Ali Irmak Ozdagli

Postdoctoral Research Fellow and Adjunct Professor

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Department of Civil Engineering

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1 University of New Mexico

Albuquerque, NM 87131

RESEARCH INTEREST

Earthquake Engineering, Structural Health Monitoring, Cyber-Physical Systems, Image Processing, Railroad Engineering

EDUCATION

Ph.D. Civil Engineering (Structural Engineering Program), Purdue University, May 2015. Advisor: Prof. S. J. Dyke. Dissertation: “Distributed Real-Time Hybrid Simulation: Modeling, Development and Experimental Validation”

M.S. Civil & Environmental Engineering & Earth Sciences (Structural Engineering Program), University of Notre Dame, July 2009. Advisor: Prof. Y. Kurama. Thesis: “Analytical Modeling of Diagonally Reinforced Concrete Coupling Beams under Lateral Loads”

B.S. Civil Engineering, Bogazici University (Istanbul, Turkey), June 2007. Senior Project: “Design of a Highway Bridge over E-5 at Istanbul, Turkey”

RESEARCH EXPERIENCE

Post-Doctoral Research Fellow, Smart Management of Infrastructure Laboratory (SMILAB), University of New Mexico (UNM), Albuquerque, NM (December 2015 – present)

- Developed a method to fuse accelerometer data with inclinometer data to estimate railroad transverse displacements with pseudo-static components due to asymmetric loading
- Designed, developed and tested a real-time hardware system to process sensor data in real-time for long-time structural health monitoring of railroad bridges
- Integrated Arduino based wireless low-cost sensing platform into infrastructure health monitoring
- Built and managed a structural health monitoring and wireless sensing laboratory for the first time at UNM
- Assisted in preparation of over four research and teaching proposals

Faculty Mentor, Nonlinear Mechanics and Dynamics Research Institute (NOMAD), Sandia National Laboratories, Albuquerque, NM (June 2016 – July 2016)

- Developed a full-scale FE model of a rail road bridge using ANSYS and performed dynamic nonlinear impact analysis simulating vehicle collision

- Utilized artificial neural networks to detect damage location at a railroad bridge upon impact
- Developed a damage rating method to score the impact intensity

Graduate Research Assistant, Intelligent Infrastructure Systems Laboratory (IISL), Bowen Laboratories, Purdue University, West Lafayette, IN (January 2010 – May 2015)

- Developed and validated a distributed Real-time Hybrid Simulation (dRTHS) platform to conduct full scale experiments utilizing Internet Protocol and User Datagram Protocol (IP/UDP) by comparing results to shake table responses of a large-scale steel structure (Funded by NSF-CMMI-0927178)
- Designed and validated a delay compensator that can determine and compensate the internet time delay on-the-fly
- Developed and validated an adaptive multi-rate interface that can couple physical and analytical substructures running at different sampling rates, increasing stability of dRTHS (Funded by NSF-CNS-1136075)
- Developed and validated a robust actuator controller based on H-inf
- Developed a streaming platform based on Open Source Data Turbine (OSDT) that is capable of running RTHS, and stream the experiment data to multiple clients (Funded by NSF-ACI-1148255)
- Developed a software in Python that monitors Transmission Control Protocol (TCP) ports of OSDT's, reports OSDT's uptime/health
- Developed and tested a preliminary RTHS platform capable of conducting structural health monitoring application (Funded by Purdue University-DEAL-2013)
- Conducted system identification experiments on a large-scale frame, developed a model to be used for control purposes of structures equipped with smart dampers (Funded by NSF-CMMI-1011534)
- Developed a MATLAB based program to detect impacts, parse time domain data, and convert the data to transfer function
- Developed and validated a new control-oriented model updating algorithm based on identified structural parameters

Engineer, Network for Earthquake Engineering Simulation Center (NEES), Purdue University, West Lafayette, IN (January 2013 – May 2015)

- Developed a remote testing platform capable of capturing video of seismically excited structures and processing images to measure displacements (Funded by NEES and Office of Vice Presidency-Purdue University)
- Developed a new project and curation structure for social science data publication

Visiting Scholar, Structural Engineering Laboratory, Department of Civil Engineering, Harbin Institute of Technology (HIT), Harbin, China (May 2012 – August 2012)

- Developed and validated an RTHS framework for the first time in HIT running on dSpace hardware (Funded by Purdue International Programs)

- Conducted shake table tests on a large-scale 3D structure, and implemented semi-active control strategies for magneto-rheological dampers (Funded by NSF of China-90715036)

Graduate Research Assistant, Department of Mechanical, Aerospace & Structural Engineering, Washington University at St. Louis, St. Louis, MO (Aug 2009 – December 2009)

- Studied the design and performance of linear quadratic regulator (LQR) based active and semi-active controllers (Funded by McDonnell International Scholars Academy Graduate Fellowship)

Graduate Research Assistant, Concrete Structures Laboratory, University of Notre Dame, Notre Dame, IN (July 2007 – July 2009)

- Developed a recipe for modeling diagonally reinforced coupling beams using DRAIN-2DX and OpenSees (Funded by Notre Dame Graduate Scholarship Award)
- Validated the modeling recipe by comparing the results to experimental coupling beam and coupled wall tests

Undergraduate Research Assistant, Concrete Structures Laboratory, Bogazici University, Istanbul, Turkey (September 2006 – June 2007)

- Assisted graduate students in the surface preparation of damaged brick infilled wall specimens for Fiber Reinforced Polymer (FRP) retrofit

TEACHING EXPERIENCE

Adjunct Professor, CE202 - Engineering Statics, University of New Mexico (Spring 2017 – Two Sections)

Adjunct Professor, **CE202 - Engineering Statics,** University of New Mexico (Fall 2016)

Instructor, **Shake It Up in Engineering: Shake Table, Sensing Technology & Website Creation,** University of New Mexico (Spring 2016)

- Developed a 5-week long curriculum for underrepresented undergraduate students focusing on sensing technologies, shake table experimentation and dissemination of the experimental data by creating personal website using WordPress
- Delivered one-hour lecture each week

Lecturer, CE521 - Structural Dynamics & Earthquake Engineering, Asst. Prof. F. Moreu, University of New Mexico (Spring 2016)

- Delivered substitute lectures, answered students' questions

Teaching Assistant, CE466 - Advanced Design of Concrete Structures, Prof. T. Harmon, Washington University at St. Louis (Fall 2009)

- Performed office hours and problem-solving sessions

Teaching Assistant, **CE30160 Materials Laboratory,** Asst. Prof. Elizabeth Kerr, University of Notre Dame (Spring 2009)

- Managed lab sessions, guided students to become familiar with lab equipment, data acquisition, and experimental setup
- Designed and prepared test setup and conducted weekly material testing on universal testing machine
- Graded laboratory reports

Teaching Assistant, CE40270 - **Reinforced Concrete Design,** Prof. Y. Kurama, University of Notre Dame (Spring 2008 and Fall 2008)

- Delivered substitute lectures, answered students' questions
- Performed office hours and problem-solving sessions, created and graded homework

Teaching Assistant, CE30200 - Structural Analysis I, Prof. Ahsan Kareem, University of Notre Dame (Fall 2007)

- Delivered substitute lectures, answered students' questions
- Performed office hours and problem-solving sessions, created and graded homework

Teaching Assistant, **CE451.02 - Concrete Structure Laboratory,** Prof. Cengiz Karakoc, Bogazici University (Fall 2006)

- Managed laboratory sessions
- Prepared test setup and conducted beam experiments for all lab groups

Student Mentor, University of New Mexico (December 2015 – present)

Graduates

- Jose A. Gomez Romero-Salazar (Civil Engineering M.S.), Development of Arduino Based Displacement Estimation Platform, December 2015 – May 2017; Working at Heuristic Actions, Inc.
- Piyush Garg (Electrical Engineering M.S.), Estimation of Displacements using Laser Sensors an Unmanned Aerial Vehicles, May 2016 – present (expected graduation date December 2017)
- Travis Taylor (Electrical Engineering M.S.), Wireless Sensing of Spacecrafts with Arduino, August 2017 – present (expected graduation date May 2019)
- Xiaomeng Li (Civil Engineering Ph.D.), Wireless Sensing of Civil Infrastructure using XNode, June 2017 – present (expected graduation date May 2021)
- Shreya Vemuganti, Study on the Utilization of Strain Gages and Magnetic Strain Checkers, December 2015 – May 2017
- Rhytham Jayeshbhai Soni, Wireless Sensing based on Arduino, May 2017 – September 2017

Undergraduates

- Emmanuel Ayorinde, Manufacturing of breaker boxes for efficient field testing, sensor and cable management, August 2017 – present
- Laura Gomez, Integration of cyber-physical systems into education for infrastructure maintenance, June 2016 – August 2016
- Clayton Bliss, Study on Shunt Calibration of Strain Gages for Full Wheatstone Bridge Systems, June 2016 – August 2016; Admitted to Arizona State University

High School

- Clayton Bliss, Study on Shunt Calibration of Strain Gages for Full Wheatstone Bridge Systems, June 2016 – August 2016; Admitted to Arizona State University
- Erik Moreno, Tilt measurement using low-cost sensors; Integration of Solar Power to Arduino Platform; Sensor Breakout Box for LVDTs and accelerometers, May 2017– August 2017; Admitted to University of New Mexico

Student Mentor, Purdue University (September 2012 – September 2014)

Graduates

- Xin Li, Development and Deployment of a dRTHS System with two MR Damper Systems, September 2012 – September 2014

Undergraduates

- Sarah Hacker, Development of Virtual RTHS Sample Using xPC, January 2013 – August 2013
- Chris Beeler, Assessing Performance of a Three-story Structure using Arduino-based Wireless Sensors, June 2012 – August 2012
- Yili Qian, Assessing Performance of a Three-story Structure using Arduino-based Wireless Sensors, June 2012 – August 2012

INDUSTRY EXPERIENCE

Network for Earthquake Engineering Simulation Center (NEES), West Lafayette, IN
IT Support, January 2015 – September 2015

- Managed, controlled and curated research data of over +15 projects uploaded by PIs
- Checked the integrity of OracleDB daily, analyzed user statistics with advanced SQL/PL queries
- Created transition documents explaining backend Java/JEE workflow for the Natural Hazards Engineering Research Infrastructure (NHERI) team
- Conducted Quality Assurance for various web applications for internal operations
- Improved BatchsubmitGUI, a front end for Batchsubmit, a job submission tool to streamline OpenSees simulations for high-performance computing (HPC) systems

Arup – Istanbul Office, Istanbul, Turkey
Engineer Intern, June 2006 – August 2006

- Supervised soil survey on residential development area as field engineer

- Received training in structural analysis of space truss systems and nonlinear systems and training about ISO-9001 and ISO 14001

Yapı Teknik Proje (Construction Technique Project), Istanbul, Turkey
Engineer Intern, January 2006 – May 2006

- Prepared preliminary design of low importance structures in ideCAD
- Drafted reinforced design details in AutoCAD
- Received training in curved concrete shell systems

Anadolu Metro Ortaklığı (Anatolian Metro Partnership), Istanbul, Turkey
Engineer Intern, June 2005 – August 2005

- Supervised construction of Yenikapı Light Railway Transportation System Station
- Performed bill of materials calculations for batch steel and concrete orders

AWARDS AND HONOR SOCIETIES

Southern Plains Transportation Center Workshop Travel Grant, 2016
UNM STEM Collaborative Center, Instructor Honorarium, 2016
Purdue Graduate Student Government Discovery, Engagement, and Learning Grant, 2013
Best Simulation Model of the 2013 NEES Simulation Competition, QuakeSummit, 2013
McDonnell International Scholars Academy Graduate Fellowship, WashU Engineering, 2009
PCA Education Foundation Fellowship Award, University of Notre Dame, 2009
Notre Dame Graduate Scholarship Award, 2007
Notre Dame Professional Development Fund, 2007
Tuition scholarship, Minister of Education of Turkey, 2005-2007

REFEREED JOURNAL PUBLICATIONS

1. **A. I. Ozdagli,** B. Liu, and F. Moreu. “Low-cost, Efficient Wireless Intelligent Sensors (LEWIS) Measuring Real-time Reference-free Dynamic Displacements” (submitted to Mechanical Systems and Signal Processing).
2. **A. I. Ozdagli** and S. J. Dyke. “Experimental Verification of an Accessible Geographically-Distributed Real-time Hybrid Simulation Platform” (submitted to Smart Structures and Systems).
3. **A. I. Ozdagli**, B. Liu, and F. Moreu. “Measuring Total Displacements of Timber Railroad Bridges Susceptible to Asymmetric Loading” (submitted to Journal of Structural Engineering; accepted with review).
4. B. Liu, **A. I. Ozdagli**, and F. Moreu. “Hybrid reference-free displacements measurement: data fusing from accelerometers and direct displacement sensors” (submitted to Journal of Bridge Engineering).
5. B. Liu, **A. I. Ozdagli,** and F. Moreu. “Direct reference-free measurement of displacements for railroad bridge management” (submitted to Structural Control and Health Monitoring; accepted with reviews).

6. **A. I. Ozdagli**, J. A. Gomez, and F. Moreu. “Total Reference-Free Displacements for Condition Assessment of Timber Railroad Bridges Using Tilt” (submitted to Smart Structures and Systems for final review; accepted with reviews).
7. **A. I. Ozdagli**, J. A. Gomez, and F. Moreu. “Real-time Model-free and Reference-free Displacements of Railroad Bridges”, Journal of Bridge Engineering, 22, no. 10 (2017): 04017073.
8. J. A. Gomez, **A. I. Ozdagli,** and F. Moreu. “Reference-Free Dynamic Displacements of Railroad Bridges Using Low-Cost Sensors”, Journal of Intelligent Material Systems and Structures, p.1045389X17721375.
9. S. J. Dyke, T. Hacker, **A. I. Ozdagli**, G. Marshall, C. Thompson, B. Rohler, and C. M. Yeum. “A Researcher-oriented Automated Data Ingestion Tool for Real-time Data Processing, Visualization and Preservation”, Advances in Engineering Software, https://doi.org/10.1016/j.advengsoft.2017.06.019.
10. X. Li, **A. I. Ozdagli**, S. J. Dyke, R. Christenson and B. Wu (2016). “Development and Verification of Distributed Real-Time Hybrid Simulation Methods”, Journal of Computing in Civil Engineering, doi: 10.1061/(ASCE)CP.1943-5487.0000654
11. A. Maghareh, J. Waldbjoern, S. J. Dyke, A. Prakash, and **A. I. Ozdagli** (2016). “Adaptive Multi-Rate Interface: Development and Experimental Verification for Real-Time Hybrid Simulation”, Earthquake Engineering and Structural Dynamics, doi: 10.1002/eqe.2713.
12. G. Ou, **A. I. Ozdagli**, S. J. Dyke, and Bin Wu (2014), “Robust Integrated Actuator Control Algorithm and Implementation for Real-Time Hybrid Simulation”, Earthquake Engineering & Structural Dynamics, 44, 441–460.
13. A. Friedman, S. J. Dyke, B. M. Phillips, R. Ahn, B. Dong, Y. Chae, N. Castaneda, Z. Jiang, J. Zhang, Y. Cha, and **A. I. Ozdagli**, B. F. Spencer, J. Ricles, R. Christenson, A. Agrawal, R. Sause (2013). “Large-Scale Real-Time Hybrid Simulation for Evaluation of Advanced Damping System Performance”, Journal of Structural Engineering, 10.1061/(ASCE)ST.1943-541X.0001093, 04014150.
14. P. Garg, **A. I. Ozdagli**, S. Vemuganti, and F. Moreu. “Reference-free Non-Contact Dynamic Displacement Measurement of Railroad Bridges using Laser Doppler Vibrometer” (to be submitted to Sensors in October 2017).
15. **A. I. Ozdagli**, and F. Moreu. “Impact Rating System for Vehicle - Railroad Bridge Collision” (to be submitted to International Journal of Impact Engineering in November 2017).
16. **A. I. Ozdagli**, and F. Moreu. “Feasibility of Time-of-flight Cameras in Measuring Railroad Bridge Displacements” (to be submitted to Journal of Bridge Engineering in December 2017).
17. **A. I. Ozdagli** and S. J. Dyke, “Hybrid Simulation - Oriented System Identification and Model Updating Using ERA” (to be submitted in January 2018).

REPORTS

1. **A. I. Ozdagli**, W. Xi, G. Ou, S. J. Dyke, J. Zhang, B. Wu (2014). "Verification of Real-Time Hybrid Simulation with Shake Table Tests for a Three Story Structure Equipped with MR Damper – IISL Technical Report 006", https://nees.org/resources/12822

PUBLICATIONS IN CONFERENCE PROCEEDINGS

1. **A. I. Ozdagli,** B. Liu, and F. Moreu (2018). "Real-time Low-cost Wireless Reference-free Displacement Sensing of Railroad Bridges", IMAC XXXVI, Orlando, FL.
2. B. Liu, **A. I. Ozdagli,** and F. Moreu (2018). "Direct reference-free dynamic deflection measurement of railroad bridge under service load", IMAC XXXVI, Orlando, FL.
3. B. Liu, **A. I. Ozdagli,** and F. Moreu (2017). "Cost-effective Monitoring of Railroad Bridge Performance", ASME SMASIS 2017, Snowbird, UT.
4. **A. I. Ozdagli,** B. Liu, and F. Moreu (2017). "Measuring Lateral Displacements of Railroad Bridges susceptible to Asymmetric Loading", 3rd Huixian International Forum on Earthquake Engineering for Young Researchers, University of Illinois, Urbana-Champaign.
5. B. Liu, **A. I. Ozdagli,** and F. Moreu (2017). "Measurement of Direct Reference-free Dynamic Displacements of Railroad Bridges under Train-crossing and Ground Motion Excitations", 3rd Huixian International Forum on Earthquake Engineering for Young Researchers, University of Illinois, Urbana-Champaign.
6. F. Moreu, B. Liu, and **A. I. Ozdagli** (2017). "Observation and monitoring of total reference-free displacements", 3rd Huixian International Forum on Earthquake Engineering for Young Researchers, University of Illinois, Urbana-Champaign.
7. **A. I. Ozdagli**, S. Vemuganti and F. Moreu (2017). "Impact Rating of Semi-trailer Truck – Railway Through Plate Girder (TPG) Bridge Collisions", AREMA2017, Indianapolis, IN.
8. S. Vemuganti, **A. I. Ozdagli**, F. Moreu (2017). "Survey Bottom Surface Abrasion of Concrete Crossties", TRB 96th Annual Meeting.
9. S. Vemuganti, F. Moreu, **A. I. Ozdagli**, A. Bajrić, B. Liu, K. Troyer, M. R. Brake, and D. Otter (2017). "Sensing and Rating of Vehicle - Railroad Bridge Collision", Structural Dynamics Challenges in Next Generation Aerospace Systems, IMAC XXXV, Garden Grove, CA
10. P. Garg, **A. I. Ozdagli**, A., and F. Moreu. (2017). "Optimal Bridge Displacement Controlled by Train Speed on Real-Time", IMAC XXXV Garden Grove, CA
11. P. Garg, J. A. Gomez, **A. I. Ozdagli**, and F. Moreu. (2017). "Real-time Displacements of Railroad Bridges under Train Crossing Events Using Non-Contact, Reference-free Vibrometers", ASCE Structures Congress 2017, Denver, CO
12. J. A. Gomez, **A. I. Ozdagli**, and F. Moreu (2016). "Evaluation of Low-Cost Wireless Sensors for Real-Time Estimation of Reference-free Displacements Under Dynamic Loading of Railroad Bridges", ASME 2016 Conference on Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS), Stowe, VT
13. P. Garg, J. A. Gomez, **A. I. Ozdagli**, and F. Moreu (2016). "Non-Contact, Reference-Free Measurement of Bridge Displacement Using Vibrometer", 2nd Huixian

International Forum on Earthquake Engineering for Young Researchers, Beijing, China

14. **A. I. Ozdagli**, F. Moreu, S. Vemuganti, J. A. Gomez and P. Garg (2016). “Data Fusion of Accelerometers with Inclinometers for Reference-free High Fidelity Displacement Estimation”, 8th European Workshop on Structural Health Monitoring, Bilbao, Spain
15. **A. I. Ozdagli** and S. J. Dyke (2015). “Development and Evaluation of a Geographically Distributed Real-Time Hybrid Simulation Platform”, AESE/ANCRiSST 2015, Urbana, IL
16. G. Ou, **A. I. Ozdagli**, S. J. Dyke and A. Prakash (2015). “Novel RTHS with Concurrent Model Updating on a Distributed Platform”, AESE/ANCRiSST 2015, Urbana, IL
17. A. Maghareh, J. Waldbjoern, S. J. Dyke, A. Prakash, **A. I. Ozdagli** (2015). “Adaptive Multi-Rate Interface: Development and Experimental Verification for Real-Time Hybrid Simulation”, AESE/ANCRiSST 2015, Urbana, IL
18. X. Li, S. J. Dyke, **A. I. Ozdagli**, R. Christenson, X. Lu (2015). “Multi-Site Real-Time Hybrid Simulation Framework for Advanced Earthquake Engineering Experiment”, International Symposium on Innovation and Sustainability of Structure in Civil Engineering (ISISS-2015), Beijing, China
19. A. Maghareh, **A. I. Ozdagli** and S. J. Dyke (2014). “Modeling and Implementation of Distributed Real-Time Hybrid Simulation”, 10th US National Conference on Earthquake Engineering. Anchorage, Alaska
20. **A. I. Ozdagli**, W. Xi, Y. Ding, S. J. Dyke, J. Zhang and B. Wu (2012). “Verification of Real-Time Hybrid Simulation with Shake Table Tests: Phase 2 – Development of Control Algorithms”, 15th World Conference on Earthquake Engineering, Lisbon, Portugal
21. J. Zhang, W. Xi, S. J. Dyke, **A. I. Ozdagli** and B. Wu (2012). “Seismic Protection Design of Nonlinear Structures Using Hybrid Simulation”, 15th World Conference on Earthquake Engineering, Lisbon, Portugal
22. **A. I. Ozdagli**, W. Xi, Y. Ding, S. J. Dyke, J. Zhang and B. Wu (2012). “Verification of Real-Time Hybrid Simulation with Shake Table Tests: Phase 1 – Modeling of Superstructure”, International Conference on Earthquake Engineering Research Challenges, Harbin, China

DATA PRODUCTS

1. **A. I. Ozdagli**, S. J. Dyke (2014). “Magneto-Rheological Damper Characterization Tests at Purdue”, NEES Dataset, DOI:10.4231/D30863622
2. **A. I. Ozdagli**, G. Ou, S. J. Dyke (2014). “Real-Time Hybrid Simulation Tests on Magneto-Rheological Damper at Purdue”, NEES, Dataset, DOI:10.4231/D3VH5CJ8J
3. **A. I. Ozdagli**, G. Ou, S. J. Dyke, J. Zhang, B. Wu (2014). “Real-Time Hybrid Simulation Tests on Magneto-Rheological Damper at HIT”, NEES, Dataset, DOI: 10.4231/D3319S30P
4. **A. I. Ozdagli**, W. Xi, B. Li, S. J. Dyke, B. Wu, J. Zhang, Y. Ding (2013). “Preliminary Hammer Test on 3DOF Structure after Structural Modification”, NEES, Dataset. DOI: 10.4231/D3R785N6W

5. **A. I. Ozdagli**, W. Xi, B. Li, G. Xu, S. J. Dyke, J. Zhang, B. Wu (2013). “Shake Table Test on 3DOF Structure”, NEES, Dataset. DOI: 10.4231/D3VQ2S97T
6. **A. I. Ozdagli**, W. Xi, B. Li, G. Xu, S. J. Dyke, J. Zhang, B. Wu (2013). “Magneto-Rheological Damper Characterization Tests at HIT”, NEES, Dataset. DOI: 10.4231/D35717N6S
7. **A. I. Ozdagli**, W. Xi, Bo Li, G. Xu, S. J. Dyke, J. Zhang, B. Wu (2013). “Actual Hammer Test on 3DOF Structure after Structural Modification”, NEES, Dataset. DOI: 10.4231/D3QZ22H32
8. **A. I. Ozdagli**, A. Friedman, R. Ahn, B. Dong, S. J. Dyke, J. Ricles, R. Sause (2013). “Dynamic System Identification on DBF - Rigid Links OFF - Ground Links ON - Loading Beams OFF”, NEES, Dataset, DOI:10.4231/D31J9770D
9. **A. I. Ozdagli**, A. Friedman, R. Ahn, B. Dong, S. J. Dyke, J. Ricles (2013). “System Identification on DBF - Rigid Links ON/OFF - Ground Links ON - Loading Beams ON - Actuator @ Floor 1”, NEES, Dataset, DOI:10.4231/D3WS8HK5D
10. **A. I. Ozdagli**, A. Friedman, R. Ahn, B. Dong, S. J. Dyke, J. Ricles (2013). “System Identification on DBF - Rigid Links ON/OFF - Ground Links ON - Loading Beams ON - Actuator @ Floor 2”, NEES, Dataset, DOI:10.4231/D3S46H549
11. **A. I. Ozdagli**, A. Friedman, R. Ahn, B. Dong, S. J. Dyke, J. Ricles (2013). “System Identification on DBF - Rigid Links ON/OFF - Ground Links ON - Loading Beams ON - Actuator @ Floor 3”, NEES, Dataset, DOI:10.4231/D3NC5SC05
12. **A. I. Ozdagli**, A. Friedman, R. Ahn, B. Dong, S. J. Dyke, J. Ricles, R. Sause (2013). “Dynamic System Identification on DBF - Rigid Links ON - Ground Links ON - Loading Beams OFF”, NEES, Dataset, DOI:10.4231/D3599Z13P

PAPERS AND POSTERS PRESENTED AT PROFESSIONAL MEETINGS WITHOUT PROCEEDINGS

1. **A. I. Ozdagli**, W. Xi, Y. Ding, S. J. Dyke, J. Zhang and B. Wu (2013). “Comparison of Shake Table Test with Real-Time Hybrid Simulations for a Large-Scale Structure”, Quake Summit 2013, Reno, Nevada
2. G. Ou, **A. I. Ozdagli**, S. J. Dyke and B. Wu (2013). “Application of Robust Integrated Actuator Control Strategy in RTHS”, Quake Summit 2013, Reno, Nevada
3. **A. I. Ozdagli**, W. Xi, G. Ou, B. Li, J. Zhang, G. Xu, B. Wu and S. Dyke (2013). “Verification of Real-Time Hybrid Simulation with Shake Table Tests”, Engineering Mechanics Institute Conference
4. A. Maghareh, **A. I. Ozdagli** (2013). “Modeling of Distributed Real-Time Hybrid Simulation – Poster”, https://nees.org/resources/6624

INVITED TECHNICAL SEMINARS AND WORKSHOPS

1. **A. I. Ozdagli** (2017). “Impact Rating of Semi-trailer Truck – Railway Through Plate Girder (TPG) Bridge Collisions”, Graduate Seminar, Department of Civil Engineering, University of New Mexico, Albuquerque, NM
2. 2017 The New Mexico EPSCoR Post Doc Leadership Workshop (funded by NSF - Experimental Program to Stimulate Competitive Research), New Mexico

3. **A. I. Ozdagli** (2016). “Integration of Wireless Structural Control into Curriculum through Arduino Microcontrollers”, Arduino Workshop for Transportation Engineering Educators and Symposium on Active Student Engagement in Civil and Transportation Engineering, Southern Plains Transportation Center – Louisiana Tech University, Ruston, LA
4. **A. I. Ozdagli** (2016). “From Testing to Simulation: What is Hybrid Simulation?”, Graduate Seminar, Department of Civil Engineering, University of New Mexico, Albuquerque, NM
5. P. Garg, S. Vermuganti, J. A. Gomez, **A. I. Ozdagli** and F. Moreu (2016). “Smart Management of Infrastructure Laboratory”, New Mexico Research Collaborative Development Council**,** Unmanned Aerial Vehicle Systems and Remote Sensing Workshop, Albuquerque, NM
6. G. Ou, S. J. Dyke, B. Wu, **A. I. Ozdagli** and B. Li (2013). “Robust Integrated Actuator Control Strategy for Real-Time Hybrid Simulation”, SERIES Concluding Workshop - Joint with US-NEES Earthquake Engineering Research Infrastructures, Ispra, Italy
7. **A. I. Ozdagli** (2013). “Verification of Hybrid Simulation”, 4th Workshop on China-USA Collaboration for Disaster Evolution/Resilience of Civil Infrastructure and Urban Environment, Reno, Nevada
8. **A. I. Ozdagli**, S. J. Dyke (2011). “Control-oriented System Identification of a Large Frame for RTHS”, Advanced in Real-Time Hybrid Simulation Workshop, Lehigh University, PA
9. Disaster Awareness Month, Hart Senate, Washington DC, 2011 (funded by NSF)
10. Annual AAAS Meeting 2010, San Diego (funded by NSF) - http://goo.gl/fJxCa
11. Dedication of Hall for Discovery and Learning Research, Purdue University, 2010 - http://goo.gl/lRecV

VIDEO PUBLICATIONS

1. F. Moreu, **A. I. Ozdagli**, S. Vemuganti (2016). “Shake it Up Engineering”, https://www.youtube.com/watch?v=xx-vhsqwsRo
2. S. J. Dyke, A. Friedman, T. Li, **A. I. Ozdagli** (2013). “Large-Scale Real-Time Hybrid Simulation for Validation of Advanced Damping Systems - Media”, https://nees.org/resources/6627

PATENT APPLICATION

1. F. Moreu and **A. I. Ozdagli**. “Wireless Low-cost Sensing of Railroad Bridges”, (patent pending)

PROFESSIONAL MEMBERSHIP AND SERVICE

Professional Society Memberships:

- Earthquake Engineering Research Institute (EERI)
- American Society of Civil Engineers (ASCE)
- Structural Engineering Institute (SEI)
- American Concrete Institute (ACI)

- American Institute of Steel Construction (AISC)

Technical Reviewer for:

- Journal of Earthquake Spectra
- Journal of Structural Engineering
- Journal of Natural Hazards and Earth System Sciences (on behalf of Prof. F. Moreu)
- Journal of Smart Structures and Systems (on behalf of Prof. S. J. Dyke)
- Journal of Smart Materials and Structures (on behalf of Prof. S. J. Dyke)
- Journal of Engineering Structures (on behalf of Prof. S. J. Dyke)

Service as:

- AREMA Committee 10: Structures Maintenance & Construction (Guest Participant, 2017)
- Session Co-Chair, 3rd Huixian International Forum on Earthquake Engineering for Young Researchers, University of Illinois, Urbana-Champaign
- Co-Founder and Advisor for EERI Student Chapter @ UNM, 2016
- Recorder and associate session leader for Hybrid Simulation Workshop, Quake Summit 2013
- Session Evaluator for Interdisciplinary Studies in Tsunami Impacts & Mitigation, University of Notre Dame, 2008
- Co-writer of CE News, Journal of Civil Engineering Department, Bogazici University, 2006

K-12 Service:

- Co-Organized for Summer Transportation Systems – Summer Transportation Institute, University of New Mexico, 2017
- Leading Organizer for Engineering Open House - Structural Dynamics Laboratory, University of New Mexico, 2016
- UNM STEAM-H (University of New Mexico – Science, Technology, Engineering, Art, Math, and Health) Career Exploration Extravaganza Weekend, 2016
- Each One Teach One College Bound Tutoring for K12 students, St. Louis, 2009
- Shakes and Quakes – EERI activities for South Bend Public Schools, South Bend, IN, 2007-2009

Languages:

- Turkish (native)
- German (Abitur and Goethe-Zertifikat C2: GDS Sprachdiplom)

ACADEMIC HIGHLIGHTS IN THE NEWS

- CE 202 Students Designed and Tested Their First Bridge - https://goo.gl/225D3Q
- UNM engineering students organize to think about earthquakes - http://goo.gl/3HZhZL
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