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PERSONAL PROFILE

A highly motivated and enthusiastic Civil / Structural engineer and academic person/leader with over 20 years of academic and industrial experience. With a passion for the exciting field of **structural engineering** in general and structural steel design, in particular, has developed a significant amount of professional experience in both teaching and research. Maintained strong links with industry through research and consultancy. Took on consultancy work on issues with direct relevance to the problems of the industry. Based on the experience developed in his field of expertise believes in inspiring excitement in civil engineering education. A highly effective communicator both with students and colleagues.

EDUCATION

- 1996-2000 **Ph.D. in Structural Engineering** @ Engineering Structures Section, Department of Civil Engineering, **Imperial College of Science, Technology and Medicine, LONDON, UK**
<https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.248129>
- 1995-1996 **M.S. in Structural Steel Design** @ Department of Civil Engineering, Engineering Structures Section, **Imperial College of Science, Technology and Medicine, LONDON, UK**
(<https://www.imperial.ac.uk/study/pg/civil-engineering/structural-steel-design/>)
- 1995-1996 **DIC in Structural Steel Design**, Department of Civil Engineering, Engineering Structures Section, **Imperial College of Science, Technology and Medicine, LONDON, UK**
- 1991-1995 **B.S. in Civil Engineering** @ Department of Civil Engineering, **Istanbul Technical University, ISTANBUL, Turkey**

EMPLOYMENT

- 2018-Present **Professor** @ Istinye University, Department of Civil Engineering
- 2016-2018 **Professor** @ Antalya Bilim University, Department of Civil Engineering
- 2013-2016 **Associate Professor** @ Antalya Bilim University, Department of Civil Engineering
- 2002-2013 **Assistant Professor** @ Istanbul Kultur University, Department of Civil Engineering
- 2000-2002 **Structural Engineer** @ Alarko Contracting Company, Istanbul International Airport
- 1995-2000 **Research Assistant** @ Imperial College, London

ACADEMIC POSITIONS OF RESPONSIBILITY

Held the position of **founding chairperson of Civil Engineering departments** of two **private universities** in Turkey and contributed to the overall strategy and direction of the departments. Had the opportunity to lead, manage, and develop the department to achieve the highest possible standards of excellence in teaching, research, and administrative activities. Managed and coordinated the development of the four-year undergraduate course program, promoted and represented the College of Engineering and the Department of Civil Engineering both internally and externally. Acted as International Relations and Erasmus coordinator at Civil Engineering department as well as College of Engineering levels, with the primary role of promoting the department/college to establish academic relations that would provide students / staff academic mobility. Played a crucial role in the **establishment of the fundamental Civil Engineering teaching and research laboratories** for the Construction Materials, Soil Mechanics and Structural Mechanics related courses. **Directed the Structural Engineering laboratory** in both teaching and research activities to ensure the creation of a dynamic teaching and research environment for both students and academic staff. Assumed the role of **coordinator for the M.S. program in Structural Engineering** that included duties related to course plan development, coordination of research projects, and promoting the program both internally and externally. Developed an extensive amount of experience in providing undergraduate students with **pastoral support** and advice on personal or financial matters as well as issues on career development. The following is a summary list of the administrative responsibilities that I have undertaken.

- **Department Chair**, Civil Engineering Department, Istinye University (IU)
- **Department Chair**, Civil Engineering Department, Antalya Bilim University (ABU)
- **Director**, Structural Engineering Laboratory (ABU)
- **Member**, College of Engineering Executive Board, Antalya Bilim University (ABU)
- **International Relations Coordinator**, College of Engineering, Istanbul Kultur University (IKU)
- **Erasmus Coordinator**, Civil Engineering Department, Istanbul Kultur Uni. (IKU)
- **Member of the curriculum development team** (IKU, ABU, IU)
- **Program coordinator**, M.S. in Structural Engineering (IKU)
- **Undergraduate student advisory** (IKU, ABU, IU)

PROFESSIONAL MEMBERSHIPS

EERI / Earthquake Engineering Research Institute, USA

SCI / Steel Construction Institute, UK

FEM-ERF / European Racking Federation, Belgium

ASCE/SEI-Committee on Cold-Formed Structures

IMO / Turkish Chamber of Civil Engineers, Turkey

TUCSA / Turkish Constructional Steelwork Association, Turkey

INDUSTRY EXPERIENCE

Throughout my academic career, I had the opportunity to offer **consultancy and expert witness services to the construction industry and government**. Putting my academic expertise into practice, I provided companies with consultancy services on their challenging and exciting engineering problems. Took on consultancy work on issues related to more effective design of metal structures (steel, aluminum and stainless steel) as well as static/seismic design and assessment/retrofit of existing steel and reinforced concrete structures. Depending on the nature of the problem, the adopted methodology to handle the problem differed and included **investigations on-site**, carrying out **experimental testing** in the laboratory **or utilizing advanced numerical modeling and simulation** to understand and solve the problem at hand.

Based on my close relationships with the **Steel Construction Institute (SCI)** in the United Kingdom, I served as a country consultant to SCI to promote their structural steel activities in Turkey. Played a crucial role in establishing partnerships between **steel construction companies** and the SCI and advised the companies in their **research and development projects**.

Research collaborations that have been established with research groups in Europe and the USA on thin-walled steel storage racking systems have led to the establishment of the **National Laboratory for Testing and Design of Industrial Storage Racking Systems** in Istanbul. As the project's principal investigator/coordinator, with my project team, we aimed to establish a laboratory that would allow testing and analysis, evaluation, and developmental work. The laboratory provides state-of-the-art facilities on this specific field of thin-walled steel structures and is amongst the most up-to-date and best equipped in Turkey and its geographical reach. The project that was awarded a Turkish Ministry of Development funding included industry partners both from Turkey and Europe and has been highly commended by the funding agency to be a **good model for university-industry partnership**. The laboratory serves as a hub for companies in their activities related to product development, technical verification, and quality assurance.

TEACHING

Merits in Teaching and Pedagogical Competence

I have been actively teaching at the university level since 2002. As listed below, at the undergraduate level, I have offered courses in Structural Engineering discipline, including the core courses of Engineering Mechanics, Strength of Materials and Structural Analysis, and a suite of design courses on structural steel,

computer-aided design of structures, and steel-concrete composite structures. At Masters and doctoral degree levels, I had the opportunity to deliver courses on advanced static and seismic design of steel structures, steel-plated structures, and other advanced topics of interest. Over the years, I have developed a very sound experience in communicating with students of both undergraduate and graduate levels. My interaction with my students has not been limited to classical lecturing but also included advising them in student competitions as well as one-to-one student tutoring and advising. I have designed my courses such that the students have gone through an effective as well as an enjoyable learning process. Such a process has been realized through various in-class and field activities as well as the engineering competitions that I and my students participated both at national and international levels.

Courses Offered at Undergraduate and Post-Graduate Level Civil Engineering

- ✓ Engineering Mechanics – Statics (undergraduate - compulsory)
- ✓ Engineering Mechanics – Dynamics (undergraduate - compulsory)
- ✓ Strength of Materials (undergraduate - compulsory)
- ✓ Structural Analysis (undergraduate - compulsory)
- ✓ Structural Steel Design (undergraduate - compulsory)
- ✓ Computer-Aided Design of Structures (undergraduate - compulsory)
- ✓ Steel High Rise Building Design (undergraduate - elective)
- ✓ Structural Steel Connections (undergraduate - elective)
- ✓ Seismic Design of Steel Structures (undergraduate - elective)
- ✓ Advanced Design of Steel Structures (graduate level)
- ✓ Advanced Seismic Design of Steel Structures (graduate level)
- ✓ Steel Plated Structures (graduate level)
- ✓ Design of Steel-Concrete Composite Structures (undergraduate/graduate level)

BS Thesis Supervised

Supervised more than 100 undergraduate final year capstone projects. The projects mostly included the structural design of structural steel and steel-concrete composite buildings and bridges. Urged Civil Engineering students to establish teams with final year undergraduate Architectural students who were willing to have experience in steel design from an architectural perspective.

MS and PhD Thesis Supervised

Bassel El Kadi “**Behavior and design of perforated steel storage rack columns under axial compression**”

Graduate School of Science and Technology, Structural Engineering Program, MSc Thesis, May 2014

Abba Massoud Alfanda “**Seismic Design and Behavior of Steel Storage Rack Frames**” Graduate

School of Science and Technology, Structural Engineering Program, MSc Thesis, June 2014

Atakan Mangır **“Strength and Stability of Thin Walled Steel Columns in Storage Rack Structures”** Graduate School of Science and Technology, Structural Engineering Program, MSc Thesis, June 2014

Genç, F. **“Behavior and design of cold formed thin walled C section flexural members”** Graduate School of Science and Technology, Structural Engineering Program, MSc Thesis, June 2008

Seçkin, E. **“Effect of plate slenderness on the behavior of steel plate shear wall systems”** Graduate School of Science and Technology, Structural Engineering Program, MSc Thesis, June 2004

Seçkin, E. **“Behavior and design of gusset plate welded end connections of stainless-steel hollow section members in tension”** Graduate School of Science and Technology, Structural Engineering Program, Ph.D. Thesis, May 2014

Bassel El Kadi **“Seismic behavior and strength upgrading of steel storage racking frames”** Graduate School of Science and Technology, Structural Engineering Program, Ph.D. study, June 2018

RESEARCH

I research efficient ways of designing metal structures (hot and cold-formed steel, stainless steel, aluminum and high strength steel) with particular emphasis on members and connections that these structures are composed of. My research has tackled problems regarding the safe and economic design of these system components under the effects of static as well as dynamic earthquake loads. Utilizing **advanced non-linear numerical modeling supported by physical experimental testing**, my research ultimately aims to **fill the gap in existing structural design guidelines**. My specific field of interest from the viewpoint of research is, therefore, steel structures. As a natural consequence of this, my research efforts have mostly been targeted towards investigating problems on various topics of this exciting branch of structural engineering.

Selected Publications

- Cosgun, C., Kiyamaz, G. **“Finite element analysis-based investigation of strength and stability of steel storage racking frames with damaged columns”** Journal of Constructional Steel Research (2020) (under preparation)
- Dindar AA., Tugsal, UM., Kiyamaz, G. and El Kadi, B **“Seismic fragility curves for steel storage racking systems with strengthened beam-to-column connections”** Journal of Constructional Steel Research (2020) (under preparation)
- Cosgun, C., Turk, AM., Mangır, A., Cosgun, T., Kiyamaz, G. **“Experimental investigation of RC beam-column joints with plain bars, low-strength concrete and different joint anchorage details”** Engineering Failure Analysis, Volume 109, 2020.

- Kıymaz, G., El Kadi, B. "**Behaviour and Design of Complex and Open-section Thin-Walled Steel Columns with Regular Multiple Perforations**" 8th International Steel Structures Symposium, 24–26 October 2019, KTO Karatay University
- Kıymaz, G., Dindar, A.A., Tuğsal, U.M., Tanırcan, G., Aydın, N.S. "**State of the Art Review on Seismic Behavior and Design of Steel Storage Racking Structures**" 5th International Conference on Earthquake Engineering and Seismology, Ankara, 8-11 October 2019
- Kıymaz, G., Cosgun. C., El Kadi, B., Mangır, A. "**Strength upgrading of steel storage rack frames in the down-aisle direction**" Steel and Composite Structures, Vol. 23, No. 2 (2017) 143-152
- El Kadi, B., Kıymaz, G. "**Behavior and design of perforated steel storage rack columns under axial compression**" Steel and Composite Structures, Vol. 18, No. 5, May. 2015, pp. 1259-1277
- Kıymaz, G., Seckin, E. "**Behavior and design of stainless steel tubular member welded end connections**", Steel and Composite Structures, Vol. 17 No.3, Sep. 2014, pp.253-269
- Kıymaz, G., Alfanda, A.M. "**Investigation of Seismic Behaviour of Steel Pallet Rack Frames**" American Journal of Engineering and Technology Management, 2017; 2(2): 13-19
- Kıymaz, G., Coskun. E., Cosgun, C, Seckin, E., "**Transverse load carrying capacity of sinusoidally corrugated steel web beams with web openings**", Steel and Composite Structures, Vol. 10, No. 1, Jan. 2010, pp. 69-85
- Kıymaz, G., "**Investigations on the bearing strength of stainless steel bolted plates under in-plane tension**", Steel and Composite Structures, Vol. 9, No. 2, Jan. 2009, pp. 173-189
- Kıymaz, G., Coskun. E., Cosgun, C., "**Behavior And Design Of Seam-Welded Stainless Steel Circular Hollow Section Flexural Members**", Journal of Structural Engineering, ASCE, Vol. 33, No. 12, Dec. 2007, pp. 1792-1800
- Kıymaz, G, "**Strength and stability criteria for thin-walled stainless steel circular hollow section members under bending**", Thin Walled Structures, Vol. 43/10, Oct. 2005, pp. 1534-1549
- Kıymaz, G, "**FE based mode interaction analysis of thin-walled steel box columns under axial compression**", Thin Walled Structures, Vol. 43/7, Jan. 2005, pp. 1051-1070
- El Kadi, B., Kıymaz, G., Mangır, A. "**Experimental Investigation on the Behavior of Perforated Steel Storage Rack Columns Under Axial Compression**" Nordic Steel Construction Conference 2015 Tampere, Finland 23-25 September 2015

- Kıymaz, G., Cosgun. C., El Kadı, B., Mangır, A. and Çalık, E. **“Strength upgrading of existing steel storage rack beam-to-column connections”** SMAR 2015, Third Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures, September 2015, Antalya, Turkey
- Peköz, T. Casafont, M., Roure, F., Somalo, M.R., Kıymaz, G., Pastor, M.M., Bonada, J. **“Current Research On Cold-Formed Steel Industrial Racks”** 5th Steel Structures Symposium, 13-15 Nov. 2013, İstanbul
- Peköz, Teoman., Kıymaz, G., Casafont, M., Pastor, M.M., Bonada, J., **“Design of perforated industrial storage rack columns for distortional buckling”**, 21st International Specialty Conference on Cold-Formed Steel Structures - Recent Research and Dev., Jan. 2012, pp. pp. 437-454, St. Louis, Missouri
- Kıymaz, G., Seckin, E. **“Strength and design of slotted and gusset plate welded tubular member connections in stainless steel”** Stainless Steel in Structures-Fourth International Experts Seminar Ascot, UK. 6-7 December 2012
- Kıymaz, G., Seckin, E., **“Investigation of the behavior of gusset plate welded slotted stainless steel tubular members under axial tension ”**, Tubular Structures XIV-Proceedings of the 14th International Symposium on Tubular Structures, ISTS, Jan. 2012, pp. pp. 369-375
- Kıymaz, G., Peköz, Teoman. **“Recent research activities on column behaviour with special emphasis on distortional buckling”** European Racking Federation (ERF) / ECCS WG7.5 Meeting and Workshop, Barcelona, 20-22 January 2010
- Kıymaz, G., Seckin, E., **“Strength of slotted stainless steel tubular member tension connections”**, International Symposium on Steel Structures: Culture and Sustainability , İstanbul / Turkey, Sep. 2010, pp. 371-381
- Kıymaz, G., Coskun, E., Cosgun, C., Seckin, E., **“Transverse load carrying capacity of sinusoidally corrugated steel webs with web openings”**, International Symposium on Steel Structures: Culture and Sustainability , İstanbul / Turkey, Sep. 2010, pp. 593-603
- E.Coskun, G. Kıymaz, E. Seckin, **“Sustainable and earthquake resistant structural systems”**, Guimares / Portugal, Jul. 2010, pp. 1467-1472
- Kıymaz, G., **“Bearing strength of bolted stainless steel plates in tension”**, 11th Nordic Steel Construction Conference – NSCC2009, Malmö / Sweden, Sep. 2009, pp. 238-246
- Dikmen S. Umit, Turk A. Murat, Kıymaz Guven, **“Effect of depth of ground water on the seismic response of frame type buildings on sand deposits. Part I: Soil Response”**, NATO Advanced Research

Workshop on Coupled Site and Soil-Structure Interaction Effects with Applica., Borovets / Bulgaria , Sep. 2008, pp. 273-280

- Kıymaz, G., "**Numerical investigation of coupled instability in axially loaded steel box columns**", Fifth International Conference on Coupled Instabilities in Metal Structures, CIMS2008, Sydney / Australia, Jun. 2008, pp. 595-603
- Kıymaz, G., Coskun. E., Cosgun, C., "**Examination of Cross-Section Stability of Stainless Steel Tubular Sections by Finite Element Analysis**", Fifth International Conference on Advances in Steel Structures, Singapore, Dec. 2007, pp. 882-889
- Kıymaz, G., Coşkun, Coşgun, C., E., Seçkin, E., "**Strength of Sinusoidally Corrugated Web Beams with Web Openings**", 6th International Conference on Steel and Aluminium Structures ICSAS'07, Oxford / UK, Jul. 2007, pp. 872-880
- Kıymaz, G., Coşkun, E., Seçkin, E., "**Effect of plate slenderness on the seismic performance of steel plate shear wall systems**", 7th International Congress on Advances in Civil Engineering, İstanbul / Turkey, Oct. 2006,
- Kıymaz, G., Coşkun, E., "**Critical assessment of the behavior and design of steel box columns to Eurocode 3**", 6th International Congress on Advances in Civil Engineering, İstanbul, Turkey, Oct. 2004, pp. 520-530
- Karatas, H., Mastanzade, N., Kıymaz, G., "**Model Experiments of a Tension Leg Platform**", International Conference on Offshore Mechanics and Arctic Engineering, Cancun / Mexico, Dec. 2003, pp. 417-425
- Kıymaz, G., Chryssanthopoulos, M.K., "**Ultimate Strength of Imperfect High Performance Steel Plate Panels under Uni-axial Compression**", Fifth International Congress on Advances in Civil Engineering, İstanbul / Turkey, Sep. 2002, pp. 487-497
- Coşkun, E., Kıymaz, G., "**Interaction between Architecture and Engineering**", Structure, No. 308, Jan. 2011
- Kıymaz, G., Genç, F., Seckin, E., "**Strength of thin walled steel C section members with web perforations**", 3rd Steel Structures Symposium, Gaziantep / Turkey, Oct. 2009, pp. 301-310
- Kıymaz, G., "**Numerical Simulation of Seam-Welded Stainless Steel Tubular Members under Bending**", ABAQUS Users' Meeting, İstanbul, Nov. 2007, pp. 109-133
- Kıymaz, G., Coşkun. E., "**Design and behavior of corrugated web steel fabricated beams**" Steel Structures, Turkish Constructional Steelwork Association, Sep. 2006

- Kıymaz, G., "**A Finite Element Validation Study For The Strength Prediction Of Steel Box Columns With Initial Geometric Imperfections And Welding Residual Stresses**", ABAQUS Users' Meeting, İstanbul/Turkey, Sep. 2005
- Kıymaz, G., Coşkun, E., "**Fundamentals of design for stiffened steel plate members**" TMH – Engineering News, No. 436, Feb. 2005
- Kıymaz, G. "**Stability and Strength Criteria for High Performance Steel Plates under Edge Compression**" Journal of İstanbul Kültür University, 2003/3, pp.1-26
- Kıymaz, G., "**Fundamental approach for the design of structural steelwork connections**" Construction Magazine, Dünya Publishing, Oct. 2001
- Kıymaz, G., Chryssanthopoulos, M.K., "**Bending Tests of Structural Stainless Steel Circular Hollow Sections**", Department of Civil Engineering, Imperial College, London, CESLIC Report OR 12, Vol. 12, Jan. 1998