

BRIAN J. SMITH, Ph.D., P.E.

Associate Teaching Professor

University of Notre Dame

Dept. of Civil & Environmental Engineering & Earth Sciences

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EDUCATION

University of Notre Dame, Notre Dame, IN

Ph.D. in Civil Engineering, January 2013

Dissertation: "Design, Analysis, and Experimental Evaluation of Hybrid Precast Concrete Shear Walls for Seismic Regions"

Advisor: Dr. Yahya Kurama

Georgia Institute of Technology, Atlanta, GA

M.S. in Civil Engineering, August 2002

Thesis: "Critical Assessment of Potential and Limitations of Applications of Shape Memory Alloys"

Advisor: Dr. Reginald DesRoches

University of Notre Dame, Notre Dame, IN

B.S. in Civil Engineering, May 2001

Concentration: Structures

PROFESSIONAL REGISTRATION

Licensed Professional Engineer (P.E.) in California

09/2004 - Present

WORK HISTORY

Associate Teaching Professor

5/2018 - Present

Assistant Teaching Professor

8/2012 - 5/2018

University of Notre Dame

Notre Dame, IN

Primary Appointment: Dept. of Civil & Environmental Engineering & Earth Sciences

Concurrent Appointment: School of Architecture

Currently holds the position of associate teaching professor in the Department of Civil and Environmental Engineering and Earth Sciences with a concurrent appointment in the School of Architecture. Primary responsibilities include teaching multiple sections of the first-year engineering course through the College of Engineering, teaching upper-division undergraduate and graduate structural engineering design classes, and teaching upper-division structural design courses to undergraduate and graduate architecture students.

Research Engineer

7/2013 - 12/2016

University of Notre Dame - Kinetic Structures Laboratory

Notre Dame, IN

Investigated the behavior of an origami-inspired foldable rigid wall shelter comprised of sandwich panels using fiber-reinforced polymer faces and a foam core. Primarily responsible for the design of the experimental program (featuring half-scaled full-assembly tests, component tests, and material tests) including the test setup and loading systems, implementation of the data acquisition and signal conditioning systems, as well as interpretation of the analytical and measured results. In addition, investigated the

behavior of cold bent steel plate splice connections for accelerated construction of steel bridges. Contributed to the development of the experimental test setup, data acquisition system, material testing, and interpretation of the analytical and measured results.

**Graduate Research Assistant
University of Notre Dame**

**8/2007 - 12/2012
Notre Dame, IN**

Investigated the behavior of hybrid precast concrete shear walls (a new type of self-centering lateral force resisting system) under seismic loading, with the goal of gathering the required analytical and experimental evidence to validate the system per ACI ITG-5.1 (2007) and gain code-approval as a special reinforced concrete shear wall per ACI-318. Developed and published seismic design methodology and procedure for hybrid wall systems. Designed, instrumented, and constructed test setup and test specimens. Conducted six large-scale experimental tests subjected to fully-reversed cyclic lateral loading. Developed validated fiber-element analytical models used for nonlinear time-history analyses as well as validated finite-element and linear-elastic effective stiffness models used as design tools.

**Graduate Student Instructor
University of Notre Dame**

**8/2011 - 5/2012
Notre Dame, IN**

Accepted into the First Year Teaching Apprentice Program (FYETAP), a mentored teaching experience for graduate students in preparation for careers as faculty members. As part of this program, graduate student instructors work alongside tenured-track faculty members and undergraduate student assistants to instruct first-year engineering students in the Introduction to Engineering Systems courses. Responsibilities include developing course material for classroom lectures, instructing first-year students during learning center (i.e., laboratory) sections, and participating in regular meetings with faculty, both weekly to discuss course planning and monthly to discuss engineering education topics. Based on a positive performance review by supervising faculty during the Fall 2011 semester, received invitation to continue as a graduate student instructor during the Spring 2012 semester.

**Graduate Teaching Assistant
University of Notre Dame**

**8/2007 - 12/2009
Notre Dame, IN**

Held the position of teaching assistant over five semesters for three different undergraduate classes: Civil Engineering Materials and Lab, Reinforced Concrete Design, and Structural Steel Design. Responsibilities included leading classroom lectures on a substitution basis, holding weekly small group homework review sessions, instructing during laboratory sessions, as well as grading exams, homework, papers and project presentations. Awarded the Dondanville Family Award for Outstanding Teaching by a Graduate Student in 2008, as voted by a committee of undergraduate civil engineering students.

**Associate Engineer III
Wiss, Janney, Elstner (WJE) Associates, Inc.**

**9/2005 - 8/2007
Emeryville, CA**

Held position of Associate Engineer III at WJE Associates, an architectural, engineering, and material science consulting firm where the primary focus is to provide practical, innovative, and technically sound solutions to structural problems in existing buildings. Contributed to a variety of projects, including evaluations and investigations of structural failures (e.g., I-880/I-80 Overpass Bridge Collapse in Oakland, CA), preparation of repair construction documents for fire damaged residential and commercial structures (e.g., McHenry Village Shopping Center in Modesto, CA), seismic evaluations of existing structures (e.g., U.S. Embassy Residential Facilities in Istanbul, Turkey) and retrofit/rehabilitation designs for deficient structures (e.g., Main Cellhouse on Alcatraz Island in San Francisco, CA). Member of the design and construction administration team for the seismic retrofitting of the State Bar Building in San Francisco, CA, a project which received the Certificate of Merit for Best Retrofit/Alteration given by the Structural Engineers Association of Northern California (SEAONC) and the Presidential Award of Excellence in Structural Engineering given by the American Institute of Steel Construction (AISC).

Project Engineer 8/2004 - 9/2005
Assistant Engineer 12/2002 - 8/2004
Madsen, Kneppers & Associates (MKA), Inc. Walnut Creek, CA

Worked as an assistant and project engineer for MKA Inc., a multidisciplinary construction consulting firm that provides creative solutions to the construction, legal, and insurance industries. Performed visual, non-destructive, and destructive investigations of structural and architectural failures caused by defective design, construction, and materials (e.g., Niebaum-Coppola Winery in Rutherford, CA). Conducted numerous evaluations of buildings damaged by construction vibrations, earthquakes, explosions, fires, hurricanes, water intrusions, and wind (e.g., various Post-Hurricane Katrina projects). Provided various types of litigation support services for construction defect claims on single-family and multi-family residential developments, including visual field observations, destructive testing, code analysis, and mediation attendance (e.g., Ranchwood Homes in Los Banos, CA).

Graduate Research Assistant 8/2001 - 8/2002
Georgia Institute of Technology Atlanta, GA

Investigated the potential seismic applications of shape memory alloys, a type of smart material. Conducted specimen tests of several different alloy compositions subjected to various loading conditions. Developed in-depth literature review of documented seismic applications of shape memory alloys.

Graduate Engineering Intern 5/2001 - 8/2001
Thornton Tomasetti Group Trumbull, CT

Served as an engineering intern at Thornton Tomasetti Group, an architecture and engineering firm that provides multidisciplinary design services. Assisted on multiple projects, including the design of a new auditorium at Yale University, the site development of high school athletic fields in New York City, NY, and the investigation of deteriorating exterior pedestrian walkways at a multi-family residential building.

Undergraduate Research Assistant 6/2000 - 5/2001
University of Notre Dame Notre Dame, IN

Assisted in research involving the development, testing, and analysis of the performance of friction dampers in post-tensioned precast concrete beam-column connections while subjected to earthquake loading. Responsible for the design of the steel test frame, the creation of fabrication drawings, and assisted in the design of post-tensioned concrete specimens.

COURSES TAUGHT

All courses are presented with course title, total student enrollment, and “composite median” score based on course instructor feedback (CIF) completed by students at the end of the semester.

Spring 2021

ARCH-40521	Applied Structural Systems	23 students	5.0/5.0
ARCH-60521	Structures II: Concrete	11 students	5.0/5.0
CE-60290	Advanced Structural Steel Design	11 students	4.9/5.0

Fall 2020

ARCH-40511	Structural Design for Architects	22 students	5.0/5.0
ARCH-70531	Structures III: Wood and Steel	6 students	5.0/5.0
CE-40280	Structural Steel Design	33 students	5.0/5.0

Spring 2020

ARCH-40521	Applied Structural Systems	46 students	5.0/5.0
ARCH-60521	Structures II: Concrete	6 students	5.0/5.0

Spring 2020 (cont'd)

EG-10112-10	Introduction to Engineering Systems II	48 students	5.0/5.0
EG-10112-11	Introduction to Engineering Systems II	44 students	5.0/5.0

Fall 2019

ARCH-40511	Structural Design for Architects	45 students	5.0/5.0
ARCH-70531	Structures III: Wood and Steel	4 students	5.0/5.0
CE-40280	Structural Steel Design	37 students	5.0/5.0
EG-10111-10	Introduction to Engineering Systems I	35 students	4.8/5.0

Spring 2019

ARCH-40521	Applied Structural Systems	36 students	4.8/5.0
ARCH-60521	Structures II: Concrete	4 students	4.8/5.0
EG-10112-10	Introduction to Engineering Systems II	45 students	4.9/5.0
EG-10112-11	Introduction to Engineering Systems II	43 students	5.0/5.0

Fall 2018

ARCH-40511	Structural Design for Architects	37 students	4.8/5.0
ARCH-70531	Structures III: Wood and Steel	9 students	4.9/5.0
CE-40280	Structural Steel Design	30 students	5.0/5.0
EG-10111-10	Introduction to Engineering Systems I	36 students	4.9/5.0

Spring 2018

ARCH-40521	Applied Structural Systems	28 students	4.9/5.0
ARCH-60521	Structures II: Concrete	10 students	4.9/5.0
EG-10112-10	Introduction to Engineering Systems II	45 students	5.0/5.0
EG-10112-11	Introduction to Engineering Systems II	44 students	4.9/5.0

Fall 2017

ARCH-40511	Structural Design for Architects	28 students	5.0/5.0
ARCH-70531	Structures III: Wood and Steel	7 students	4.7/5.0
CE-40280	Structural Steel Design	23 students	5.0/5.0
EG-10111-11	Introduction to Engineering Systems I	37 students	4.8/5.0

Spring 2017

ARCH-40521	Applied Structural Systems	35 students	4.7/5.0
ARCH-60521	Structures II: Concrete	7 students	4.7/5.0
EG-10112-10	Introduction to Engineering Systems II	46 students	5.0/5.0
EG-10112-11	Introduction to Engineering Systems II	37 students	4.8/5.0

Fall 2016

ARCH-40511	Structural Design for Architects	35 students	4.7/5.0
ARCH-70531	Structures III: Wood and Steel	9 students	4.5/5.0
CE-40280	Structural Steel Design	43 students	4.9/5.0
EG-10111-11	Introduction to Engineering Systems I	42 students	4.7/5.0

Spring 2016

ARCH-40521	Applied Structural Systems	33 students	4.6/5.0
ARCH-60521	Structures II: Concrete	8 students	4.6/5.0
EG-10112-02	Introduction to Engineering Systems II	47 students	4.4/5.0
EG-10112-03	Introduction to Engineering Systems II	47 students	4.8/5.0

Fall 2015

ARCH-40511	Structural Design for Architects	33 students	4.8/5.0
ARCH-70531	Structures III: Wood and Steel	11 students	4.7/5.0
CE-40620	Transportation	37 students	3.7/5.0
EG-10111-05	Introduction to Engineering Systems I	46 students	4.9/5.0

Spring 2015

ARCH-40521	Applied Structural Systems	32 students	4.6/5.0
ARCH-60521	Structures II: Concrete	11 students	4.4/5.0
CE-40280	Structural Steel Design	36 students	4.4/5.0
CE-40620	Transportation	46 students	4.3/5.0

Fall 2014

ARCH-40511	Structural Design for Architects	32 students	4.9/5.0
ARCH-70531	Structures III: Wood and Steel	4 students	5.0/5.0
EG-10111-07	Introduction to Engineering Systems I	45 students	4.6/5.0

Spring 2014

ARCH-40521	Applied Structural Systems	28 students	4.6/5.0
ARCH-60521	Structures II: Concrete	6 students	3.9/5.0
CE-40280	Structural Steel Design	27 students	4.3/5.0
CE-40620	Transportation	37 students	4.6/5.0

Fall 2013

ARCH-40511	Structural Design for Architects	28 students	4.3/5.0
ARCH-70531	Structures III: Wood and Steel	12 students	4.5/5.0
EG-10111-02	Introduction to Engineering Systems I	246 students	n/a
EG-11111-14	Introduction to Engineering Systems I	32 students	4.3/5.0

Spring 2013

CE-40620	Transportation	43 students	4.2/5.0
CE-40702	Senior Design	7 students	4.7/5.0

Fall 2012

ARCH-40511	Structural Design for Architects	48 students	4.4/5.0
ARCH-70531	Structures III: Wood and Steel	7 students	4.7/5.0
EG-10111-02	Introduction to Engineering Systems I	235 students	3.0/5.0
EG-11111-02	Introduction to Engineering Systems I	33 students	4.2/5.0

Spring 2012

EG-11112-07	Introduction to Engineering Systems II	31 students	4.9/5.0
EG-11112-08	Introduction to Engineering Systems II	30 students	4.4/5.0

Fall 2011

EG-11111-07	Introduction to Engineering Systems I	32 students	4.3/5.0
EG-11111-08	Introduction to Engineering Systems I	33 students	4.3/5.0

COURSES COORDINATED

All courses are presented with course title and total student enrollment.

Spring 2021

EG-10116 Engineering Programming 323 students

Fall 2020

EG-10116 Engineering Programming 199 students

REFEREED PUBLICATIONS

Refereed Journal Publications

- [1] Gerbo, E., Wang, Y., Tumbeva, M., Thrall, A., Smith, B., and Zoli, T. (2018) "Behavior of an Adjustable Bolted Steel Plate Connection during Field Installation," *ASCE Journal of Structural Engineering*, Vol. 144, No. 3, 04017223.
- Research engineer for project. Contributed to the development of the experimental test setup, data acquisition and signal condition systems, material testing, and interpretation of analytical and measured results.
- [2] Gerbo, E., Thrall, A., Smith, B., and Zoli, T. (2016) "Full-Field Measurement of Residual Strains in Cold-Bent Steel Plates," *Journal of Constructional Steel Research*, Vol. 127, pp. 187-203.
- Research engineer for project. Contributed to the development of the experimental test setup, data acquisition and signal condition systems, material testing, and interpretation of analytical and measured results.
- [3] Ballard, Z., Gerbo, E., Thrall, A., and Smith, B. (2016) "Behavior of Sandwich Panels in a Deployable Structure," *ASCE Journal of Structural Engineering*, Vol. 142, No. 10, 04016073. - Research engineer for project. Provided preliminary designs of experimental test setup and loading systems for half-scale full-assembly tests, component-level tests, and material-level tests. Selected and implemented data acquisition and signal conditioning systems as well as provided interpretation of analytical and measured results.
- [4] Ballard, Z., Thrall, A., and Smith, B. (2016) "Behavior of Folding Sandwich Panel Structures: Impact of Ground Conditions, Anchorage, and Panel Warping," *Construction and Building Materials*, Vol. 112, No. 1, pp. 1110-1122.
- Research engineer for project. Provided preliminary designs of experimental test setup and loading systems for half-scale full-assembly tests, component-level tests, and material-level tests. Selected and implemented data acquisition and signal conditioning systems as well as provided interpretation of analytical and measured results.
- [5] Ballard, Z., Thrall, A., Smith, B., and Casias, C. (2016) "Impact of Hinged Connectors on Sandwich Panel Behavior," *ASCE Journal of Structural Engineering*, Vol. 142, No. 3, 06015005.
- Research engineer for project. Provided preliminary designs of experimental test setup and loading systems for half-scale full-assembly tests, component-level tests, and material-level tests. Selected and implemented data acquisition and signal conditioning systems as well as provided interpretation of analytical and measured results.
- [6] Smith, B., Kurama, Y., and McGinnis, M. (2015) "Perforated Hybrid Precast Shear Walls for Seismic Regions," *ACI Structural Journal*, Vol. 112, No. 3, pp. 359-370.
- Ph.D. graduate student for research project. Conducted large-scale experimental testing including the design of test specimens, test setup, and data acquisition and signal conditioning systems. Developed associated analytical models validated by the experimental results. Developed comprehensive seismic design guidelines for this innovated structural system.

- [7] Smith, B., and Kurama, Y. (2014) "Seismic Design Guidelines for Solid and Perforated Hybrid Precast Concrete Shear Walls," *PCI Journal*, Vol. 59, No. 3, pp. 43-59.
- *Ph.D. graduate student for research project. Conducted large-scale experimental testing including the design of test specimens, test setup, and data acquisition and signal conditioning systems. Developed associated analytical models validated by the experimental results. Developed comprehensive seismic design guidelines for this innovated structural system.*
- [8] Smith, B., Kurama, Y., and McGinnis, M. (2013) "Behavior of Precast Concrete Shear Walls for Seismic Regions: Comparison of Hybrid and Emulative Specimens," *ASCE Journal of Structural Engineering*, Vol. 139, No. 11, pp. 1917-1927.
- *Ph.D. graduate student for research project. Conducted large-scale experimental testing including the design of test specimens, test setup, and data acquisition and signal conditioning systems. Developed associated analytical models validated by the experimental results. Developed comprehensive seismic design guidelines for this innovated structural system.*
- [9] Smith, B., Kurama, Y., and McGinnis, M. (2011) "Design and Measured Behavior of a Hybrid Precast Concrete Wall Specimen for Seismic Regions," *ASCE Journal of Structural Engineering*, Vol. 137, No. 10, pp. 1052-1062.
- *Ph.D. graduate student for research project. Conducted large-scale experimental testing including the design of test specimens, test setup, and data acquisition and signal conditioning systems. Developed associated analytical models validated by the experimental results. Developed comprehensive seismic design guidelines for this innovated structural system.*
- [10] DesRoches, R., and Smith, B. (2004) "Shape Memory Alloys in Seismic Resistant Design and Retrofit: A Critical Assessment of the Potential and Limitations," *Journal of Earthquake Engineering*, Vol. 8, No. 3, pp. 415-429.
- *Master's graduate student for research project. Developed a comprehensive literature review of documented seismic applications of shape memory alloys.*

Refereed Conference Publications (Paper and Oral Presentation)

- [1] Smith, B. and Kerr, E. (2020) "Parameterizing Major Discernment for First and Second-Year Engineering Students," *Proceedings of the 127th ASEE Annual Conference and Exposition*, Montreal, Quebec, Canada, 21-24 June 2020, 13 pp.
- [2] Smith, B. (2019) "Evaluation of a Flipped Classroom in Structural Steel Design," *Proceedings of the 126th ASEE Annual Conference and Exposition*, Tampa, FL, 16-19 June 2019, 10 pp.
- [3] Ballard, Z., Thrall, A., and Smith, B. (2015) "Parametric Study of the Effect of Hinged Connectors on the Behavior of Origami-Inspired Structures Comprised of Sandwich Panels," *Proceedings of the ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conference*, Boston, MA, 2-5 August 2015, 8 pp.
- [4] Smith, B., and Kurama, Y. (2012) "Validated Seismic Design Guidelines for Solid and Perforated Hybrid Precast Shear Walls," *Proceedings of the PCI Annual Convention and Exhibition*, Nashville, TN, 29 September - 3 October 2012, 14 pp.
- [5] Smith, B., Kurama, Y., and McGinnis, M. (2011) "Design and Measured Behavior of a Perforated Hybrid Precast Concrete Shear Wall for Seismic Regions," *Proceedings of the PCI Annual Convention and Exhibition*, Salt Lake City, UT, 22-26 October 2011, 12 pp.
- [6] Smith, B., and Kurama, Y. (2010) "Seismic Behavior of a Hybrid Precast Concrete Wall Specimen: Measured Response versus Design Predictions," *Proceedings of the 9th U.S. National and 10th Canadian Conference on Earthquake Engineering*, Toronto, ON, Canada, 25-29 July 2010, 10 pp.
- [7] Smith, B., McGinnis, M., and Kurama, Y. (2010) "Full-Field Lateral Response Investigation of Hybrid Precast Concrete Shear Walls," *Proceedings of the 3rd International Congress and fib Exhibition Incorporating the PCI Annual Convention and Bridge Conference*, Washington D.C., 29 May - 2 June 2010, 12 pp.

NON-REFEREED PUBLICATIONS

Non-Refereed Conference Publications (Paper with Oral/Poster Presentation)

- [1] Smith, B., and Kurama, Y. (2013) "Seismic Displacement Demands for Hybrid Precast Concrete Shear Walls," *Proceedings of the ASCE Structures Congress*, Pittsburgh, PA, 1-4 May 2013, 12 pp. (Oral Presentation).
- [2] Smith, B., Kurama, Y., and McGinnis, M. (2012) "Comparison of Solid and Perforated Precast Concrete Shear Walls for Seismic Regions," *Proceedings of the ASCE Structures Congress*, Chicago, IL, 29-31 March 2012, 12 pp. (Oral Presentation).
- [3] McGinnis, M., Smith, B., Holloman, M., Lisk, M., Kurama, Y., and O'Donnell, A. (2012) "3-D Digital Image Correlation: An Underused Asset for Structural Testing," *Proceedings of the ASCE Structures Congress*, Chicago, IL, 29-31 March 2012, 10 pp. (Oral Presentation).
- [4] Smith, B., Kurama, Y., and McGinnis, M. (2012) "Hybrid Precast Concrete Shear Walls for Seismic Regions: Solid and Perforated Walls," *Proceedings of the 9th International Conference on Urban Earthquake Engineering and 4th Asia Conference on Earthquake Engineering*, Tokyo, Japan, 6-8 March 2012, 10 pp. (Oral Presentation).
- [5] Smith, B., Kurama, Y., and McGinnis, M. (2011) "Comparison of Hybrid and Emulative Precast Concrete Shear Walls for Seismic Regions," *Proceedings of the ASCE Structures Congress*, Las Vegas, NV, 14-16 April 2011, 12 pp. (Poster Presentation).
- [6] Smith, B., and Kurama, Y. (2010) "Analytical Model Validation of a Hybrid Precast Concrete Wall for Seismic Regions," *Proceedings of the ASCE Structures Congress*, Orlando, FL, 12-14 May 2010, 11 pp. (Oral Presentation).
- [7] Smith, B., and Kurama, Y. (2009) "Design of Hybrid Precast Concrete Walls for Seismic Regions," *Proceedings of the ASCE Structures Congress*, Austin, TX, 30 April - 2 May 2009, 10 pp. (Oral Presentation).

OTHER PUBLICATIONS & PRESENTATIONS

Research Reports

- [1] Smith, B. and Kerr, E. (2019) "Parameterizing Major Discernment for First and Second-Year Engineering Students," *University of Notre Dame*, Research Report No. NDEE-2019-01.
- [2] Smith, B., Kurama, Y., and McGinnis, M. (2012) "Hybrid Precast Wall Systems for Seismic Regions," *University of Notre Dame*, Research Report No. NDSE-2012-01.
- [3] Smith, B., and Kurama, Y. (2012) "Seismic Design Guidelines for Special Hybrid Precast Concrete Shear Walls," *University of Notre Dame*, Research Report No. NDSE-2012-02.

Other Technical Oral Presentations

- [1] Smith, B., Kurama, Y., and McGinnis, M. (2012) "Hybrid Precast Wall Systems for Seismic Regions," *PCI Annual Convention and Exhibition*, PCI Funded Research: Part I, Nashville, TN, 29 September - 3 October 2012.
- [2] Smith, B., Kurama, Y., and McGinnis, M. (2011) "Hybrid Precast Concrete Shear Walls for Seismic Regions," *PCI Annual Convention and Exhibition*, R&D Session II: Research Updates, Salt Lake City, UT, 22-26 October 2011.
- [3] Smith, B., Kurama, Y., and McGinnis, M. (2011) "Hybrid Precast Concrete Shear Walls for Seismic Regions," *PCI Committee Days*, Seismic and R&D Committee Meetings, Chicago, IL, 24-26 March 2011.
- [4] McGinnis, M., Smith, B., and Kurama, Y. (2010) "Base Panel to Foundation Joint Response of Hybrid Precast Walls: Full Field Measurements and FEM Simulations," *ACI Fall Convention*, Seismic Performance of Concrete Joints and Connections, Pittsburgh, PA, 24-28 October 2010.

- [5] Smith, B., and Kurama, Y. (2010) "Hybrid Precast Wall Systems for Seismic Regions," *PCI Committee Days*, Seismic and R&D Committee Meetings, Chicago, IL, 24-26 September 2010.
- [6] Smith, B., and Kurama, Y. (2010) "Experimental Evaluation of Hybrid Precast Concrete Walls for Seismic Regions," *PCI Annual Convention and National Bridge Conference*, Precast Concrete R&D Projects: Part II, Washington D.C., 29 May - 2 June 2010.
- [7] Smith, B., and Kurama, Y. (2009) "Behavior and Design of Hybrid Precast Concrete Walls for Seismic Regions," *PCI Annual Convention and National Bridge Conference*, Seismic Design and Research Issues: Developing Innovative Solutions for Design and Construction of Precast/Prestressed Concrete Construction Systems, San Antonio, TX, 5-8 October, 2009.
- [8] Smith, B., and Kurama, Y. (2009) "Hybrid Precast Wall Systems for Seismic Regions," *PCI Committee Days*, Seismic and R&D Committee Meetings, Chicago, IL, 23-25 April 2009.
- [9] Smith, B., and Kurama, Y. (2009) "Design of Hybrid Precast Concrete Walls for Seismic Regions," *ACI Spring Convention*, Developing Innovative Solutions for Design of Precast/Prestressed Concrete Structures, San Antonio, TX, 15-19 March 2009.
- [10] Smith, B., and Kurama, Y. (2008) "Behavior and Design of Hybrid Precast Concrete Walls for Seismic Regions," *PCI Annual Convention and Exhibition*, Seismic Design and Research Issues: Developing Innovative Solutions for Design and Construction of Precast/Prestressed Concrete Construction Systems, Salt Lake City, UT, 22-26 October 2011.
- [11] Smith, B., and Kurama, Y. (2008) "Hybrid Precast Wall Systems for Seismic Regions," *PCI Committee Days*, R&D Committee Meeting, Chicago, IL, 24-27 April 2008.

GOOGLE SCHOLAR

Citations: 656

h-index: 10

PROPOSAL AND GRANTS

Funded Support

- [1] Title: "Parameterizing Major Discernment for First and Second-Year Engineering Students"
 - Funding Source: Notre Dame Faculty Research Support Program - Initiation Grant
 - Funding Period: Jan. 2018 to Dec. 2018
 - PIs: Brian Smith and Elizabeth Kerr
 - Budget: \$10,000

Unfunded Support

- [1] Title: "Inverted Classrooms for Upper-Division Engineering Design Courses"
 - Funding Source: Notre Dame Faculty Research Support Program - Initiation Grant
 - PI: Brian Smith
 - Budget: \$10,000
- [2] Title: "Research Initiation - Understanding How First-Year Engineering Students Select and Identify as Specific Majors"
 - Funding Source: NSF Solicitation 17-514; Submitted Feb. 2017
 - PI: Brian Smith; Co-PI: Elizabeth Kerr
 - Proposed Budget: \$193,652

AWARDS & HONORS

Teaching

- Rev. Edmund P. Joyce, C.S.C., Award for Excellence in Undergraduate Teaching 2018
- First-Year Engineering Teaching Apprentice Program (FYETAP) Fellowship 2011 - 2012
- Dondanville Family Award for Outstanding Teaching by a Graduate Student 2008

Research

- Charles C. Zollman Award from the PCI Journal 2015
- PCI Annual Convention and Exhibition Travel Fellowship 2011
- EERI US/Canadian National Earthquake Engineering Conference Travel Grant 2010
- Univ. of Notre Dame - Dept. of Civil Engineering Travel Grant 2008 - 2010

Professional

- Seismic Retrofit of the State Bar Building of California, 180 Howard Street, San Francisco, CA
 - Member of Project Design and Construction Administration Team for WJE Associates, Inc.
 - Project Received AISC Presidential Award for Excellence in Structural Engineering 2008
 - Project Received SEAONC Certificate of Merit for Best Retrofit/Alteration 2007

Academic

- Univ. of Notre Dame Lilly Fellowship 2007 - 2011
- Georgia Institute of Technology President's Fellowship 2001 - 2002
- Univ. of Notre Dame Dean's List 1999 - 2001
- Univ. of Notre Dame Dailey Memorial Scholarship 1998 - 1999
- Univ. of Notre Dame Alumni Club of New Haven, CT Scholarship 1997 - 1998

SERVICE ACTIVITIES

University Committees

- Mentoring Guidelines for Non-Tenure Track Faculty - Member 2018 - Present

College Committees

- College Council - Member 2019 - Present

Departmental Committees

- CEEES ABET Committee - Member 2019 - Present
- CEEES Build Break Perfect and Undergraduate Recruitment Committee - Member 2020 - Present
- CEEES Professional's Master Program Committee - Member 2020 - Present
- CEEES Structural Engineering Tenured-Track Faculty Search Committee - Member 2020 - 2021
- CEEES Braun Teaching Faculty Search Committee - Member 2020 - 2021
- CEEES Massman Beavers Professor of the Practice Search Committee - Member 2020 - 2021
- CEEES CA and CRPT Procedures Committee - Member 2019 - 2020
- CEEES Undergraduate Studies Committee - Member 2015 - 2020
- CEEES Resiliency and Sustainability Minor Committee - Member 2016 - 2017
- CEEES First-Year Engineering Committee - Chair and Member 2015 - 2017

Professional Committees

- Transportation Research Board - University Representative 2013 - Present
- ACI 550 Committee: Revisions to ACI ITG-5.2 - Code Reviewer 2013 - 2015

Undergraduate Outreach and Mentoring

- AISC Student Steel Bridge Competition - Faculty Advisor 2017 - Present
- Notre Dame Sophomore Mentor Program - Professional Mentor 2015 - 2016
- Building Bridges Mentoring Program - Faculty Mentor 2012 - 2013

Academic Journals

- Structures - Journal Reviewer 2017 - Present
- Construction and Building Materials - Journal Reviewer 2016 - Present
- Engineering Structures - Journal Reviewer 2016 - Present
- Materials and Design - Journal Reviewer 2016 - Present
- Advances in Structural Engineering - Journal Reviewer 2015 - Present
- ASCE Journal of Structural Engineering - Journal Reviewer 2008 - Present

GRADUATE STUDENT ADVISING COMMITTEES

- Theresa Aragon – “Type III Grouted Seismic Rebar Connections for Precast Concrete Structures”
- Member of Ph.D. Dissertation Review Committee, Summer 2018
- Casey Casias – “Novel Bridge Forms Composed of Temporary Modules for Transitional Bridges”
- Member of M.S. Thesis Review Committee, Spring 2015

PROFESSIONAL MEMBERSHIPS & AFFILIATIONS

- American Institute of Steel Construction (AISC)
- American Society of Civil Engineers (ASCE)
- Earthquake Engineering Research Institute (EERI)
- Precast/Prestressed Concrete Institute (PCI)
- Tau Beta Pi - Univ. of Notre Dame Chapter