**Curriculum Vitae of Ece Erdogmus, PhD, PE**

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# I. Education

**PhD** Architectural Engineering–Structural Engineering, Penn State University 2004

**M.S.** Architectural Engineering–Structural Engineering, Penn State University, 2001

**B.Arch** Architecture (Technical), Middle East Technical University, Ankara, Turkey, 1999

# II. Appointments

07/21-Present **Chair and Professor**, School of Building Construction, Georgia Institute of Technology

07/21-Present **Adjunct Professor**, Durham School, UNL

08/13-07/21 **Durham School** **Associate Director for Architectural Engineering**, UNL (former title “Program Coordinator”)

04/17-Present **Professor of Architectural Engineering**, UNL

08/19-01/20 **Senior Researcher**, National Concrete Masonry Association, (*On faculty development leave from UNL*)

08/10-04/17 **Associate Professor of Architectural Engineering**, UNL

08/12-05/13 **Senior Structural Engineer**, Leo A. Daly Architecture/Engineering Company, Omaha (*On faculty development leave from UNL*)

08/04-08/10 **Assistant Professor of Architectural Engineering**, UNL

5/05-8/05 **Visiting Structural Engineer**, Leo A. Daly Architecture/Engineering Company, Omaha

07/99–08/04 **Research and Teaching Assistant and Weiss Fellow**, Pennsylvania State University

*\*Internship positions during undergraduate education are not listed, but available upon request.*

# III. Professional Registrations

Professional Engineer (CIVE/Structural), State of Virginia, No. 0402051604

# IV. Leadership Training

1. **Big Ten Academic Alliance Academic Leadership Program (ALP) Fellow: 2018-19**

Erdogmus was selected as one of the five ALP Fellows representing University of Nebraska in 2018-19.

The selected group met with all of the UNL administrators via monthly meetings on campus, and visited three other Big 10 universities to meet with the administrators, discuss challenges and opportunities facing Higher Education, and received training on academic leadership issues including but not limited to: budgets, fund-raising, diversity and inclusion, communications, enrollments, student success, and many others. More information on this national leadership training program can be found in:

<https://www.btaa.org/leadership/alp/introduction>

<https://executivevc.unl.edu/faculty/leadership-development/alp-fellows>

1. **UNL College of Engineering William E. Brooks Engineering Leadership Fellow (2014- 2018)**

Erdogmus was one of the four inaugural members for this leadership training program initiated by the Dean of College of Engineering. Erdogmus was selected based on her contributions to the college and her potential as an emerging leader at the University. The group met monthly under the leadership of the Associate Dean for Faculty Development to discuss challenges and opportunities in academic leadership roles, discussed related readings, and completed character/skill-set assessments.

# V. Leadership and Administrative Experience

1. **Associate Director for Architectural Engineering at UNL:**

Durham School of Architectural Engineering and Construction (DSAEC) at University of Nebraska includes three degree-granting programs: Architectural Engineering, Construction Management, and Construction Engineering. While the School administratively belongs to the Lincoln campus (University of Nebraska-Lincoln, or UNL), 2/3rd of the DSAEC is physically located in Omaha, due to the significant presence of related industry in the city. DSAEC is led by the Director, assisted by two academic Associate Directors (one each for AE and Construction) and an Associate Director of Operations. Since fall of 2013, I have been serving as the AE Program Coordinator, later titled Associate Director. In this role, along with *man*y other smaller tasks, I perform the following key duties, along with many smaller daily tasks:

* Chair all AE faculty meetings, ensure the effectiveness of the AE curriculum
* Chair AE Industry Advisory Board meetings (twice a year)
* Facilitate the course/instructor/TA assignments each semester
* Perform annual evaluations of all AE faculty
* Successfully led AE Program’s 2017 ABET accreditation and compiled the Program’s Self Study
* Organize and ensure the productivity of all AE committees
* Serve as the first point of contact for current and prospective AE students
* Conduct exit interviews with all AE graduates
* Lead or participate in all AE outreach and celebratory events
* Serve on the DSAEC Executive Council and participate in the policy development and key decisions for the entire School
* Represent the Nebraska AE program in the national Academic Council of AE Programs

Nebraska AE program is typically recognized as one of the top AE programs in the nation, and it is one of the very few that grants all degrees in AE (Bachelor’s, Master’s, and PhD). One of the ways the top tier status of the Nebraska AE program can be evidenced is by the many national awards and recognitions the AE program received recently (list available upon request).

1. **Chair of the Task Force on Diversity and Inclusion for College of Engineering**

In Spring 2019, I was asked by the Dean of the College of Engineering (CoE) to chair a task force on Diversity and Inclusion (D&I). In this effort, I led a team of 9 other individuals (six faculty representing the other 6 CoE units and three students) to: 1) research the state-of-the-art literature on D&I, 2) document the current stature of UNL-CoE with respect to peers and national data, and most importantly, 3) identify and recommend actionable initiatives to the Dean for improvements in this area. We finished and submitted this report in Spring 2020. *Please refer to my diversity statement for a further discussion on this topic*.

1. **Chief Editor- ASCE Journal of Architectural Engineering**

Journal of Architectural Engineering (JAE) is one of the main technical journals of the American Society of Civil Engineers (ASCE). I served as the Editor-in-Chief of this journal for over 8 years and my team significantly improved the quality and the reputation of the journal.

1. **Global Initiatives Coordinator**

Given my significant international research and education activities, I was appointed as the Durham School Global Initiatives Coordinator between 2011-2013. In this role, I developed policies for travel funding for Durham School students and led the awarding process, helped other faculty develop international programs, strengthened semester exchange programs with the Leed University in UK, among other achievements.

1. **Structures Option Faculty Leader**

Nebraska AE program has a very strong structures track, however, to avoid duplication of efforts all structural engineering courses are taught collaboratively with Civil Engineering (a separate department at Nebraska). As such, I have been, and still am, the only Structures Faculty affiliated solely with the Durham School. This meant that I had an important role with respect to the Structures-track curriculum, maintaining collaborations with CIVE, and most importantly, serving as the career adviser for all AE-Structures students. Given Nebraska-AE is accredited at the Master’s level, this was a significant task until recently, as all students had to produce a Master’s report and I served as the advisor of 47 of these students (See section IX-D) and chaired all of the MAE Structures final oral exam meetings.

1. **Other Miscellaneous Leadership Roles**
	1. **CANUS project leader:** Appointed as a senior researcher for the National Masonry Concrete Association (NAMC) during my faculty development leave in Fall of 2019, I was the USA-Team leader for the Project titled “*CANUS: Harmonization of Canadian and American Masonry Structures Design Standards Project”.* In this leadership role, I led the seven academic and industry professionals from USA as well as served the academic leader for the overall project including 7 other professionals from Canada. Outcomes of the project include 5 journal manuscripts in progress and a long research needs document that will turn into NAMC funding opportunities in the near future.
	2. **14NAMC Conference Chair:** My proposal is approved for chairing and hosting the 14th Northern American Masonry Conference in 2023 organized by the Masonry Society. The proposal effort showcased my leadership skills in bringing together academia and industry in a significant service role to a professional organization.It is also a testament to my professional reputation at the national level. This conference typically involves 250 participants from all over the world and is only held once every four years.
	3. **ARCHES Workshop Organizer and Chair:** I raised funding (ultimately funded by NCPPT and industry partners), organized, and chaired a three-day think-tank type international workshop in 2016 on “Assessment, Rehabilitation, and Conservation of Historical and Existing Structures (ARCHES).Based on the follow-up survey, all participants found the effort fruitful and workshop successful. Research and education needs in the area of Assessment and Rehabilitation of Historic Construction are identified.
	4. **US-Turkey Research Collaboration:** I have been serving as the International Research Program Leader that involves two academic institutions and two archeological sites in Turkey since 2005 (Antioch ad Cragum and Blaundos). Under this program international and interdisciplinary research program, twice funded by NSF, I brought numerous American students to Turkey.
	5. **Engineering in Italy faculty leader:** I have been leading a summer study abroad program available to all engineering majors since 2008.20-25 students participate in this program, which has recently been offered every other year. This is another program that showcases my managerial/organizational skills in a complex setting, resourcefulness, and most importantly, my commitment to the development of ***cultural intelligence[[1]](#footnote-1)*** of engineering students.

# VI. Honors and Awards

1. **National Awards/Honors**
2. **2019 Architectural Engineering Institute (AEI)- Architectural Engineering (AE) Outstanding Educator Award**

An honor given to one faculty per year nationally to celebrate outstanding achievement in Architectural Engineering education.

1. **2018 Rising Star in Structural Engineering: Civil + Structural Engineer magazine**

The Rising Stars in Structural Engineering program recognizes structural engineers 40 years old or younger working in the United States who have shown exceptional technical capability, leadership ability, effective teaching or research, and/or public service benefiting the structural engineering profession, their employers, project owners, and/or society.

1. **2013 Tau Beta Pi Honor Awarded**
2. **Teaching, Mentoring, and Service Awards**
3. 2018, UNL College Distinguished Teaching Award
4. 2018, COE Holling Family Master Teacher Award
5. 2014, College of Engineering Holling Family Distinguished Teaching/Advising/Mentoring Award.
6. 2013, College of Engineering Holling Family Distinguished Senior Faculty Teaching Award
7. 2011, UNL College of Engineering Faculty Service Award – Associate Professor Level
8. 2010, Architectural Engineering Mentoring Award, Architectural Engineering Student Leadership and Advisory Committee
9. 2008, Outstanding Contribution to Undergraduate Research, Awarded by the Office of Undergraduate Studies and UNL Undergraduate Creative and Research Activities (UCARE) Program, nomination by student: Mary Naughtin
10. 2007, Architectural Engineering Teaching Award, Architectural Engineering Student Leadership and Advisory Committee, In recognition of outstanding teaching of Architectural Engineering students
11. 2006, Henry Y. Kleinkauf Family Distinguished New Faculty Teaching Award, Henry Y. Kleinkauf Family, College of Engineering, Awarded for achievements in teaching.
12. 2004-2003, Outstanding Graduate Assistant Teaching Award, Pennsylvania State University, for outstanding teaching performance.
13. **Research Awards and Recognition**

* ASCE- AEI Award for the Best Paper of the 2013 Architectural Engineering Conference for the papers “Material Condition and Deterioration Assessment Program for a 3rd Century Roman Temple,” by Erdogmus, E., Freedland, J., Jording, A.\*, Kousgaard, A.\*, Buckley C.M.\* (2013).
* ASCE-AEI Award for the Best Journal Article in 2008 for the paper “Structural Appraisal of the Florentine Gothic Construction System,” by Erdogmus, E., Boothby, T.E.; published in *the Architectural Engineering Journal*, 2007, ASCE, 13(1), 9-17.
* ASCE-AEI award for Best Structural Paper Presented at the 2008 Architectural Engineering Conference for the paper“Use of Ground Penetrating Radar for Accurate Concrete Thickness Measurements,” Authors: Meyer, K.\*, Erdogmus, E., Morcous, G., Naughtin, M.1 (2008).

# VII. Publications

*\*Denotes students/research assistants under Erdogmus’ supervision.*

1. **Peer-reviewed Journal Articles In Print or Accepted**
2. Ehresman, R.\*, Taylor, N.\*, Pulatsu, B.\*, Erdogmus, E. (2021). “Discrete Rigid Block Analysis to Assess Settlement Induced Damage in Unreinforced Masonry Façades,” *Civil Eng 2021*, 2(3), 541-555, <https://doi.org/10.3390/civileng2030030>
3. Pulatsu, B.\*, Gonen, S., Erdogmus, E., Lourenço, P. B., Lemos’,J. V. and Prakash, R. (2021). “In-Plane Structural Performance of Dry-Joint Stone Masonry Walls: A Spatial and Non-Spatial Stochastic Discontinuum Analysis,” *Engineering Structures 242 (2021) 112620. DOI:* <https://doi.org/10.1016/j.engstruct.2021.112620>
4. Amiri, A.S.\*, Erdogmus, E., Richter-Egger, D. “A Comparison between Ultrasonic Guided Wave Leakage and Half-Cell Potential Methods in Detection of Corrosion in Reinforced Concrete Decks, *Signals 2(3), 413-433.* <https://doi.org/10.3390/signals2030026>
5. Gonen, S., Pulatsu, B.\*, Soyoz, S., Erdogmus, E. (2021) “Stochastic Discontinuum Analysis of Unreinforced Masonry Walls: Lateral Capacity and Performance Assessments,” *Engineering Structures*, 238 (2021) *112175,* <https://doi.org/10.1016/j.engstruct.2021.112175>
6. Sondag, T.\*, Erdogmus, E., Puckett, J. Forthcoming. “Evaluation of the Dynamic Behavior of Steel Staircases with Concrete Filled Pan Threads” *accepted for publication in the Journal of Architectural Engineering, ASCE.* DOI:[10.1061/(ASCE)AE.1943-5568.0000464](https://www.researchgate.net/deref/http%3A//dx.doi.org/10.1061/%28ASCE%29AE.1943-5568.0000464?_sg%5B0%5D=Hwf72xa84VyWAyOVZUNJpV-rfV17hFTvptsLd-iyhuzbhopv2SsfdWXDH8o1m8P5Q1tCCHhDGqag0bf8YfM8-FwBrA.lZlohVWqeYzCZ7T3YTpCeSvVJHmKmGddRwm4vAjji0xP3x-6MQy_vCyTrL5izPjeZsPF08FSTHgBJR1QEKygCA)
7. Gonen, S., Pulatsu, B.\*, Erdogmus, E., Karaesmen, Engin, and Karaesmen Erhan. (2021). “Quasi-Static Nonlinear Seismic Assessment of the 4th Century A.D. Roman Aqueduct in Istanbul, Turkey.” *Accepted for publication in the Heritage Journal.*
8. Pulatsu, B.\*, Gencer, F., Erdogmus, E. (2020). “Study of the Effect of Construction Techniques on the Seismic Capacity of Ancient Dry-Joint Masonry Towers through DEM,” *European Journal of Environmental and Civil Engineering.* DOI: [10.1080/19648189.2020.1824823](https://doi.org/10.1080/19648189.2020.1824823)
9. McCabe, T.\*, Erdogmus, E., Kodsy, A., and Morcous, G., (2021). “Early Detection of Honeycomb in Concrete Pavements Using GPR,” *ASCE Journal of Performance of Constructed Facilities,* Volume 35, Issue 1, February 2021. ASCE. DOI: 10.1061/(ASCE)CF.1943-5509.0001547
10. Pulatsu, B.; Gonen, S.; Erdogmus, E.; Lourenço, P.B.; Lemos, J.V.; Hazzard, J. “Tensile Fracture Mechanism of Masonry Wallettes Parallel to Bed Joints: A Stochastic Discontinuum Analysis.” *Modelling* **2020**, *1*, 78-93.
11. Atar, T.\*, McCabe, T.\*, Pulatsu, B.\*, Erdogmus, E. “Dynamic analysis of Semi-Circular Masonry Arches: Small-Scale Experiment and Discrete Element Modeling,” WSEAS Transactions on Computers, ISSN / E-ISSN: 1109-2750 / 2224-2872, Volume 19, 2020, Art. #19, pp. 137-142. DOI: 10.37394/23205.2020.19.19
12. Erdogmus, E., Garcia, E., Schuller, M., Amiri, S.A. (2020). “A Novel Structural Health Monitoring Method for Reinforced Concrete Bridge Decks Using Ultrasonic Guided Waves,” *Infrastructures 2020, 5, 49.*
13. Pulatsu, B.\* Erdogmus, E., Lourenco, P.B., Lemos, J.V., Tuncay, K. (2020). “Simulation of the In-Plane Structural Behavior of Unreinforced Masonry Walls and Buildings using DEM,” *Structures*,  Volume 27, October 2020, pp: 2274-2287, DOI: [10.1016/j.istruc.2020.08.026](https://www.researchgate.net/deref/http%3A//dx.doi.org/10.1016/j.istruc.2020.08.026?_sg%5B0%5D=zxRKvuOKzijby9OYioVYOyfIyezrxPQOYyHATHnKW9hDN4r4QgiCfAw-h_THFvpaBxFJ1QdkMOQX9bQ_oeEWeA4Log.CpCFA42VLSxxxjZn1i6_TyTtzQAfImI7K77rnU5bJX1flC0xPFoMnXEKq3fPT4xsEQXUGweh2W7-4gUqthbWEg)
14. Pulatsu, B.\*, Erdogmus, E., Lourenço, P.B., Lemos, J.V., Tuncay, K.(2020). “Numerical Modeling of the Tension Stiffening in Reinforced Concrete Members via discontinuum models,” *Comp. Part. Mech.* (2020). https://doi.org/10.1007/s40571-020-00342-5
15. Erdogmus, E., Pulatsu, B.\*, Gaggioli, A. and Hoff, M. (2020). “Reverse engineering a fully collapsed ancient temple through geoarchaeology and DEM” *International Journal of Architectural Heritage*, 1:21, 2020.DOI: 10.1080/15583058.2020.1728593
16. Pulatsu, B.\*, Kim, S., Erdogmus, E. and Lourenço, P.B. (2020). “Advanced analysis of masonry retaining walls using mixed discrete-continuum approach” *Geotechnical Engineering*, 1:34, 2020.DOI: 10.1680/jgeen.19.00225
17. Pulatsu, B.\*, Erdogmus, E., Lourenço, P.B., Lemos, J.V., and Hazzard J. (2020). “Discontinuum analysis of the fracture mechanism in masonry prisms and wallettes via discrete element method” *Meccanica*, 55 (3), 505-523. 2020. DOI: 10.1007/s11012-020-01133-1
18. Pulatsu, B.\*, Erdogmus, E., and Lourenço, P. B., Quey, R. (2019). “Simulation of Uniaxial Tensile Tensile Behavior of Quasi-Brittle Materials Using Softening Contact Models in DEM”. *International Journal of Fracture (FRAC), 217.1-2 (2019):105-125.* <https://doi.org/10.1007/s10704-019-00373-x>
19. Erdogmus, E; Skourup, B; Garcia, E\*; Matta, F. (2019). “Tornado Resistant Residential Design Using Experimentally Obtained Characteristic Values for Cement Stabilized Earthen Masonry”, *Journal of Architectural Engineering, 25 (2), (Published as part of the Special Collection on Residential Construction, Guest Editor: Ali Memari),* DOI: 10.1061/(ASCE)AE.1943-5568.0000342
20. Pulatsu, B.\*, Erdogmus, E., and Lourenço, P. B. (2019). “Comparison of in-plane and out-of-plane failure modes of masonry arch bridges using discontinuum analysis.” *Engineering Structures*, 178(2019), 24–36.
21. Garcia, E.\*, Erdogmus, E; Schuller, M., Harvey, D. (2019). “Detecting the Onset of Different Types of Flaws in Reinforced Concrete, *ACI Materials Journal*, 116 (1), January 2019, DOI: DOI: 10.14359/51710962
22. Pulatsu, B.\*, Erdogmus, E., Bretas, E. (2018). “Parametric Study on Masonry Arches Using 2D Discrete Element Modeling,” *Journal of Architectural Engineering*, 24(2), 2018. DOI: 10.1061/(ASCE)AE.1943-5568.0000305, *(Published as part of the ARCHES Special Collection, Guest Editor: Carlo Citto).*
23. Garcia, E.\*; Erdogmus, E.; Schuller, M; Harvey, D (2017). *“*A Novel Method for the Detection of Onset of Delamination in Reinforced Concrete Bridge Decks*,” ASCE Journal of Performance of Constructed Facilities, 31 (6),* DOI: 10.1061/(ASCE)CF.1943-5509.0001093.
24. Kousgaard, A.\* and Erdogmus, E, (2016). “A Review of Reconstruction Methods and Materials for Ancient Structures,” *The Masonry Society Journal*, *Vol 34, No 1, December 2016,* The Masonry Society.
25. DeGagné, B\*; Erdogmus, E; Savage, J. (2016). “Longitudinal Bar Spacing and Intermediate Ties: A Review of the development of ACI 318 provisions for column reinforcement,” *Concrete International, An international Journal by American Concrete Institute (ACI), Volume 38, Issue 5, 43-46, April 2016.*
26. Colley, E\*; Erdogmus, E (2015). “Effects of cement stabilization and fibers on the water resistance of compressed stabilized earth blocks”, *The Masonry Society Journal, Vol 33, No. 1, December 2015*, The Masonry Society.
27. Erdogmus, E. (2015). “Use of Fiber-Reinforced Cements in Masonry Construction and Structural Rehabilitation,” Fibers Journal, 2015, 3, 41-63; doi:10.3390/fib3010041, \*(Invited Feature Paper).
28. Sorensen, A.\* & Erdogmus, E. (2013) “Horizontal Support Displacement of a Thin-Tile Masonry Dome: Experiments and Analysis”, Published Online Ahead of Print, ASCE Journal of Performance of Constructed Facilities, [http://dx.doi.org/10.1061/(ASCE)CF.1943-5509.0000495](http://dx.doi.org/10.1061/%28ASCE%29CF.1943-5509.0000495).
29. Erdogmus, E.; Shen, Z.; Schaap, B. (2013). “Review of BIM in Small-Scale Sustainable Design by Francois Levy.” Book Review Article, *ASCE Journal of Architectural Engineering*, Vol. 19, No. 3, pp. 217-218.
30. Sorensen, A.\* and Erdogmus, E. (2011). “Study of Tile Layer Contribution of a Thin-Tile Masonry Dome”, *The Masonry Society Journal*, Vol. 29, No. 1, December 2011, pp.63-74.
31. Armwood, C.K.\*, Erdogmus, E. and Haider, H. (2011). “Effect of Fibers on the Flexural Strength of Masonry Mortars,” *The Masonry Society Journal*, Vol. 29, No. 1, December 2011, pp. 19-32.
32. Radik, M\*, Erdogmus, E., Schafer, T\*\*. (2011). “Strengthening of Two-way reinforced concrete floor slabs using polypropylene fiber reinforcement,” ASCE Journal of Materials in Civil Engineering, Volume 23, Number 5, pp. 562-571, May 2011.
33. Morcous, G., and Erdogmus, E. (2010). “Accuracy of Ground-Penetrating Radar for Concrete Pavement Thickness Measurement,” *ASCE Journal of Performance of Constructed Facilities*, ASCE, 24 (6), November/December 2010.
34. Skourup, B.N.\*, and Erdogmus, E. (2010). “Mechanical Characteristics of PVA Fiber-Reinforced PCL Mortars for Masonry Applications” *ACI Materials Journal*, Vol. 107, January- February 2010, No. 1., pp 1- 9, ACI publications.
35. Erdogmus, E., Skourup, B. N.\*, Tadros, M. K. (2010). “Recommendations for design of Reinforced Concrete Pipe,” *ASCE Journal of Pipeline Systems and Engineering, Inaugural Issue*, Vol. 1., No. 1, pp. 25-32. February 2010.
36. Maximos, H.\*, Erdogmus, E., Tadros, M. K (2010). “Fatigue Evaluation of Reinforced Concrete Box Culverts, *ACI Structural Journal*, Vol. 107 No. 01, pp. 13-20, January-February 2010.
37. Sorensen, A.\* and Erdogmus, E. (2010). “Study of System-Component Interactions in a Thin-Tile Masonry Dome,” *the Masonry Society Journal,* V.28, No 1, January 2010, pp. 53-67.
38. Erdogmus, E. (2008). “Timbrel domes of Guastavino: Nondestructive Assessments on a Half-Scale Model,” International Journal of Architectural Heritage, 2(4), 330-352, Taylor and Francis Group, LLC, Philadelphia, PA.
39. Erdogmus, E., Boothby, T.E. (2007) “Structural Appraisal of the Florentine Gothic Construction System,” the Architectural Engineering Journal, ASCE, 13(1), 9-17. (Awarded best AEI Journal article in 2008).
40. Boothby, T. E., Yurianto, Y., Erdogmus, E. (2005), “Experimental Replication of Masonry Arch Bridge Spandrel Wall Collapse, *The Masonry Society Journal*,” 23(1).
41. Erdogmus, E. and Boothby, T.E. (2004) “Strength of Spandrel Walls in Masonry Arch Bridges,” *Transportation Record: Journal of the Transportation Research Board*, No. 1892, 47-55. Transportation Research Board of the National Academies, Washington, D.C.
42. **Peer-reviewed Journal Articles Submitted and Under Review**
43. Hall, E.\*, Pulatsu, B.\*, Erdogmus, E., and Skourup, B. (2021). “Compression, Tension, and Fracture Energy Properties of Compressed Cement- Stabilized Earth Blocks,” *Submitted to Journal of Architectural Engineering, ASCE.*
44. Pulatsu, B. Erdogmus, E., Lourenco, P.B., Lemos, J.V., Tuncay, K. “Simulation of the In-Plane Structural Behavior of Unreinforced Masonry Walls and Buildings using DEM,” Submitted to *Journal of Building Engineering.*
45. **Peer-reviewed Conference Articles In-Print or Accepted**
46. Erdogmus E.; Ryherd, E.; Diefes-Dux, H.; Armwood-Gordon, C. (2021). “Use of Virtual Reality to Improve Engagement and Self-Efficacy in Architectural Engineering Disciplines,*’ Proceedings of the Frontiers in Education (FIE 2021)* Conference, October 13-16, 2021
47. Erdogmus, E., Turan, M., Freedland, J., Gaggioli, A, Hoff, M. (2021). *“*Characterization of Historic Mortar Samples for Period Analysis and Determination of Intervention Mortars: A Case Study,” accepted *to be published in the proceedings of* *SAHC 2020 International Conference on Structural Analysis of Historical Constructions, Barcelona, September, 2021 (This paper is fully accepted already and the conference was initially scheduled for September 2020 but postponed a year to 2021 due to COVID-19).*
48. Erdogmus, E.; Dutrisac, H.; Thompson, J.; and Banting, B. (2021). “Comparison of Selected CSA S304-14 and TMS 402-16 Reinforced Masonry Design Provisions and Material Properties.” *Proc., 14th Canadian Masonry Symposium,* Montreal, QC, Canada*.*
49. Erdogmus, E.; Cruz-Noguez, C.; Ledent, P.; Jobe, L.; Hughes, K.; Banting, B.; and Thompson, J. (2021). “Parametric Studies on Reinforced Masonry Shear Walls Resisting In-Plane Loads: A Comparison of CSA S304-14 and TMS 402-16.” *Proc., 14th Canadian Masonry Symposium,* Montreal, QC, Canada*.*
50. Sustersic, H.; Stubbs, D.; Peterson, R.; Bennett, R.; Pettit, C.; Flisak, B.; Erdogmus, E.; Thompson, J.; Banting, B.; and Cruz-Noguez, C. (2021). “Parametric Studies on Reinforced Masonry Walls Resisting Out-of-Plane Loads: A Comparison of CSA S304-14 and TMS 402-16.”*Proc., 14th Canadian Masonry Symposium,* Montreal, QC, Canada*.*
51. Erdogmus, E.; Bennett, R.; Thompson, J.; and Banting, B. (2021). “Parametric Studies on Reinforced Masonry Beams: A Comparison of CSA S304-14 and TMS 402-16.” *Proc., 14th Canadian Masonry Symposium,* Montreal, QC, Canada.
52. Banting, B., Thompson, J., Dutrisac, H.; Ledent, P.; Hughes, K.; Flisak, B.; and Erdogmus, E. (2021). “Design Examples Demonstrating the Differences Between CSA S304-14 Limit States and TMS 402-16 Strength Design Provisions,” *Proc., 14th Canadian Masonry Symposium,* Montreal, QC, Canada.
53. Erdogmus, E., Pulatsu, B.\*, Can, B., Ozkan, K. (2019). “Analysis of the Last Standing Arch of the Roman Aqueduct at Blaundos,” *Proceedings of the 13th North American Masonry Conference, June 2019, Salt Lake City, Utah.*
54. Erdogmus, E., Freedland, J., Schuller, M., Turan, M., Townsend, R., Hoff, M. (2019). “Preventive Conservation Efforts and A Preliminary Preservation Management Plan for the Roman Temple at Antioch ad Cragum,” *Proceedings of the 13th North American Masonry Conference, June 2019, Salt Lake City, Utah.*
55. Pulatsu, B.\*, Erdogmus, E., Christiansen, J.\*, Townsend, R., Butler, M.\* (2019). “Discrete Element Analysis of the Seismic Behavior of an Ancient Roman Temple Façade,” *Proceedings of the 13th North American Masonry Conference, June 2019, Salt Lake City, Utah.*
56. Pulatsu, B.\*, Erdogmus, E., Lourenco,P.B. (2019). “Influence of soil-backfill depth on the strength and behavior of masonry arch bridges in the transverse direction,” *Proceedings of the 13th North American Masonry Conference, June 2019, Salt Lake City, Utah.*
57. Erdogmus, E. (2019). “Increased Global Awareness in Architectural Engineering Students through International Research Experiences” *Proceedings of the Architectural Engineering Institute (AEI) 2019 Conference,* Tysons, VA., April 3-6, 2019. ISBN (PDF): 9780784482261, https://ascelibrary.org/doi/book/10.1061/9780784482261
58. Pulatsu, B.\*, Erdogmus, E., Bretas, E.M. Lourenco, P.B. (2019). “In-Plane Static Response of Dry-Joint Masonry Arch-Pier Structures,” *Proceedings of the Architectural Engineering Institute (AEI) 2019 Conference,* Tysons, VA., April 3-6, 2019. ISBN (PDF): 9780784482261, https://ascelibrary.org/doi/book/10.1061/9780784482261
59. Raebel, C.H., Hasler, F., Erdogmus, E., Parfitt, K. (2019). “State of the Art of Architectural Engineering Education as a Contribution to the Foundation for the National Agenda: A Snapshot of Four Programs,” *Proceedings of the Architectural Engineering Institute (AEI) 2019 Conference,* Tysons, VA., April 3-6, 2019. ISBN (PDF): 9780784482261, https://ascelibrary.org/doi/book/10.1061/9780784482261
60. Pulatsu, B. Erdogmus, E. Lourenco, P. (2019). “Discrete-continuum approach to assess 3D failure modes of masonry arch bridges,” *Proceedings of the IABSE Symposium at Guimaraes, Portugal, March 27-29.*
61. Pulatsu, B. Erdogmus, E. Lourenco, P. (2018). “Simulation of Masonry Arch Bridges using 3D Discrete Element Modeling,” *Published in the Proceedings of 11th International Conference on Structural Analysis of Historical Constructions – SAHC 2018, held in Cusco, Peru, September 2018.*
62. Erdogmus, E., Kousgaard, A.\*, Ryherd, E., Brown, S. (2017) “Does Gamer Personality Affect the Experience and Engagement of Architectural Engineering Sophomores in Fundamental Classes?” *Proceedings of the 2017 Architectural Engineering Institute (AEI) Conference*, March 2017, Oklahoma City.
63. Erdogmus, E., Fickle, K.\*, Kousgaard, A.\*, Freedland, J. (2015). “Assessment and Preservation of Ancient Roman Marble Blocks,” *Proceedings of the 12th North American Masonry Conference (12NAMC)*, The Masonry Society, May 2015, Denver, Colorado.
64. Erdogmus, E., Garcia, E.\* (2015). “Influence of Stabilizers on the Compressive Strength of Compressed Stabilized Earth Block Masonry,” *Proceedings of the 12th North American Masonry Conference (12NAMC)*, The Masonry Society, May 2015, Denver, Colorado.
65. Erdogmus, E., Kousgard, A.\*\*, Can, B., Hoff, M. (2015). “Interdisciplinary Investigations on a Roman-Era Colonnaded Street,” *Proceedings of the 12th North American Masonry Conference (12NAMC)*, The Masonry Society, May 2015, Denver, Colorado.
66. Erdogmus, E., Wagner, B.\*\*, Rohe, L.\*\*, Garcia, E.\*, Schwer, A., Matta, F., Obonyo, E., (2015). “Design of Compressed Stabilized Earthen Wall Systems for High-Wind Resistant Residential Unit Construction,” *Proceedings of the 2015 Architectural Engineering Institute (AEI) Conference*, March 2015, Milwaukee.
67. Kousgaard, A.\*\*, Erdogmus, E. (2015). “State-of-the-Art Review on the Resilience of Existing Masonry Wall Buildings against Progressive Collapse,” *Proceedings of the 2015 Architectural Engineering Institute (AEI) Conference*, March 2015, Milwaukee.
68. Donkor, P., Obonyo, E, Matta, F., and Erdogmus, E. (2014). “Effect of Polypropylene Fiber Length on the Flexural and Compressive Strength of Compressed Stabilized Earth Blocks” Proceedings of the 2014 Construction Research Congress, Atlanta Georgia, May 19-21, 2014.
69. Wagner, B.\*, Erdogmus, E., Schwer, A. (2013). “Affordable, Sustainable, and Resilient Tornado Shelter Design Using Compressed Stabilized Earth Block Construction,” *Proceedings of the SEMC 2013: The fifth international conference on Structural Engineering, Mechanics and Computation, 2-4 September 2013, Cape Town, South Africa.*
70. Kousgaard, A.\* and Erdogmus, E, (2013). “Externally Applied Retrofit System for Existing Masonry Buildings Subject to Progressive Collapse,” proceedings of the SEMC 2013: The fifth international conference on Structural Engineering, Mechanics and Computation, 2-4 September 2013, Cape Town, South Africa.
71. Cuéllar Azcárate, M.C., F. Matta, E. Erdogmus, and E. Obonyo (2013), “Earth Blocks with Recycled Plastic Reinforcement for Damage Tolerance against Flying Debris from Extreme Winds,” Proc. 7th International Conference on Architecture and Construction with Earthen Materials (Earth USA 2013), October 4-6, 2013, Santa Fe, NM, 7 p.
72. Erdogmus, E., Freedland, J., Jording, A., Kousgaard, A.\*\*, Buckley C.M. (2013). “Material Condition and Deterioration Assessment Program for a 3rd Century Roman Temple,” Proceedings AEI 2013 conference. Selected Best Paper of the conference.
73. Erdogmus, E., Norton, T., Buckley, C.M., Kauzlarich, K.\*\*, Petersen, B.\*\* (2011). “Seismic Investigation for the Temple of Antioch Reconstruction,” to be published in the *Proceedings of First International Conference on Vulnerability and Risk Analysis and Management (ICVRAM)/Fifth International Symposium on Uncertainty Modeling and Analysis (ISUMA)*, April 11-13, 2011, Hyattsville, Maryland.
74. Erdogmus, E., Buckley, C.M., Brink, H.\*\* (2011). “Restoration of the Temple of Antioch”. *Proceedings of* 11th North American Masonry Conference, The Masonry Society (TMS), June 5-8, 2011, Minneapolis, MN.
75. Erdogmus, E., Buckley, C.M., Brink, H.\*\* (2011). “The Temple of Antioch: A Study Abroad Internship for Architectural Engineering Students”, the *Proceedings of Architectural Engineering Conference*, March 30- April 2, Oakland, California
76. Erdogmus, E.; Armwood, C.\*; Haider, H.; Yang, Y. (2010). “Flexural Strength of Fiber Reinforced Lime Mortars for Historic Masonry Structures”, *Proceedings of* 2nd Historical Mortars Conference, HMC10: Proceedings of Historical Mortars Conference, September 22-24, Prague, Czech Republic.
77. Skourup, B.\* and Erdogmus, E. (2009). “Characteristics of PVA Fiber-Reinforced Mortars,” *Proceedings of the 2009 Structures Congress*, ASCE, Austin, TX.
78. Erdogmus, E. and Armwood, C.\* (2008). “Feasibility of Fiber-Reinforced Mortar for the Reconstruction of an Ancient Roman Temple,” *HMC08: Proceedings of Historical Mortars Conference*, September 24- 26, Lisbon, Portugal. (Invited Paper and presentation).
79. Meyer, K.\*\*, Erdogmus, E., Morcous, G., Naughtin, M.\*\* (2008). “Use of Ground Penetrating Radar for Accurate Concrete Thickness Measurements,” *Proceedings of the AEI Conference 2008,* September 24-27, AEI, ASCE. *(Awarded best structures article presented at the 2008 Architectural Engineering Conference).*
80. Armwood, C.\*, Sorensen A.\*, Skourup, B., Erdogmus, E. (2008). “Fiber Reinforced Mortar Mixtures for the Reconstruction and Rehabilitation of Existing Masonry Structures,” Proceedings of the AEI Conference 2008, September 24-27, AEI, ASCE.
81. Sorensen, A. D.\*, Schafer T.\*\*, Erdogmus, E. (2008). “Ambient Environmental Effects On Experimental Modal Analysis,” Proceedings of the AEI Conference 2008, September 24-27, AEI, ASCE.
82. Sorensen, A.\*, Erdogmus, E. (2008). “Effects of Environmental Conditions on the Experimental Modal Analysis of Timbrel Domes,” *SACoMaTiS 2008: Proceedings of the International Conference on the on site assessment of concrete, masonry, and timber structures*, Varena, Italy, September 1-4, 2008.
83. Maximos, H.\*, Erdogmus, E., M.Tadros (2008). “Full Scale Test Installation for Reinforced Concrete Pipe,” *Proceedings of the International Pipelines Conference 2008*, ASCE Pipeline Division, July 22-27, Atlanta, Georgia.
84. Erdogmus, E., Hoff, M., Townsend, R., Turkmen, S. (2007). “Interdisciplinary Assessment of A Roman Temple: Antiocheia Ad Kragos (Gazipasa, Turkey)”, *Proceedings of the International Symposium on Studies on Architectural Heritage*, Yildiz Technical University Research Center for Preservation for Historical Heritage, 163-170.
85. Erdogmus, E., Skourup, B.N. \*(2007). “Review of Available On-site Assessment and Strengthening Techniques for the Reconstruction of an Ancient Roman Temple,” *Proceedings of the 10th North American Masonry Conference*, The Masonry Society, TMS.
86. Erdogmus, E., Unay, A. I. (2007). “Nondestructive Experiments and Structural Assessments on the Medieval Divrigi Complex,” *Proceedings of the 10th North American Masonry Conference*, The Masonry Society, TMS.
87. Erdogmus, E., Skourup, B. N.\* (2007). “System Characteristic Identification of Timbrel Domes Using Modal Analysis,” *Proceedings of the International Operational Modal Analysis Conference (IOMAC)*, Denmark. (Invited Paper and presentation).
88. Erdogmus,E., Tuan, C., Dogan, S. Z.\* (2007). “Prediction and optimization of HPC characteristics by machine learning techniques -Part I: review of the state-of-the-art.”, *Proceedings of the Concrete Technology Forum: Focus on High Performance Concrete,* NRMCA.
89. Dogan, S. Z.\*, Erdogmus, E., Tuan, C. (2007). “Prediction and optimization of HPC characteristics by machine learning techniques -part II: A strength prediction model using case based reasoning”, *Proceedings of the Concrete Technology Forum: Focus on High Performance Concrete*, NRMCA.
90. Erdogmus, E., Tadros, M. K., Skourup, B. N.\* (2007). “History of The Bedding Factor And Recommendations For The Design Of Reinforced Concrete Pipe,” *Proceedings of the 2007 TRB Annual Conference*, Transportation Research Board.
91. Hoff, M., Townsend, R., Erdogmus, E. (2007). “Rough Cilicia Archeological Project: 2005 Season,” *Proceedings of the 28th Archeological Survey Symposium*, Turkish Ministry of Culture, 231-244.
92. Erdogmus, E., Fitton, D.\*\* (2006). “Modal Analyses on the Lateral Resistance System of the Auxerre Cathedral,” *Proceedings of the 2006 Architectural Engineering Conference*, AEI, ASCE.
93. Erdogmus, E., Skourup, B. N.\* (2006). “Experiments and Analyses on a Timbrel Dome,” *Proceedings of the 2006 Architectural Engineering Conference*, AEI, ASCE.
94. Hoff, M., Townsend, R., Erdogmus, E. (2006). “The Rough Cilicia Archeological Project: 2005 Season,” *ANMED News of Archeology from Anatolia's Mediterrenaen Areas 2006-4*, Suna-Inan Krac Research Institute on Mediterrenean Civilizations, 99-104
95. Erdogmus, E. and Boothby, T.E. (2004). “Validated Structural Analysis of Gothic Vaulted Systems,” *Proceedings of the Structural Analysis of Historical Construction Conference IV.*
96. Erdogmus, E., Hanagan, L. M. and Boothby, T.E. (2004). “Modal Experiments for the Validation of Masonry Vault Models,” *Proceedings of IMAC-XXII Conference*.
97. Erdogmus, E., Boothby, T.E. and Smith, E. B. (2003). “Documentation of a Medieval Structure: Santa Maria Novella,” *Proceedings of 9th North American Masonry Conference*.
98. Erdogmus, E. and Boothby, T.E. (2003). “Analysis of Masonry Arch Spandrel Vaults: Loading and Strength,” *Proceedings of 9th North American Masonry Conference*
99. Boothby, T.E., Erdogmus, E. and Fanning, P. (2001). “Transverse Strength of Masonry Arch Bridges, *Proceedings of NSF 5th National Workshop on Bridge Research in Progress*
100. Boothby, T.E. and Erdogmus, E. (2001). “Load Rating of Masonry and Concrete Arch Bridges,” *Proceedings of the AREMA 2001 Annual Conference & Exposition*
101. **Other Papers Published in Peer-Reviewed Journals**
102. Erdogmus, E. (2014). “Editor’s Note”, *Journal of Architectural Engineering*, December 2014 Issue, 10.1061/(ASCE)AE.1943-5568.0000160
103. Erdogmus, E; Schafer, T2 (2013). Closure to “Strengthening Two-Way Reinforced Concrete Floor Slabs Using Polypropylene Fiber Reinforcement” by Matthew J. Radik2; Ece Erdogmus, and Travis Schafer2, *ASCE Journal of Materials in Civil Engineering*, May 2011, Vol. 23, No. 5, pp. 562-571, ASCE, ISSN 0899-1561/2011/5-562–571/
104. Erdogmus, E. (2012). “Editor’s Note”, *Journal of Architectural Engineering*, March 2012 Issue, 10.1061/(ASCE)AE 1943-5568.0000082
105. **Presentations\* and Invited Talks**

*\*Conference papers listed in section C also involve presentations, but they are not listed here again to avoid duplication. This section only lists talks independent of a paper in-print.*

1. Erdogmus, E. (2019). “Repointing Masonry,” Invited Speaker at the Restore Nebraska Conference, March 1-2, 2019.
2. Erdogmus, E. (2019). “Case Studies in Assessment and Modeling of Masonry Arches and Domes,” Invited talk at University of Florence, Italy, May 2019.
3. Erdogmus, E. (2018). “Historic Masonry: Assessment and Rehabilitation,”, Invited Speaker at the Nebraska Historic Preservation Conference, March 2-3, 2018.
4. Erdogmus, E. (2015). “Engineering Perspective on Assessment, Rehabilitation, and Conservation of Ancient Sites,” *Izmir Technology Institute, Izmir, Turkey, June 2015.*
5. Erdogmus, E. (2015). “Historical Structures’ Assessment and Rehabilitation (HiSAR),” *Rome Sapienza University Department of Civil Engineering, Rome, Italy, May 2015.*
6. Erdogmus, E. (2015). “Historical Structures’ Assessment and Rehabilitation (HiSAR),” O*sher Lifelong Learning Institute (OLLI) 2015 Lecture Series*
7. Erdogmus, E. (2015). “Rehabilitation of Existing Masonry Structures,” *Eureka! 2015 Event*, Organized by UNL Extension
8. Erdogmus, E. (2014). “Masonry Research at University of Nebraska,” 9th Annual NCMA Quality Masonry Conference, Ashland, NE, January 30, 2014.
9. Erdogmus, E. (2009). “The Temple Excavation and Restoration Project in Turkey,” invited speaker to *HDR Architectural Engineering Firm,* Omaha, Nebraska, November 2009.
10. Erdogmus, E. (2009). “The Temple Excavation and Restoration Project in Turkey,” invited speaker to *City of Lincoln Engineering Department Professional Speaker Series,* March 2009.
11. Erdogmus, E. (2009). “Update on Research on Fiber reinforced mortar for masonry applications,” *presentation to the Nebraska Masonry Institute (NMI), May 2009.*
12. Erdogmus, E. (2008). “Research on Fiber reinforced mortar for masonry applications,” *presentation to the Nebraska Masonry Institute (NMI), February 2008.*
13. Erdogmus, E. (2007). “Development of Nondestructive Evaluation Tools and Innovative Rehabilitation Techniques for Existing and Historical Structures,” *International Workshop on Advanced Structures and Materials (IWASAM): Research collaborations between University of Nebraska-Lincoln and Kansai University (Japan),* UNL, Lincoln, U.S.
14. Erdogmus, E. (2007). “Development of Nondestructive Evaluation Tools and Innovative Rehabilitation Techniques for Existing and Historical Structures,” *UNL\_ Warsaw University of Technology Research Collaboration Workshop, Warsaw, Poland*.
15. Erdogmus, E. (2007). “Development of Nondestructive Evaluation Tools and Innovative Rehabilitation Techniques for Existing and Historical Structures,” *UNL\_ Szczecin University of Technology Research Collaboration Workshop, Szczecin, Poland*.
16. Erdogmus, E. (2007). “Development of Nondestructive Evaluation Tools and Innovative Rehabilitation Techniques for Existing and Historical Structures,” *UNL\_ Krakow University of Technology Research Collaboration Workshop, Krakow, Poland*.
17. Erdogmus, E. (2004). Invited Seminar “Model Experiments for the Validation of Masonry Vault Models”, *Massachusetts Institute of Technology (MIT). Department of Architecture, Building Technology Group Seminars.*
18. Erdogmus, E. (2004). “Modal Experiments for the Validation of Masonry Vault models, *Architectural Engineering Department Seminar Series, The Pennsylvania State University.*
19. Erdogmus, E. (March 2001). “Influence of Heavy Axles on Filled Arch Railroad Bridges,” *Architectural Engineering-Civil Engineering Departments Structural Seminar Series, The Pennsylvania State University.*
20. **Webinars, Trade/Technical Magazines, and Media References to Work**
21. Tran-SET webinar *“Innovative Technology, Techniques, and Processes in Transportation Infrastructure Inspection”:* <https://www.youtube.com/watch?v=S5tv2MrbeEY&feature=youtu.be>
22. Erdogmus, E. (2016). “Masonry Matters. Pay Attention!” *appeared in Smart: Dynamics of Masonry Technical Magazine, July 2016.* (This article highlights Erdogmus’ Masonry Design class and the term project she assigns every year. She is invited to write another article in Summer 2020).
23. “Expert address on the use of Ground Penetrating Radar”, KETV news, Omaha, October 2011.
24. “Ice shards falling on my head,” Omaha World Herald Article on March 6, 2010, quoting Ece Erdogmus for Architectural Engineering aspects of the Zorinsky Federal Building downtown Omaha.
25. “Erdogmus’ Research Helps National Park Service with Historic Preservation of Buildings,” *News release, 2009.* <http://www.engineering.unl.edu/collegeheadlines/2009/collegeheadlines06-24-09.shtml>
26. Numerous Turkish newspapers and TV news programs (Erdogmus interviewed) regarding the Temple Reconstruction Project in Turkey (2005- 2009).
27. “Archaeology Group Digs UNL Engineers’ Presentation.” *Engineering @ Nebraska Magazine*, Spring 2008. Article regarding the award-winning poster “The Imperial Temple Project at Antiocheia ad Kragos in Turkey: 2007 Season,”
28. “Rebuilding, Learning from Ancient Ruins” *University of Nebraska Lincoln, Office of Research and Graduate Studies, Annual Report, 2006-2007.*
29. Alumni Honors, *Penn State Architectural Engineering Newsletter,* Spring/ Summer 2007, Regarding the AE teaching award in 2007.
30. “What Lies Beneath” *Engineering Nebraska Magazine, Spring 2005*. Article regarding research on Italian and French Gothic Monuments as well as the domes of the Nebraska State Capitol.
31. “2005 UPMW Draws Educators from Across North America to the University of Minnesota,” *The Masonry Society News, April 2005.*
32. “Medieval Masonry Vaults” *Penn State Architectural Engineering Newsletter*, Fall/Winter 2003.

# VIII. Funding Record

1. **Externally Funded Grants**





1. **Internally Funded Grants**



1. Seed Grants



1. Undergraduate Research Grants



# IX. Supervision of Research

1. **Postdoctoral Fellows**
2. Bora Pulatsu (Fall 2019-Present). “Numerical investigations on the damage, time-dependent and thermo-mechanical deformations in *concrete* and *masonry*.”
3. Eric Garcia (December 2016-May 2017). “Use of Ultrasonic Guided Waves on Reinforced Concrete”
4. Yasar Hanifi Gedik (2008): “Behavior of Fiber Reinforced Cements”
5. Sevgi Zeynep Dogan (2006-2007): “Use of Machine Learning To Predict the Strength of High Performance Concrete Mixes”
6. **PhD Students**
7. Soumitra Das- New student, Topic TBD, Expected Graduation: May 2023
8. Bora Pulatsu (2019). “Simulation of Complex 3D Behavior of Masonry Arch Systems”

*Current Employment:* Postdoctoral Fellow at the University of Nebraska-Lincoln*.*

1. Eric Garcia (2016). “Identifying the Onset, Type, and Location of Deterioration in Reinforced Concrete Using Ultrasonic Testing,”

*Current Employment:* Assistant Professor of Engineering at University of Mary*.*

1. Ariel P. Kousgaard (2016). “Material Durability in the Anastylosis of Ancient Structures”

*Current Employment:* Associate II at Wiss, Janney, and Elstner Associates, Northbook Office.

1. Catherine K. Armwood (2014). “Behavior of Fiber Reinforced Mortar Joints in Masonry Walls Subjected to In-Plane Shear and Out-of-Plane Bending”

*Current Employment:* Assistant Professor at the Architectural Engineering Department at Tennessee State University.

1. Andrew D. Sorensen (2009). “Decomposing a timbrel dome: Understanding the role of the structural elements in a complex masonry system”

*Current Employment:* Assistant Professor at the Civil and Environmental Engineering Department at Utah State University.

1. Co-adviser for Hany Maximos with Andrej Nowak (and formerly with Maher Tadros). (2009) “Behavior and Design of Buried Reinforced Concrete Pipe”

*Current Employment:* Maximos Engineering

1. **Master of Science (M.S.) Students- with Thesis**
2. Theresa McCabe (Expected Graduation: August 2020). “Quality Control in Concrete Pavement: Early Detection of Near-Surface Honeycombing with GPR”
3. Shoaib Amiri (Expected graduation: August 2020). “A Comparison between Ultrasonic Guided Wave Leakage and Half-Cell Potential Methods in Detection of Corrosion in Reinforced Concrete Structures.”
4. Tyler Sondag (May 2020). “Evaluation of the Dynamic Behavior of Steel Staircases with Concrete Filled Pan Treads”
5. Elena Hoff (2016). “Appraisal of the Sustainability of Compressed Stabilized Earthen Masonry”
6. Cody Michael Buckley (2015). “The Effect of Classical Design Principles on the Seismic Response of Mechanically Fastened Masonry Columns”
7. Ebrima Colley (2014). “Effects Of Polyethylene Terephatlalate Fibers in the Water Resistance of Compressed Stabilized Earth Blocks”
8. Alexander Charles Jording (2012). “Damage Detection in Metamorphic Stone Blocks Utilizing Impact-Echo Testing and Modal Analysis”
9. **Master of Architectural Engineering (MAE) Students- with Report**

These students carried out a year-long research project as part of a 5-credit individual cap-stone course. As the structural option leader, I have served as the major advisor of all of the following students, in addition to serving on the committee of all of the other structures-option students since Fall of 2004.



1. **Undergraduate Research Students (Funded)**

I value undergraduate involvement in research as an educator. Following undergraduate students have been mentored in research activities under externally funded projects. In addition, 31 university-funded undergraduate research project activities have been mentored (Please section VIII.B).



1. **Participation on Other Student PhD Supervisory Committees**
* Anthony Kodsy (ConE/CIVE student, Adviser)
* Mostafa Aboelkhier (ConE/CIVE student)
* Luz Sotelo (MME student)
* \*Amanda Gaggioli (Geoarcheology at Stanford- worked in my NSF project and collaborated on articles)
* Mabel Cuellar-Azcarate University of Southern Carolina (CIVE)
* Ri Na (CM)
* Mohammad Badran (CIVE)
* Mehdi Mohseni (CM)
* Mohammad Lashgari (CM)
* Musa Alawneh (CIVE)
* JiChong An (CIVE)
* \*Willast Amornrattanepong (CIVE)
* Kromel Hanna (CIVE)
* Ning Wang (CIVE)
* Jonathan Rathsam (AE-Acoustics)

\*I provided partial funding

# X. Mentoring of Junior Faculty

I have mentored the following junior AE faculty:

* Dr. Josephine Lau (tenured and promoted to Associate)
* Dr. Fadi Alsaleem (Assistant Professor)
* Dr. Iason Konstantzos\* (Assistant Professor)
* Dr. Jennifer Lather\*(Assistant Professor)

**\*** Hired as a result of a search where Erdogmus served as the search committee chair.

We do not have a unit-level formal mentoring program, but I have served as a formal mentor to Dr. Josephine Lau through a university-level program, and I have been mentoring the other three most recently hired AE faculty on an informal basis. Mentorship includes identifying funding opportunities for them, reviewing/editing grant proposals, giving feedback on teaching/mentorship related issues, and having informal open-ended conversations periodically through new faculty lunches.

# XI. Courses Taught

* Masonry and Timber Design
* AE Interdisciplinary Team Design Project (Capstone)
* Engineering Statics
* Mechanics of Elastic Bodies
* Mechanics of Materials Lab
* Global Experiences in Engineering
* Special Topics: Advanced Cementitious Systems
* Special Topics: Sustainable Masonry
* Special Topics: Assessment of Historical Construction

# XII. Consulting and Industry Partnership

I chair the Durham School Architectural Engineering Industry Advisory Board (AEIAC) and have developed close relationships with AEC industry through the advisory board, my own work, and our alumni.

* AEIAC includes members from AEC firms all around the nation including but not limited to HDR, DLR, Leo A Daly, JE Dunn, Alvine Engineering, HGA, SGH, and many others.
* I worked as a structural engineer for Leo A Daly Omaha Office for 3 months in 2005 and 9 months in 2012/13.
* I collaborate or perform consulting projects for:
	+ Atkinson-Noland and Associates, Boulder, Colorado
	+ Robert Silman Associates, New York
	+ Wiss, Janney, Elstner and Associates, Chicago office
	+ Expert Witness for Attorney Michelle Epstein at Ausman Law Firm
* I am advisor to the board of the Nebraska Masonry Alliance (NMA) and serve as a technical consultant to them.

# XIII. Service Roles

1. **University/College/Department Service**

**University-Level**

1. Member, Chancellor’s Commission on Status of Women, (2019-present)
2. Member, UNL Search Committee for the Dean of the College of Engineering (2018)
3. Member, UNL Dean of the College of Engineering 5-year Review committee (2016)
4. Member of the UNL Academic Rights and Responsibilities committee (2014- Present)
5. Member, UNL Search Committee for the Dean of the College of Engineering (2010-2011)
6. Reviewer for the Layman, Arts & Humanities, Minority Health, and Strategic Cluster awards (2010).
7. Mentor to Dr. Josephine Lau, UNL Research Development Fellows Program (2009-10)

**College-level**

1. Chair, college of Engineering Task Force on Diversity and Inclusion (2019-2020)
2. Reviewer, UNL College of Engineering Employee Awards Review Committee (2014)
3. College of Engineering Continuous Improvement in Teaching and Learning (CITL) committee (2013-2014)
4. Member, Building the 22nd Century Workshop Organizing Committee (2012-2013) and Faculty Leader for the K-12 Outreach/Competition
5. Member, Search Committee for the Director of the Durham School of Architectural Engineering and Construction (2009)
6. Member, College of Engineering Curriculum Committee (2006- 2013)
7. Member, College of Engineering International Programs Committee (2008-2010)
8. Member, College of Engineering Apportionment Appeals Committee (2008-2010)
9. College of Engineering Research Advisory Committee (2006-2007)

**Unit-LEVEL**

1. Chair, Architectural Engineering ABET Committee (2015- 2017)
2. Chair, Architectural Engineering Curriculum Committee (2006- 2019)
3. Chair, AE Faculty Search Committee, 2019
4. Chair, AE Faculty Search Committee, 2018
5. Member, AE Presidential Scholar Search Committee, 2019
6. Member, Durham School of Architectural Engineering and Construction, Executive Council (2013-Present)
7. Member, AE P&T Committee
8. Member, UNL AE Search Committee for Big-Data Program of Excellence faculty position (2016)
9. Member, UNL CIVE Search Committee for Structures Faculty Position (2014-2015)
10. Member, UNL CIVE Search Committee for Structures Faculty Position (2013-2014)
11. Member, UNL AE Search Committee for open faculty position (2012)
12. Member, UNL AE Search Committee for open faculty position (2008)
13. Member, UNL AE Search Committee for open faculty position (2007)
14. Durham School of Architectural Engineering and Construction, Promotion & Tenure Guidelines Ad-Hoc Committee, (2006)
15. Member, UNL AE Search Committee for open faculty position (2005)

**Outreach**

* Raymond G. Alvine Engineering Scholarship Committee (2008- 2019)
* Faculty host for the students/parents considering the Architectural Engineering Program (2013- Present)
* Presenter for Explorer’s Post events (several occasions): Introducing AE and Presenting Structural Engineering break-out session
* Presenter/Session chair at the Women Interested in Engineering Event (2016)
* Organizer/Chair for the Marian High school- NSF workshop (2012)
* Faculty leader in charge of the K-12 Poster Competition at the Building the 22nd Century Workshop, UNL College of Engineering (2013)
1. **Professional Service**
* The Masonry Society (TMS)
	+ Member (2003- Present)
	+ Member of the Technical Activities Committee (TAC)- nomination/invitation only (2019-Present)
	+ Member of the TMS 402/602 committees, which are responsible for the development and maintenance of Building Code Requirements and Specifications for Masonry Structures (2012- Present)
	+ Member of the Existing Masonry Technical Committee (2014- Present)
	+ Associate Editor for the Masonry Society Journal (2006- 2013)
* Architectural Engineering Institute (AEI)
	+ Member (2002- Present)
	+ AEI AE-PE review exam webinar instructor: <https://www.asce.org/architectural-engineering/architectural-engineering-pe-exam-review-webinar-series/>
	+ Member of the AEI Academic Council (2013- Present)
	+ Editor of the Journal of Architectural Engineering and Chair of the Editorial Board (2011- 2019)
* American Society of Civil Engineers (ASCE)
	+ Member (2002-Present)
	+ Member of the Paper Awards Committee (2011- 2018)
* Society of Women Engineers (SWE)
	+ Member (2004- 2013)
	+ Faculty Adviser of the Omaha Student Chapter (2006-2013)
* Structural Engineers Association of Nebraska (SEAON)
	+ Member (2004- Present)
* American Concrete Institute (ACI)
	+ Reviewer for the ACI Committee 544 for “Report on the Physical Properties and Durability of Fiber-Reinforced Concrete”, 2009
* Reviewer for Journals (Selected list):

*\*Frequent requests*

* + ACI Materials Journal, American Concrete Institute
	+ Construction and Building Materials, Elsevier
	+ Construction Materials, ICE publishing
	+ Earthquake Engineering and Engineering Vibration, Springer
	+ Engineering Structures, Elsevier
	+ \*Journal of Architectural Engineering, ASCE
	+ Journal of Civil Engineering and Construction Technology, Academic Journals
	+ \*Journal of Cultural Heritage, Elsevier
	+ \*Journal of Materials in Civil Engineering, ASCE
	+ Materials and Structures, Springer
	+ Structures and Buildings
	+ \*The Masonry Society Journal, TMS
* Other peer-review:

\*Names of individuals are not included to ensure their dossiers’ confidentiality

* + External Reviewer for the Promotion to full professor for a faculty member\* at Oklahoma State University
	+ External Reviewer for the Promotion and Tenure dossier of a faculty member\* at Tennessee State University, 2019
	+ External Reviewer for the Promotion and Tenure dossier of a faculty member\* at Edinburgh College, Scotland, 2013
	+ Member of the Technical Committee for ICSDEC 2012 (International Conference on Sustainable Design, Engineering, & Construction) Conference
	+ External Reviewer for proposals for the Austrian Science Fund (FWF), 2010
	+ National Science Foundation (NSF) Review Panel member for the CMMI program, 2009
	+ NSF Review Panel member for the CMMI program, 2007
	+ NSF Review Panel member for the Dynamic Systems program, 2006
1. Earley, P.C. and Mosakowski, E. (2004). “Cultural Intelligence,” Harvard Business Review, October 2004. <https://hbr.org/2004/10/cultural-intelligence> [↑](#footnote-ref-1)