

# CURRICULUM VITAE

**Alper KANYILMAZ**

Assistant Professor

(Ricercatore legge 240/10 - t.det.)

Department of Architecture, Built Environment and Construction  
Engineering (DABC)  
Politecnico di Milano

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(for the latest updates in my activity, please visit:

[www.alperkanyilmaz.com](http://www.alperkanyilmaz.com))

Autorizzo il Politecnico di Milano a pubblicare il presente curriculum sul sito web di Ateneo, ai fini istituzionali e in ottemperanza al D. Lgs n. 33 del 14 marzo 2013 “Decreto trasparenza” come modificato dal D. Lgs. 97 del 2016

## PERSONAL INFORMATION

First name, family name: **Alper Kanyilmaz**  
Born in: Izmir, Turkey  
Citizenship: Turkish, Italian  
URL, personal website: [www.alperkanyilmaz.com](http://www.alperkanyilmaz.com)  
Google scholar link: <https://scholar.google.it/citations?user=oH0Z40cAAAAJ&hl=it>  
Scopus: <https://www.scopus.com/authid/detail.uri?authorId=53866528200>

Alper Kanyilmaz is an assistant professor in the Department of Architecture, Built Environment and Construction Engineering of Politecnico di Milano in Italy. His research goal is to explore new structural systems using steel, and contribute to the construction sector's transition toward a digitalised and sustainable production of safe and elegant structures requiring less material and energy consumption.

He is studying the [following topics](#):

- **Automated off-site fabrication of steel structures** using laser cutting, metal 3D printing, and bio-inspired topology optimisation methods to speed up construction, and reduce costs, waste, and manual work in the whole life cycle of a building.
- **Rapid decision-making tools and methods** to conceptually design cost-efficient building structures using artificial intelligence and data-driven approaches.
- **Mitigation of dynamic actions** (fatigue, seismic) on steel building, storage (e.g., warehouse, industrial) and renewable energy (e.g., wind) structures, with increased lifetime, reparability, and reuse.

His research lines are constructed using both numerical and experimental methods, up to high TRL levels (e.g., pilot-scale). He organizes his research in cooperation with top scientists within an extensive international network he matured since 2010.

He has been a team leader and principal coordinator in several research projects, cooperating with the steel construction industry, different disciplines, and worldwide research institutes.

He transfers his research experience to the civil engineering and architecture students in terms of [teaching, MSc and PhD thesis supervision](#).

## EDUCATION

01.11.2013 - 27.03.2017 PhD (cum laude) in Architecture, Built Environment and Construction Engineering, Politecnico di Milano, Italy. Thesis title: "A new design approach for concentrically braced frames in moderate seismicity."  
09.10.2007 - 04.05.2010 MSc in Civil Engineering, Politecnico di Milano, Italy, Thesis title: "Seismic protection of ancient statues under 3D earthquake excitations by means of base Isolation."  
01.10.2001 - 11.06.2006: BSc in Civil Engineering, Middle East Technical University, Ankara, Turkey

## ACADEMIC POSITIONS

02.09.2019 - present: **Assistant Professor**, Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano<sup>1</sup> (Italy)  
01.08.2010 - 30.08.2019: **Research Engineer, PhD, teaching assistant roles**, Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano (Italy)

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<sup>1</sup> In 2021 QS World University Rankings, Politecnico di Milano was ranked 10<sup>th</sup> in the structural engineering and architecture categories.

## ACADEMIC AND PROFESSIONAL QUALIFICATIONS

Since September 2018: Abilitazione Scientifico Nazionale 08/B3 Tecnica delle Costruzioni, Fsc II.  
Since April 2018: Abilitazione alla professione di Ingegnere Civile ed Ambientale (esame di stato)

## TEACHING AND SUPERVISION

Since 2019 teaching “Structures” module in the bi-disciplinary course “ARCHITECTURAL DESIGN LABORATORY 2” (CFU 12.0).

I took part in the past within the following courses: “Architecture of Steel Constructions”, 4th year, CFU 4.00, Architecture (4 semesters between 2014-2018), “Design of Structures”, 4<sup>th</sup> year, CFU 9.00, Building Engineering (3 semesters between 2015-2018), “Building Systems and Component Design”, 4<sup>th</sup> year, CFU 9.00 Building Engineering (2 semesters between 2014-2016).

I have co-supervised and supervised more than 15 MSc students.

Currently I am supervising 2 PhD theses:

From 01.11.2020-present

- ❖ Aleksei Kondratenko, A fast and efficient design method for buildings equipped with hysteretic dampers using artificial neural networks (ANNs) and genetic algorithm (GA), DABC, Politecnico di Milano, Relatore: Alper Kanyilmaz, Tutor: Marco Valente, 36° cycle

From 01.02.2020-present

- ❖ Martina Chierici, Steel tubular joints using Metal Additive Manufacturing, DABC, Politecnico di Milano, Relatore: Carlo A. Castiglioni, Tutor: Pierluigi Colombi, correlatore interno: Alper Kanyilmaz, correlatore esterno: Filippo Berto (NTNU Norway) 35° cycle

I obtained the following certificates of innovative teaching:

October/November 2019: “Practical approaches to innovative teaching”, 12 hours, Methods and Innovative Technologies for Learning section of Politecnico di Milano  
June 2019: “Designing innovative teaching”, 30 hours, Methods and Innovative Technologies for Learning section of Politecnico di Milano

## PROFESSIONAL ACTIVITY

01.08.2010 – 31.08.2019: Engineering consultant in Fincon Consulting Italia Srl, Italy

Static, dynamic and fatigue analysis and design of structures (buildings, bridges and industrial systems), connection detailing, structural health monitoring and rehabilitation.

31.07.2006-30.08.2007: Civil Engineer in Kasktas, Moscow, Russia

This was my first job after obtaining my BSc degree before starting an academic career. I was a site engineer in the deep excavation construction of the Moscow City Central Transport Terminal Project.

## SUCCESSFUL RESEARCH GRANT WRITING THAT RECEIVED FUNDING

15.09.2020: **Submitted: EU-RFCS/Horizon 2020 proposal LASTTS** “Laser cutting technology for tubular structures”, Coordinator: DABC, Politecnico di Milano, 42 months, 15 EU partners, Budget: €2,941,074.30, Requested grant: €1,764,644.58

I coordinated the research proposal writing, as coordinator contact of the proposal. The project grant agreement is underway.

09.01.2018: **EU-RFCS/Horizon 2020 project DISSIPABLE** “Fully Dissipative and Easily Repairable Devices for Resilient Buildings with Composite Steel-Concrete Structures”, Politecnico di Milano **Grant: € 907,405.82**

I coordinated the research proposal writing. Grant Agreement was signed on 13.03.2018 for 2018-2022.

02.03.2016: **EU-RFCS/Horizon 2020 project LASTEICON** “Laser Technology for Innovative Connections in Steel Construction”, Fincon Consulting Italia  
**Grant: € 1,156,601.58**

I assisted the coordination of the research proposal writing under the supervision of Prof. Carlo A. Castiglioni. Grant Agreement was signed on 20.06.2016 for 2016-2019. The project had a strong focus on the life-cycle cost and environmental analysis.

### **INDUSTRIAL INNOVATION: Positions in the EU-Funded Research Projects**

01.06.2018 - Present: **Primary coordinator**, Politecnico di Milano (Coordinator), RFCS/Horizon 2020 project DISSIPABLE “Fully Dissipative and Easily Repairable Devices for Resilient Buildings with Composite Steel-Concrete Structures”  
**Grant: €907,405.82**

I am coordinating the project composed of 8 academic and industrial partners from 4 EU countries. The project has a strong focus on the life-cycle cost and environmental analysis.

01.07.2016 – 30.08.2019: **Assistant coordinator**, Fincon Consulting Italy (Coordinator), RFCS/Horizon 2020 project LASTEICON “Laser Technology for Innovative Connections in Steel Construction” **Grant: €1,156,601.58**

I coordinated the project with Prof. Carlo A. Castiglioni, which is composed of 9 academic and industrial partners from 5 EU countries.

01.07.2017- 30.08.2019: **Supervisor**, Fincon Consulting Italy (Coordinator), RFCS/Horizon 2020 project FASTCOLD “Fatigue Strength of Cold-Formed Structural Steel Details”  
**Grant: €1,724,361.48**

I supervised numerical activities to develop fatigue design rules for cold-formed steel elements and their connections with a focus on the logistics industry (e.g., racking systems).

01.07.2017 - 30.08.2019: **Technical lead**, Fincon Consulting Italy (Beneficiary), RFCS/Horizon 2020 project STEELWAR “Advanced Structural Solutions for Automated Steel Rack Supported Warehouses”  
**Grant: €1,473,275.88**

I lead the numerical task on the behaviour of self-supporting automated warehouses under seismic and wind loads. I was also one of the inventors of the research idea that won the grant. This project possesses the third-largest grant for research actions in the history of EU-RFCS TGS “Steel products and applications for building, construction and industry” (among 152 funded projects since 2003).

01.07.2016 - 31.12.2017: Team member, Politecnico di Milano (Beneficiary), RFCS/Horizon 2020 INNOCISEIS “Valorization of innovative anti-seismic devices”  
**Grant: €597,396.00.**

I participated in the activities of guideline writing and dissemination about the use of dissipative seismic connections developed in past European research projects.

01.07.2013-31.12.2016: Team member, Politecnico di Milano (Beneficiary), EU-RFCS project MEAKADO “Design of steel and composite structures with limited ductility requirements for optimized performances in moderate Earthquake areas”  
**Grant: €783,015.00**

I managed a team of students, interns and technicians to perform the full-scale tests. The aim was to develop a new low-to-moderate seismicity design approach of concentrically braced frames. The results of this project were partly considered in the latest Eurocodes.

01.07.2013-31.12.2016: Scientific consultant, Neapolis University Cyprus (Beneficiary), EU-RFCS project PROINDUSTRY “Seismic protection of industrial plants by enhanced steel-based systems” **Grant €940,749.00**

I studied the seismic vulnerability of an existing steel industrial silo system by means of incremental dynamic analysis and proposed a retrofitting solution using single curved surface sliding pendulum devices.

01.07.2011-31.12.2013: Team member, Politecnico di Milano (Coordinator), EU-RFCS project SEISRACKS2 “Seismic Behaviour of Steel Storage Pallet Racking Systems” **Grant: €865,269.00**

I assisted the full-scale tests of racking systems made of cold-formed steel in both the presence and absence of the vertical bracings. The aim was to assess the ductility of different rack types. Also, I assisted the coordinator (Prof. C.A. Castiglioni) in the project management and drafted the periodic technical reports. Results of this project have formed the basis of the new European seismic standard EN 16681: 2016 -Steel static storage systems - Pallet racking - Principles for seismic design.

01.08.2010-31.12.2011: Team member, Politecnico di Milano (Beneficiary) EU-RFCS project FUSEIS “Dissipative devices for seismic resistant steel frames” RFSR-CT-2008-00032 **Grant: €444,810.00**

I assisted the real-scale experimental tests of the steel-concrete composite frames with replaceable dissipative connections. Based on the results, I developed and calibrated finite element numerical models and performed parametric analyses. Finally, I drafted the design procedures for steel and steel-concrete composite frames, in the presence of dissipative connections.

### **INVITED and KEYNOTE SPEAKER**

11.06.2021 **Invited lecturer**, Progettazione delle strutture in acciaio con i criteri di sostenibilità ambientale, 2<sup>nd</sup> edition, Euroconference, 4-hour lecture

18.02.2021 **Keynote speaker**, “Resource-efficient construction of steel structures using laser cutting and metal 3D printing”, i3Dc | 3D printing: Challenges and Opportunities in Construction, Porto, Portugal

11.02.2021 **Invited lecturer**, Progettazione delle strutture in acciaio con i criteri di sostenibilità ambientale, 1<sup>st</sup> edition, Euroconference, 4-hour lecture

11.03.2019 **Invited lecturer**, 5-hour formation seminar, Torino, Euroconference Centro studi professioni tecniche, title of lecture: Costruzioni di Acciaio alla luce delle nuove NTC 2018.

28.06.2019 **Invited speaker**, Assimpredil Ance "Stampa 3D e additive manufacturing, Componenti serializzati su misura verso la Lean production" with the presentation "Stampare l'acciaio".

23.09.2019 **Invited speaker**, Middle East Technical University, Turkey, Civil Engineering Department for the seminar "New Tubular Steel Joints Obtained by means of Laser Cutting Technology: Outcomes of EU-RFCS Project LASTEICON".

15.03.2012 **Invited presenter** at Young Researchers Conference 2012, The Institution of Structural Engineers, London, UK, presentation title “Seismic Resistant Composite Steel Frames with Replaceable Dissipative Devices”

### **Organization of international special sessions and workshops**

23-26.11.2020: Organization of Minisymposium "MS 24: Seismic Protection of Steel Structures by means of Dissipative Systems and Components" presso Eurodyn 2020 XI International Conference on Structural Dynamics 23-26 November 2020

23.11.2020 Organization and moderation of round-table discussion “Earthquake risk mitigation of buildings with reduced costs and environmental impact from a life-cycle perspective” with panelists Carlo A. Castiglioni (Politecnico di Milano), Benno Hoffmeister (RWTH Aachen, Harris Mouzakis (NTUAAthens, Michalis Sofras (Sofman steel manufacturing)), Giorgio Urbano (RINA Consulting), Eurodyn 2020 XI International Conference on Structural Dynamics 23-26 November 2020, Athens, Greece (virtual conference)

15-16.07.2020 Organization of Multi-disciplinary round-table discussion “Metal 3D printing: When will it be ready for architecture, engineering and construction industry?”, Two-day virtual workshop, Speakers: Alper Kanyilmaz (organizer and speaker), Ali Gokhan

Demir (MECC Politecnico di Milano), Leroy Gardner (Professor of Structural Engineering, Imperial College, UK), Javad Razavi (Associate Professor, NTNU Norway), Eleonora Marino (Prima Industrie, Italy), Takuya Kinoshita (Associate Chief Researcher, Takaneka Corporation, Japan), Paul Kassabian (Principal and Structural Engineer, Simpson Gumpertz & Heger, US), chair: Ingrid Paoletti (DABC Politecnico di Milano).

03-05.10.2019 Organization of the special session “Laser cutting” al XXVII Congresso del Collegio dei Tecnici dell’Acciaio, Bologna 03.10.2019 - 05.10.2019

06.09.2018 Organization of the special session "Laser cutting technology" in CST2018 The Thirteenth International Conference on Computational Structures Technology, Sitges, Barcelona, Spain 4-6 September 2018

### **PATENT APPLICATIONS**

04.03.2021: Industrial invention patent, deposited (102021000005120) “The computer-implemented method (1) for minimizing structural cost, maximizing free space and minimizing environmental impact in conceptual design of buildings”, Inventors: Alper Kanyilmaz (Dipartimento di Architettura, Ingegneria delle Costruzioni e Ambiente Costruito, Politecnico di Milano), Daniele Loiacono (Dipartimento di Elettronica, Informazione e Bioingegneria, Politecnico di Milano), Patricia Navarro, (MSc student, Politecnico di Milano).

### **AWARDS AND SCHOLARSHIPS**

26.05.2008: **Joint winner at “The Third Concrete Design Competition Implicit Performance Exploring the Hybrid Condition”, Belgium**

A biennial competition of innovative ideas related to the use of concrete, organized by a consortium of European Cement associations. I acted as the structural engineer in the team that won the Joint Winner prize award with the “Reverse effect” project. The jury's judgment was as follows: “The Reverse Effect project was awarded for the application of the “hybrid concept” to both the system and the material. The project, rich in inventiveness and imagination, provides a system of floating elements that can be used for a city on the water that uses the thrust of the fluid as a constructive component, a hybrid component made of the reinforced concrete and steel fibers”.

09.10.2007 – 30.09.2009: **Full Scholarship of ICE Unioncamere 2007**

I won the ICE-UNIONCAMERE Scholarship, a total sum of €16,000.00, for my Civil Engineering MSc study at Politecnico di Milano.

18.04.2006: **Second place with prize money at Prosteel, International Steel Design Competition 2006, Istanbul, Turkey**

Prosteel is organized by the Turkish Structural Steel Association (TUCSA), sponsored by Borusan Mannesmann (Europe’s leading steel tube manufacturer, founded in 1958). Mixed groups composed of students of architecture and civil engineering compete. I was the structural engineering student of the team that won second place with the “Student social centre” project.

### **SERVICE TO THE ACADEMY**

I am a reviewer in the following journals: *Journal of Constructional Steel Research* (Elsevier), *Fatigue & Fracture of Engineering Materials & Structures journal* (Wiley), *Thin-Walled Structures* (Elsevier), *Structures* (Elsevier), *Journal of Structural Engineering* (ASCE), *Journal of Earthquake Engineering* (Taylor Francis), *Bulletin of Earthquake Engineering* (Springer), *Steel and Composite Structures* (Techno Press), *Heliyon* (Elsevier), *Material Design and Processing Communication* (Wiley).

Since 01-11-2019, I am involved in the revision commissions to select PhD and post-doc candidates in the DABC department of Politecnico di Milano.

**MAJOR COLLABORATIONS**

**Circular economy, life cycle analysis, environmental and economic impact:** Ing. Giuliana Zilli, RINA Consulting (design and consulting, Italy), Ing. Elisabetta Mecozzi, RINA Consulting (design and consulting, Italy), Ing. Elena Rocco, RINA Consulting (design and consulting, Italy), Prof. Catherine De Wolf, Swiss Federal Institute of Technology Zurich (ETH Zurich).

**Artificial Intelligence, Machine learning, Data science, Topology optimization:** Prof. Kristo Mela, Tampere University, Finland, Dr. Lex van der Meer, Windbase, ABT, Netherlands, Prof. Daniele Loiacono, Dipartimento di Elettronica, Informazione e Bioingegneria, Politecnico di Milano.

**Advanced manufacturing methods of fabrication and construction (laser cutting, 3D printing):** Prof. Oreste Bursi, University of Trento, Prof. Leroy Gardner, Imperial Collage, Ing. Alberto Valli, BLM Group (laser cutting machine producer), Ing. Ralf Hojda, Vallourec (steel tube producer), Ing. Bertrand Maillon, Vallourec (Metal additive manufacturing expert), Ing. Gorka Iglesias (Arcelor Mittal AM Lexy), Andrea Galazzi, OCAM Srl. (steel manufacturer), Prof. Barbara Previtali, DMECC Politecnico di Milano, Prof. Javad Razavi, NTNU Norway, Ing. Paul Kassabian, Simpson Gumpertz & Heger, US, Ing. Takuya Kinoshita, Takane Corporation, Japan, Ing. Henk Van Ginkel, DNV, Ing. Sastry Kandukuri, DNV, Ing. Alessandro Catanzano, CIMOLAI Spa, Ing. Andrea Laurenti, CIMOLAI Spa.

**Steel and composite steel-concrete structures:** Prof. Mohammed Hjjaj (INSA-RENNES), Prof. Walter Salvatore (University of Pisa), Prof. Benno Hoffmeister (RWTH Aachen University), Prof. Herve Degee (Hasselt University), Dr. Pierre Olivier Martin (CTICM, France), Dr. Inigo Calderon (TECNALIA, Spain).

**Fatigue and Structural Integrity:** Prof. Filippo Berto (NTNU Norway), Prof. Abilio Jesus and Prof. Augusto Fernandes (University of Porto), Prof. Carla Gambaro (University of Genova), Dr. Ilchat Sabirov (IMDEA, Spain).

**Steel connections and joints:** Prof. Harris Mouzakis, Prof. Ioannis Psycharis, Prof. Dimitrios Vamvatsikos (National Technical University of Athens), Prof. Oreste Bursi (University of Trento), OCAM Srl. (steel manufacturer), Vallourec (steel tube producer), BLM Group (laser cutting machine producer), SOFMAN (steel manufacturer, Greece), CIMOLAI S.p.A. (steel manufacturer, Italy), MAURER (seismic isolation, Germany), SCL Italy.

**Racking industry:** SSI SCHAFFER (Germany), MODULBLOK, SACMA SPA (Italy), NEDCON (Netherlands), MECALUX, NOEGA Systems (Spain), STOW International (Belgium).

**PUBLICATION LIST****Journal publications (the first 5 articles: I am the corresponding / main /single author or without my PhD supervisor)**

1. Chierici M, Berto F, **Kanyilmaz A.** Resource-efficient joint fabrication by welding metal 3D-printed parts to conventional steel: A structural integrity study. *Fatigue Fract Eng Mater Struct.* 2021;1–21. <https://doi.org/10.1111/ffe.13428>
2. Couchaux M., Vyhlás V., **Kanyilmaz A.**, Hjiáj M., Passing-through I-beam-to-CHS column joints made by laser cutting technology: Experimental tests and design model, *Journal of Constructional Steel Research*, Volume 176, 2021, 106298, ISSN 0143-974X, <https://doi.org/10.1016/j.jcsr.2020.106298>.
3. **Kanyilmaz, A.**, Berto, F., Paoletti I., Caringal, R.J., Mora, S., Nature-inspired optimization of tubular joints for metal 3D printing, *Struct Multidisc Optim* (2020). <https://doi.org/10.1007/s00158-020-02729-7>, Springer Nature
4. Das R., **Kanyilmaz A.**, Couchaux M., Hoffmeister B., Degee H., Characterization of moment resisting I-beam to circular hollow section column connections resorting to passing-through plates, *Engineering Structures*, Volume 210, 2020, 110356, ISSN 0141-0296, <https://doi.org/10.1016/j.engstruct.2020.110356>.
5. **Kanyilmaz, A.**, The problematic nature of steel hollow section joint fabrication, and a remedy using laser cutting technology: A review of research, applications, opportunities, *Engineering Structures*, v. 183, 2019, p. 1027-1048, ISSN 0141-0296, <https://doi.org/10.1016/j.engstruct.2018.12.080> (Elsevier, IF 2.755, SJR 1.690)
6. Vamvatsikos D., Bakalis K., Kohrangi M., Pyrza S., Castiglioni C.A., **Kanyilmaz A.**, Morelli F., Stratan A., D' Aniello M., Calado L., Jorge Proença J.M., Degee H., Hoffmeister B., Pinkawa M., Thanopoulos P., Vayas I., A risk-consistent approach to determine EN1998 behaviour factors for lateral load resisting systems, *Soil Dynamics and Earthquake Engineering*, Volume 131, 2020, 106008, ISSN 0267-7261, <https://doi.org/10.1016/j.soildyn.2019.106008>.
7. **Kanyilmaz A.**, Berto, F., Robustness-oriented topology optimization for steel tubular joints mimicking bamboo structures. *Material Design & Processing Communications* 2019; 1:e43. © 2019 John Wiley & Sons, Ltd., <https://doi.org/10.1002/mdp2.43>.
8. **Kanyilmaz, A.**, Muhaxheri M., Castiglioni C.A., Influence of repairable bolted dissipative beam splices (structural fuses) on reducing the seismic vulnerability of steel-concrete composite frames, *Soil Dynamics and Earthquake Engineering*, Volume 119, 2019, Pages 281-298, ISSN 0267-7261, <https://doi.org/10.1016/j.soildyn.2019.01.007>.
9. **Kanyilmaz, A.**, Moderate ductility of the bracing joints with preloaded bolts (2018), *Bulletin of Earthquake Engineering*, vol. 16, p. 503-527, ISSN: 1570-761X, doi: 10.1007/s10518-017-0208-5 (Springer, IF 2.303, SJR 1.522)
10. **Kanyilmaz, A.**, Degee, H., Castiglioni C.A., An adjusted design approach for concentrically braced frames in low-to-moderate seismicity areas, *Bulletin of Earthquake Engineering* (Springer Nature), 16:4159, 2018, <https://doi.org/10.1007/s10518-018-0402-0>
11. Castiglioni C.A., Drei A., Mouzakis H., **Kanyilmaz, A.**, Earthquake-Induced pallet sliding in industrial racking systems, *Journal of Building Engineering* (Elsevier), Volume 19, 2018, Pages 122-133, <https://doi.org/10.1016/j.jobe.2018.05.004>.
12. **Kanyilmaz, A.**, Castiglioni C.A., Fabrication of laser cut I-beam-to-CHS-column steel joints with minimized welding, *Journal of Constructional Steel Research* (Elsevier), Volume 146, 2018, pages 16-32, ISSN 0143-974X, doi: 10.1016/j.jcsr.2018.02.039
13. Castiglioni C.A., Drei A., **Kanyilmaz, A.** (2018) Continuous Monitoring of Service Conditions of a Steel Storage Racking System. *Journal of Earthquake Engineering*, p. 1-21, ISSN: 1363-2469, doi: 10.1080/13632469.2018.1453402
14. **Kanyilmaz, A.**, A New Design Approach for Concentrically Braced Frames in Moderate Seismicity, PhD Thesis, Politecnico di Milano, 2017

15. **Kanyilmaz, A.**, Role of compression diagonals in concentrically braced frames in moderate seismicity: A full scale experimental study (2017) *Journal of Constructional Steel Research*, vol. 133, p. 1-18, ISSN: 0143-974X, doi: 10.1016/j.jcsr.2017.01.023 (Elsevier, IF 2.509, SJR 1.892)
16. **Kanyilmaz, A.** Secondary frame action in concentrically braced frames designed for moderate seismicity: a full scale experimental study (2017) *Bulletin of Earthquake Engineering*, vol. 15, p. 2101-2127, ISSN: 1570-761X, doi: 10.1007/s10518-016-0054-x (Springer, IF 2.303, SJR 1.522)
17. **Kanyilmaz, A.**, Castiglioni C.A., Reducing the seismic vulnerability of existing elevated silos by means of base isolation devices (2017), *Engineering Structures* (Elsevier), vol. 143, p. 477-497, ISSN: 0141-0296, doi: 10.1016/j.engstruct.2017.04.032
18. Valente, M., Castiglioni, C.A., **Kanyilmaz, A.**, Numerical investigations of repairable dissipative bolted fuses for earthquake resistant composite steel frames (2017) *Engineering Structures* (Elsevier), vol. 131, p. 275-292, ISSN: 0141-0296, doi: 10.1016/j.engstruct.2016.11.004
19. Valente, M., Castiglioni, C.A., **Kanyilmaz, A.**, Welded fuses for dissipative beam-to-column connections of composite steel frames: Numerical analyses (2017) *Journal of Constructional Steel Research* (Elsevier), vol. 128, p. 498-511, ISSN: 0143-974X, doi: 10.1016/j.jcsr.2016.09.003.
20. Gabbianelli, G., **Kanyilmaz, A.**, Bernuzzi, C., Castiglioni, C.A., A combined experimental- numerical study on unbraced pallet rack under pushover loads (2017) *Ingegneria Sismica*, vol. 34, p. 18-38, ISSN: 0393-1420.
21. Valente, M., Castiglioni, C.A., **Kanyilmaz, A.**, Dissipative devices for earthquake resistant composite steel structures: bolted versus welded solution (2016) *Bulletin of Earthquake Engineering*, vol. 14, p. 3613-3639, ISSN: 1570-761X, doi: 10.1007/s10518-016-0002-9.
22. **Kanyilmaz, A.**, Castiglioni, C.A., Brambilla, G., Chiarelli, G.P., Experimental assessment of the seismic behavior of unbraced steel storage pallet racks (2016) *Thin-Walled Structures* (Elsevier), vol. 108, p. 391-405, ISSN: 0263-8231, doi: 10.1016/j.tws.2016.09.001.
23. **Kanyilmaz, A.**, Brambilla G., Chiarelli G., Castiglioni C.A, Assessment of the seismic behavior of braced steel storage racking systems by mean of full scale push over tests (2016), *Thin- Walled Structures* (Elsevier), vol. 107, p. 138-155, ISSN: 0263-8231, doi: 10.1016/j.tws.2016.06.004
24. Castiglioni C.A., **Kanyilmaz, A.**, Chiarelli G.P., Brambilla G., The research activities at Politecnico di Milano on the Static and Seismic Behaviour of Steel Storage Racking Systems, *Costruzioni Metalliche*, XVIII, n.3 2016, pag 25-41
25. **Kanyilmaz, A.**, Validation of Fiber-Based Distributed Plasticity Approach for Steel Bracing Models, *Civil Engineering Journal* Vol.1, No.2, 2015, ISSN:2476-3055
26. Castiglioni, C.A., **Kanyilmaz, A.**, Simplified numerical modeling of elevated silos for non-linear dynamic analysis (2015) *Ingegneria Sismica*, 33 (1-2), pp. 5-14.
27. Castiglioni C.A., **Kanyilmaz, A.**, et al. The SEISRACKS2 EU-RFCS/Horizon 2020 Research Project Seismic Behaviour of Steel Storage Pallet Racking Systems, *Costruzioni Metalliche*, XVII, n.1, 2015, pp 37-48.
28. **Kanyilmaz, A.**, Castiglioni C.A., Chiarelli, G.P., Brambilla G., Modellazione numerica di silos e serbatoi in acciaio soggetti ad azioni sismiche, *Il Giornale dell'Ingegnere*, n.11, 2015, pp 8,10, Qine, Milano
29. Castiglioni C.A., **Kanyilmaz, A.**, Calado L., Prioena J.M., Hoffmeister B., Vayas I., Numerical and experimental results of the FUSEIS project Dissipative devices for seismic resistant frames, *Costruzioni Metalliche*, March-April 2014;
30. Castiglioni C.A., **Kanyilmaz, A.**, Calado L., Experimental analysis of seismic resistant composite steel frames with dissipative devices (2012), *Journal of Constructional Steel Research* (Elsevier), vol. 76, p. 1-12, ISSN: 1873-5983, doi: 10.1016/j.jcsr.2012.03.027

### Books and reports

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