE), 23-28 September 2012, Lisboa, Portugal.
10. **Genes, M. C.**, Erberik, M.A., Abrahamczyk, L., Gülkan, P., Bikçe, M., Kacin, S., Yakut, A., Schwarz, J. (2012). Vulnerability Assessment of Two Instrumented Masonry Buildings in Antakya (Hatay, Turkey). 10th International Congress on Advances in Civil Engineering, 17-19 October, Middle East Technical University, Ankara, Turkey.
11. Bikçe, M., Açıkyol, H.E., **Genes, M.C.** (2009). Parameters Increasing Short Column Effects in R/C Structures and Solution Recommendations, International Earthquake Symposium Abstracts Book.
12. Erberik, M.A., Yakut, A., **Genes, M.C.**, Abrahamczyk, L., Bikçe, M., Kaçin, S., Langhammer, T., Gülkan, P., Schwarz, J. (2013). Characteristics of Unreinforced Masonry Buildings in

Antakya Through Field Survey, 2nd Turkish Conference on Earthquake Engineering and Seismology. TDMSK -2013.

13. Cakti, E., Bikce, M., Ozel, O., **Genes, C.**, Kacin, S., Kaya, Y. (2011). Antakya basin strong ground motion network., 8th European Geosciences Union General Assembly: 8th Geophysical Research Abstracts.
14. **Genes, M.C.**, Bikce, M., Kacin, S., Gülkan, .P., Abrahamczyk, L., Leipold, M., Schwarz, J. (2009). Identification of Dynamic Characteristics of RC Frame Structures by Combining Instrumental and Analytical Data. *Workshop on - Case studies of seismic building instrumentation and monitoring*, Weimar, Germany.
15. Özer, B., Gülkan, P., Akyuz, U., **Genes, M.C.**, Bikçe, M., Kaçın, S., Abrahamczyk, L., Leipold, M., Schwarz, J. (2009). Modal Identification for Frame Buildings Using Harmonic Vibration Test Results. *Workshop on - Case studies of seismic building instrumentation and monitoring*, Weimar, Germany.
16. **Genes, M.C.**, Bikce, M., Kacin, S., Akyuz, U., Schwarz, J., Lang, D.H., Abrahamczyk, L. (2009). Identification of Dynamic Characteristics of Multistory RC Structures by Combining instrumental and numerical data: case study Antakya, Turkey. *Earthquake and Tsunami*, Istanbul, Turkey.
17. Schwarz, J., Abrahamczyk, L., Langhammer, T., Leipold, M., **Genes, M.C.**, Bikce, M., Kacin, S. (2009). Building typology for risk assessment: case study Antakya (Hatay). *Earthquake and Tsunami*, Istanbul, Turkey.
18. **Genes, M.C.**, Bikce, M., Kacin, S., Akyuz, U., Gülkan, P., Abrahamczyk, L., Schwarz, J. (2008). Building monitoring for seismic risk assessment (II): Instrumental testing of RC frame structures and analytical reinterpretation of response characteristics. *14th World Conference on Earthquake Engineering (WCEE)*, Beijing, China.
19. Abrahamczyk, L., Schwarz, J., Lang, D.H., Leipold, M., Golbs, Ch., **Genes, M.C.**, Bikce, M., Kacin, S. and Gülkan, P. (2008). Building monitoring for seismic risk assessment (I): Instrumentation of RC frame structures as a part of the SERAMAR project. *14th World Conference on Earthquake Engineering (WCEE)*, Beijing, China.
20. Schwarz, J., Lang, D.H., Abrahamczyk, L., Bikce, M., **Genes, M.C.**, Kacin, S. (2007). Seismische Instrumentierung Mehrgeschossiger Stahlbetonbauwerke-ein Beitrag Zum SERAMAR Project. *Der Österreichischen Gesellschaft Für Erdbebeningenieurwesen und Baudynamik (D-A-CH TAGUNG 2007)*, 28 September 2007, Wien.
21. **Genes, M. C.**, Yerli, H.R., Kacin, S. (2007). Coupled Model for the Dynamic Analysis of Large-Scale SSI Problems on High Performance Computing Platforms. *Twelfth International Colloquium on Structural and Geotechnical Engineering*. Ain Shams University, Faculty of Engineering, Department of Structural Engineering, 10-13 December 2007, Cairo, Egypt.
22. **Genes, M. C.** (2007). Büyük Ölçekli Zemin-Yapı Etkileşimi Problemlerinin Yüksek Başarımlı Hesaplama Platformlarında Dinamik Analizi İçin Birleştirilmiş Model. *XV. Ulusal Mekanik Kongresi*, Süleyman Demirel Üniversitesi, Mühendislik Fakültesi, 03-07 Eylül 2007, Isparta.
23. Bikce, M., **Genes, M.C.**, Kacin, S., Schwarz, J., Lang, D.H., Abrahamczyk, L., Langhammer, T., (2006). Antakya kent merkezi için EMS-98'e göre hasargörebilirlik değerlendirme

çalışmaları. *Yapısal Onarım ve Güçlendirme Sempozyumu*, 7-8 Aralık 2006, Denizli, S 346-353.

24. Lang, D.H., Schwarz, J., Abrahamczyk, L., Langhammer, T., Geenen, E.M., Bikce, M., Kacin, S., **Genes, M.C.**, Mazmanoglu, C., Gulkan, P., Tschurr, S. (2006). Seismic risk assessment and mitigation in the Antakya-Maras region (Southern Turkey) on the basis of microzonation, vulnerability and preparedness studies (SERAMAR). *International Disaster Reduction Conference*, August, 27-September, 1 2006, Davos, Switzerland.
25. Schwarz, J., Lang, D.H., Abrahamczyk, L., Bolleter, W., Savary, C., Bikce, M., **Genes, M.C.**, Kacin, S. (2006). Seismic building monitoring of multistory RC structures in Turkey-A contribution to the SERAMAR project. *First European Conference on Earthquake Engineering and Seismology*, 3-8 September 2006, Geneva, Switzerland.
26. **Genes, M.C.**, Bikce, M., Kacin, S., Schwarz, J., Lang, D. H., Abrahamczyk, L., Langhammer, T., (2006). EMS98'e Göre Antakya Deprem Hazırlık Planı Çalışmaları. *GAP V. Mühendislik Kongresi*, 26-28 Nisan 2006, Harran Üniversitesi, Mühendislik-Mimarlık Fakültesi, Şanlıurfa, Türkiye, 882-888.
27. **Genes, M.C.** (2006). Transient Analysis of Large-Scale Soil-Structure Interaction Systems OnIn Layered Unbounded Medias via An Advanced Coupled Finite-ElementBoundary-ElementScaled Boundary Finite-Element Model. *Seventh International Congress on Advances in Civil Engineering*, October11-13, 2006, Yildiz Technical University, Istanbul, Turkey.
28. **Genes, M. C.**, Kocak, S. (2004). A Coupled Finite-Element/Boundary-Element/Scaled Boundary Finite-Element Model for Dynamic Soil-Structure Interaction Analysis. *6th International Congress on Advances in Civil Engineering*, 6-8 October 2004, Bogazici University, Istanbul, Turkey.
29. **Genes, M.C.**, Kocak, S. (2002). Parallel Treatment of Bulirsch-Stoer Interaction Scheme for Soil-Structure Interaction Problems. *Fifth International Congress on Advances in Civil Engineering*, 25-27 September 2002, Istanbul Technical University, Istanbul, Turkey.
30. **Genes, M. C.**, Kocak, S. (2001). A finite element model for soil-structure interaction. *XII. National Congress on Mechanic*, Selcuk University, Konya, Turkey 405-414.
31. **Genes M. C.**, Kocak, S. (2002) Seismic analyses of soil-structure interaction systems by coupling the finite element and the scaled boundary finite element methods. *ECAS2002 International Symposium ob Structural and Earthquake Engineering*, 14 October 2002, Middle East Technical University, Ankara, Turkey, 411-420.
32. **Genes, M. C.**, Kocak, S. (2002). A coupled model for soil-structure interaction. *Symposium for the development of Gumushane and Environs*, 23-25 October 2002, Karadeniz Technical University, Gumushane Engineering Faculty, Gumushane, Turkey.