

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

Associate Teaching Professor

University of Notre Dame

Department of Civil & Environmental Engineering & Earth Sciences

156 Fitzpatrick Hall, Notre Dame, IN 46556

Tel: (574) 631-5332; Email: bsmith24@nd.edu

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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

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**PROFESSIONAL REGISTRATION**

**Licensed Professional Engineer (P.E.) in California**

**(2004-Present)**

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**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 civil and 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.

### **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 |

**REFEREED PUBLICATIONS**

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**Refereed Journal Publications**

- [1] Gerbo, E., Wang, Y., Tumbava, 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 ASEE Annual Conference and Exposition*, Montreal, Quebec, Canada, 21-24 June 2020, 12 pp. (Publication in Preparation)
- [2] Smith, B. (2019) "Evaluation of a Flipped Classroom in Structural Steel Design," *Proceedings of the 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 9<sup>th</sup> U.S. National and 10<sup>th</sup> 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 3<sup>rd</sup> 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 9<sup>th</sup> International Conference on Urban Earthquake Engineering and 4<sup>th</sup> 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.

## **PROPOSAL AND GRANTS**

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### **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: “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**

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**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**

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**University Committees**

- Mentoring Guidelines for Non-Tenure Track Faculty - Member (2018-2019)

**College Committees**

- College Council - Member (2019-Present)

**Departmental Committees**

- CEEES CA and CRPT Procedures Committee - Member (2019-Present)
- CEEES Undergraduate Studies Committee - Member (2015-Present)
- CEEES Undergraduate Education / Curriculum Committee - Member (2015-Present)
- CEEES Resiliency and Sustainability Minor Committee - Member (2016-2017)
- CEEES Undergraduate 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 and Graduate Student Organizations**

- AISC Student Steel Bridge Competition - Faculty Co-Advisor (2014-2015, 2017-Present)
- CE-GEOS Graduate Student Seminar Series - Co-Founder (2009-2011)
- Earthquake Engineering Research Institute - Notre Dame Chapter Co-President (2009-2011)

**Undergraduate Outreach and Mentoring**

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