

# PHILIP SCOTT HARVEY JR, PhD, PE, SE(OK)

Civil Engineering & Environmental Science 202 W Boyd St, Room 334 Norman, OK 73019-1024 P// 405 325 3836 F// 405 325 4217 E// harvey@ou.edu

# **EDUCATION**

PhD	Civil & Environmental Engineering, Duke University, Durham, NC	9/2013
	Dissertation: Rolling isolation systems: modeling, analysis, and assessment	
MS	Civil & Environmental Engineering, Duke University, Durham, NC Thesis: <i>Modeling and control of an equipment isolation system for critical facilities</i>	5/2012
BSE	Civil & Environmental Engineering, Duke University, Durham, NC Magna Cum Laude, Graduation with Distinction in Civil Engineering	5/2009

#### EMPLOYMENT

#### ACADEMIC EMPLOYMENT

<ul> <li>Associate Professor, The University of Oklahoma, Norman, OK</li> <li>School of Civil Engineering and Environmental Science</li> </ul>	7/2020 – present
<b>Director</b> , The University of Oklahoma, Norman, OK • Donald G. Fears Structural Engineering Laboratory	7/2024 – present
<ul> <li>Assistant Professor, The University of Oklahoma, Norman, OK</li> <li>School of Civil Engineering and Environmental Science</li> </ul>	8/2014 - 6/2020
<ul> <li>Postdoctoral Associate, Duke University, Durham, NC</li> <li>Supervisor: Professor Lawrence N Virgin, Mechanical Engineering &amp; Mater</li> </ul>	8/2013 – 8/2014 ial Science
<ul> <li>Adjunct Professor of Engineering, Duke University, Durham, NC</li> <li>Department of Mechanical Engineering &amp; Material Science</li> </ul>	1/2014 - 5/2014
Graduate Research Assistant, Duke University, Durham, NC • Advisor: Professor Henri P Gavin, Civil & Environmental Engineering	8/2009 - 7/2013
<ul> <li>Teaching Assistant, Duke University, Durham, NC</li> <li>CEE 423 Metallic Structures, Fall 2012</li> <li>CEE 134 Metallic Structures, Fall 2011 and Fall 2008</li> <li>CEE 130 Structural Design and Optimization, Spring 2011 and Spring 2008</li> </ul>	1/2008 – 7/2013
<ul> <li>Pratt Undergraduate Research Fellow, Duke University, Durham, NC</li> <li>Advisor: Professor Zbigniew J Kabala, Civil &amp; Environmental Engineering</li> </ul>	8/2008 - 5/2009
INDUSTRY EMPLOYMENT	
Civil Engineering Intern, Albemarle & Associates, Ltd., Kill Devil Hills, NC	5/2007 - 8/2007
• Designed wastewater and stormwater systems, and performed on-site const	ruction monitoring

Composed preliminary cost estimates and assembled design drawings

# **RELEVANT EXPERIENCE**

### SUPERVISION OF STUDENTS

Doctor of Philosophy Degree, The University of Oklahoma

- Esteban Villalobos Vega (OU GCoE PhD Recruitment Excellence Fellowship), Dissertation: TBD (Expected 2024)
- Richard Campos, Dissertation: "Enhancing Resilience in Electrical Distribution Infrastructure: A Multihazard Analysis and Component Fragility Assessment for High Winds and Wildfires" (Expected 2024)
- Mohammad H Tehrani (OU GCoE Dissertation Excellence Award), "Design and Assessment of Innovative Dual-mode Rolling Isolation Systems" (Summer 2019)

### Master of Science Degree, The University of Oklahoma

- A Rose Thomas (AME), Thesis: TBD (Expected Spring 2024)
- Stone Brackett, Thesis: "Modeling and Designing a Vertical Isolation System using Properties of Negative Stiffness" (May 2022)
- Puthynan Bin (2nd Place, OU Three Minute Thesis 2021), Thesis: "Evaluating the Performance of a Nonlinear Dual-mode Vibration Isolator/Absorber System" (May 2021)
- Braulio A Covarrubias Vargas, Thesis: "Real-Time Hybrid Simulation Study of Multi-Functional Floor Isolation Systems" (May 2021)
- Thomas M N Cain (People's Choice, OU Three Minute Thesis 2020), Thesis: "Modeling, Characterizing, and Testing a Simple Negative Stiffness Device to Achieve Apparent Weakening" (May 2020)
- Skylar J Calhoun, Thesis: "Evaluation of Rolling-type Isolation Systems for Seismic Hazard Mitigation" (June 2018)
- Corey D Casey, Thesis: "Rolling-type Isolation: An Experimental Characterization and Numerical Parametric Study" (December 2017)
- Samantha K Heinrich, Thesis: "Oklahoma Earthquakes and Their Effects on Highway Bridges" (May 2017)
- Ivanna A Kaid Bay Cortez, Thesis: "Effects of Seismic Loading on Oklahoma Highway Bridges" (December 2016)
- Kevin D Wise, Thesis: "Design Guidance for Installing Vibration Sensitive Equipment in Industrial Facilities" (August 2016)

# Undergraduate Research Supervision, The University of Oklahoma

- Mia A Griffin (HERE Scholar), Topic: On the Effect of Vertical Flexibility in Objects Isolated on Pendulum-type Systems (Spring 2022)
- Erika N Vanderheiden, Topic: Simulating 3D Floor Motions in Buildings (Spring 2022)
- Chaani A Rao (HERE Scholar; 2nd Place, Systems and Analytics, 2023 Undergraduate Research Day), Topic: Mechanical Properties of 3D-Printed Brackets for Art Exhibits (Fall 2022)
- · Edita Pipic (HERE Scholar, Davis Scholar), Topic: Innovative 3D-Printed Isolation Devices

(Spring 2022)

- A Rose Thomas (HERE Scholar), Topic: Bio-Inspired Quadrilateral Isolation System (Spring 2021 present)
- Miguel A Payan (OK-LSAMP Scholar; HERE Scholar; 2nd Place Oral Research Presentation, 29th Annual OK-LSAMP Research Symposium 2023), Topic: 3D-Printed Double Rolling Isolation Systems (Spring 2021)
- Chase L Hibbard (3D<sup>3</sup> Scholar), Topic: Development and Implementation of a Low-Cost 3D-Printed Shake Table for Outreach Activities (CY 2021)
- Stone L Brackett (Honors Research, HERE Scholar, National Merit Scholar), Topic: Characterizing and Testing 3D Printed Isolators (AY 2019-21)
- Puthynan Bin (Davis Scholar), Topic: Experimental Evaluation of a Dual-Mode Vibration Isolator/Absorber System (Spring 2020 – Spring 2021)
- Braulio A Covarrubias Vargas (Davis Scholar), Topic: Real-Time Hybrid Simulation of Rolling Pendulum Isolators (Spring 2020)
- Mehrun Nisa (Davis Scholar), Topic: Numerical Evaluation of Dual-Mode Vibration Isolator/Absorber Systems (AY 2019-20)
- Thomas M Cain (Honors Research; HERE Scholar; National Merit Scholar; Honorable Mention, OU Undergraduate Research Day 2019), Topics: Buckling Characterization and Testing 3D Printed Structures (AY 2017–18), Design of a Simple Negative Stiffness Device (AY 2018–19)
- Justin H Porter (Honors Research; HERE Scholar; National Merit Scholar; Honorable Mention, OU Undergraduate Research Day 2019), Topics: Dynamic Characterization and Testing 3D Printed Structures (AY 2017–18), Vibration Absorbers to Enforce Nodes on Beams (AY 2018–19)
- Kevin J Lepissier (Davis Scholar), Topic: Development of Oklahoma Turnpike Authority's Postearthquake Response Plan (AY 2017–18)
- Stephanie L Fox (Honors Research, HERE Scholar, National Merit Scholar), Topic: Static Characterization and Testing 3D Printed Structures (AY 2017–18)
- Guy Elisha (Honors Research, HERE Scholar, Davis Scholar), Topic: Measuring Structural Responses with Video Cameras (AY 2016–17)
- Samantha K Heinrich (Honors Research; The Phi Kappa Phi Award for Distinguished Undergraduate Research, OU Undergraduate Research Day 2016; 2nd Place, 2015 Oklahoma Transportation Research Day Poster Competition; ), Topic: Development of Oklahoma Department of Transportation's Post-earthquake Response Protocol (AY 2015–16)
- Nisal D Halaba Arachchige Senarathna (Davis Scholar), Topic: Testing and Evaluation of Multifunctional Floor Isolation Systems (AY 2015–16)
- Skylar J Calhoun (OK-LSAMP Scholar; 2nd Place, 2015 OK-LSAMP Research Symposium Poster Competition), Topic: High-performance Rolling Isolation Technologies (AY 2014–15)
- Kristen Hayden (Honors Research), Topic: Experimental Evaluation of a Nonlinear Sliding Isolation System (AY 2014–15)

# 3D-Printing Dynamics Design (3D<sup>3</sup>) Scholars, The University of Oklahoma

- W Bailey Barnes, Data Publication: "Structural Dynamics Principals Demonstrated With 3-D Printed Models" (Fall 2023)
- Dylan A Becerra, Data Publication: "How 3-D Printing Can Display Structural Dynamics" (Fall

2023)

- Bethany F Hutto, Data Publication: "Modeling Dynamic Systems Through 3D Printing" (Fall 2023)
- Aaron K Lehman, Data Publication: "Structural Dynamics Investigated Through 3-D Printing" (Fall 2023)
- Amanda G Mundt, Data Publication: "Structural Dynamics Through the Lens of 3-D Printing" (Fall 2022)
- Menziwokuhle B Thwala, Data Publication: "Exploring Structural Dynamics Principles Using 3D Printing Methods" (Fall 2022)
- Mia A Griffin, Data Publication: "Exploration of Dynamics through 3-D Printed Designs" (Fall 2022)
- Robbie E Yarbrough, Data Publication: "Scotch Yoke Movement of a Shake Table" (Fall 2022)
- Erika Vanderheiden (Fall 2021)
- Nanziri Esther Kayondo (Fall 2021)
- Dallely Ramirez Velasco (Fall 2021)
- Yumin Song (Fall 2021)

### **Research Experiences for Undergraduates (REU)**

- Demetra "Jamie" Karras (NHERI Lehigh EF REU), Wake Forest University (Summer 2022)
- Daleen M Torres Burgos (NHERI Lehigh EF REU), University of Puerto Rico–Mayaguez (Summer 2021)

#### CEES Professional Internship/Co-op (CEES 4423), The University of Oklahoma

· James V Devers, CEC Corporation Intern (Fall 2018)

# **TEACHING RELATED EXPERIENCE**

The University of Oklahoma, Norman, OK

8/2014 - present

•	• Summary of Course Evaluations (questions tracked for department evaluation)				
	<u>Courses Taught</u>	Enrollment	<u> </u>	_ <u>D</u>	<u> </u>
	CEES 3263 Intro Dynamics – ArchE/CE, Fall 2023	58	-	_	-
	CEES 4901/4991 Intro to CE/AE Capstone, Fall 2023	35/20	_	_	-
	CEES 5683 Dynamics of Structures, Fall 2023	15	_	_	-
	CEES 4903/4993 CE/AE Capstone, Spring 2023 <sup>§</sup>	43/16	_	_	-
	CEES 5663 Structural Analysis II, Spring 2023	11	_	_	-
	CEES 5683 Dynamics of Structures, Spring 2023 <sup>‡</sup>	12	-	-	-
	CEES 4901/4991 Intro to CE/AE Capstone, Fall 2022 <sup>§</sup>	43/17	4.848	4.566	-
	CEES 4903/4993 CE/AE Capstone, Spring 2022 <sup>§</sup>	36/17	4.397	4.566	_
	CEES 5683 Dynamics of Structures, Spring 2022 <sup>‡</sup>	22	-	_	_
	CEES 4901/4991 Intro to CE/AE Capstone, Fall 2021§	36/17	4.667	4.347	4.253
	CEES 5683 Dynamics of Structures, Fall 2021	13	4.889	4.347	4.253
	CEES 4903/4993 CE/AE Capstone, Spring 2021 <sup>§</sup>	48/15	4.467	4.363	4.192
	CEES 5683 Dynamics of Structures, Spring 2021 <sup>‡</sup>	17	4.222	4.363	4.192
	CEES 5970 Structural Analysis II, Spring 2021	12	4.714	4.363	4.192

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CEES 4901/4991 Intro to CE/AE Capstone, Fall 2020 <sup>§</sup>	48/16	4.571	4.189	4.205
CEES 4903/4993 CE/AE Capstone, Spring 2020 <sup>§</sup>	62/9	4.309	4.364	4.205
CEES 5683 Dynamics of Structures, Spring 2020 <sup>‡</sup>	16	4.708	4.364	4.205
CEES 3263 Intro Dynamics – ArchE/CE, Fall 2019	67	4.762	4.405	4.243
CEES 5683 Dynamics of Structures, Fall 2019	15	4.684	4.405	4.243
CEES 3263 Intro Dynamics – ArchE/CE, Fall 2018	69	4.687	4.358	4.116
CEES 5970 Structural Analysis II, Fall 2018	23	4.273	4.358	4.116
CEES 2153 Mechanics of Materials, Spring 2018	69	4.707	4.356	4.147
CEES 5683 Dynamics of Structures, Spring 2018	14	4.370	4.356	4.147
CEES 3263 Intro Dynamics – ArchE/CE, Fall 2017	72	4.774	4.319	4.151
CEES 2153 Mechanics of Materials, Spring 2017	53	4.742	4.234	4.130
CEES 3263 Intro Dynamics – ArchE/CE, Fall 2016	61	4.461	4.259	4.218
CEES 5970 Structural Analysis II, Fall 2016	18	4.833	4.256	4.218
CEES 2153 Mechanics of Materials, Spring 2016	72	4.632	4.320	4.145
CEES 5683 Dynamics of Structures, Spring 2016	10	4.033	4.320	4.145
CEES 2113 Statics, Fall 2015	49	4.278	4.176	4.125
CEES 2153 Mechanics of Materials, Spring 2015	58	4.672	4.365	4.258
CEES 5970 Structural Analysis II, Fall 2014	7	4.857	4.299	4.184

Key: <sup>‡</sup> = online; <sup>§</sup> = co-taught; I = individual score, D = departmental average score, C = college of engineering average score; Scale: 1 (poor) to 5 (excellent)

<ul> <li>Independent Studies and Professional Internships</li> </ul>	<b>Enrollment</b>
CEES 6990 Independent Study – Infrastructure Resilience, Spring 2022	4
CEES 3980 Honors Research, Spring 2021	1
CEES 5990 Independent Study – Real-Time Hybrid Simulation, Spring 2021	1
CEES 3980 Honors Research, Spring 2021	2
CEES 5990 Independent Study – Real-Time Hybrid Simulation, Summer 2020	) 1
CEES 3990 Independent Study – Buckling of Engr Structures, Spring 2020	1
CEES 3980 Honors Research, Spring 2020	1
CEES 5990 Independent Study – Linear System Theory, Spring 2019	1
CEES 5990 Independent Study – Vibration Suppression, Spring 2019	1
CEES 4423 Professional Internship/Co-op, Fall 2018	1
CEES 3980 Honors Research, Spring 2018	3
CEES 5990 Independent Study – Blast Loading of Structures, Summer 2017	1
CEES 3980 Honors Research, Spring 2017	1
CEES 3980 Honors Research, Spring 2016	1
CEES 3990 Independent Study, Spring 2016	1
CEES 3980 Honors Research, Spring 2015	1
CEES 3990 Independent Study, Spring 2015	1
Duke University, Durham, NC	1/2014 - 5/2014
ECR 244 Dynamics Spring 2014	

• EGR 244 Dynamics, Spring 2014

### **COMMITTEE SERVICE**

#### PhD Dissertation Committees (6 total)

Ali Shojaeian, H M Imran Kays, Jacob G Choate, Christopher M Zaverdas (Spring 2020; Rensselaer Polytechnic Institute), Johathan D Labriola (Spring 2020; OU School of Meteorology), Yingjun Wang (Spring 2019), Jonathan D Drury (Summer 2018), Cameron D Murray (Summer 2017)

#### MS Thesis Committees (11 total)

Abdirahman A Haibe (expected Spring 2023), Omar M Yadak (expected Spring 2023), Alexandra C Liever (expected Spring 2023), Zachary G Tiry (expected Spring 2023), Jeremiah M Boldes (expected Spring 2023), Kim Serey Vuth Chea (Fall 2020), Kevin J Lepissier (Summer 2020), Sumangali Sivakumaran (Fall 2019), Raina L Coleman (Fall 2018), Jacob G Choate (Summer 2018), Afnan Ali (Spring 2018), Alieu Jobe (Spring 2018), Chandler K Funderburg (Spring 2018), Ashwin Kesiraju (Spring 2017), Samuel T Sherry (Spring 2016)

#### **CEES Professional Internship/Co-op** (3 total)

• Nanziri Esther Kayondo (Fall 2022), Charles Hinkle (Spring 2021), Mehrun Nisa (Fall 2019), Jake E Maxwell (Fall 2017)

#### **RESEARCH RELATED EXPERIENCE**

#### Federal Grants (\$21,686,638 total; \$1,769,698 individual credit)

- F1. CAREER: Mitigation of Seismic Risk to Critical Building Contents via Optimum Nonlinear 3D Isolation, National Science Foundation CMMI ECI, Award No. 1943917, Total Budget: \$500,000, Harvey Share: 100% (PI), PoP: 1 August 2020 to 31 July 2025.
- F2. RII Track-1: Socially Sustainable Solutions for Water, Carbon, and Infrastructure Resilience in Oklahoma, National Science Foundation OIA EPSCoR Research Infrastructure, Award No. 1946093, Total Budget: \$20,000,000, Harvey Share: 2.8% (Co-PI), PoP: 1 July 2020 to 30 June 2025.
- F3. MRI: Track 1 Acquisition of a Real-Time Hybrid Simulation Testing System for Cyber-Physical Research and Training, National Science Foundation CMMI ECI, Award No. 2320379, Total Budget: \$589,262, Harvey Share: 28% (PI), Co-PIs: Andres Cavieres, Yingtao Liu, Shreya Vemuganti, and Jeffery S Volz, PoP: 1 October 2023 to 30 September 2026.
- F4. Precast Ductile End-Diaphragm System for Accelerated Construction of Slab-on-Girder Prestressed Concrete Bridges in Seismic Regions, U.S. Department of Transportation, Accelerated Bridge Construction University Transportation Center (ABC-UTC), Total Budget: \$50,000, Harvey Share: 60% (PI), Co-PI: R W Floyd, PoP: 1 June 2023 to 31 May 2024.
- F5. RII Track-4: Quantifying Seismic Resilience of Multi-Functional Floor Isolation Systems through Cyber-Physical Testing, National Science Foundation OIA EPSCoR Research Infrastructure, Award No. 1929151, Total Budget: \$182,648, Harvey Share: 100% (PI), PoP: 1 December 2019 to 30 November 2021.
- F6. Analysis and Design of a Nonholonomic, Impact-Based, Dual-Mode Vibration Isolator/Absorber System, National Science Foundation CMMI DCSD, Award No. 1663376, Total Budget: \$277,526, Harvey Share: 100% (PI), PoP: 4 August 2017 to 31 July 2021.
- F7. Development of ABC Course Module The Risk Due to Induced Earthquakes and Accelerated Solution, U.S. Department of Transportation, Accelerated Bridge Construction University Transportation Center (ABC-UTC), Total Budget: \$11,047, Harvey Share: 80% (PI), Co-PI:

KK Muraleetharan, PoP: 1 January 2019 to 31 December 2019.

F8. Rapid Retrofitting Techniques For Induced Earthquakes, U.S. Department of Transportation, Accelerated Bridge Construction University Transportation Center (ABC-UTC), Total Budget: \$76,155, Harvey Share: 60% (PI), Co-PI: K K Muraleetharan, PoP: 1 January 2018 to 1 July 2019.

#### State/Regional Grants (\$227,455 total; \$155,441 individual credit)

- S1. Maintenance of ShakeCast-OTA (Phase 3), Oklahoma Turnpike Authority, Total Budget: \$16,984, Harvey Share: 50% (PI), Co-PI: A P Kyprioti, PoP: 1 September 2024 to 31 August 2026.
- S2. Maintenance of ShakeCast-ODOT, Oklahoma Department of Transportation, Total Budget: \$20,972, Harvey Share: 80% (PI), Co-PI: KK Muraleetharan, PoP: 23 January 2023 to 22 January 2026.
- S3. Maintenance of ShakeCast-OTA, Oklahoma Turnpike Authority, Total Budget: \$13,857, Harvey Share: 80% (PI), Co-PI: K K Muraleetharan, PoP: 9 July 2022 to 31 July 2024.
- S4. Operation of ShakeCast-OTA, Oklahoma Turnpike Authority, Total Budget: \$18,000, Harvey Share: 80% (PI), Co-PI: K K Muraleetharan, PoP: 9 July 2019 to 8 July 2022.
- S5. OTA Earthquake Response Plan, Oklahoma Turnpike Authority (subcontract through Infrastructure Engineers, Inc.), Total Budget: \$25,500, Harvey Share: 80% (PI), Co-PI: K K Muraleetharan, PoP: 1 July 2018 to 30 June 2019.
- S6. Post-Earthquake Bridge Inspection Guidelines Phase 2, Oklahoma Department of Transportation (subcontract through Infrastructure Engineers, Inc.), Total Budget: \$25,000, Harvey Share: 80% (PI), Co-PI: K K Muraleetharan, PoP: 1 July 2017 to 30 June 2020.
- S7. Post-Earthquake Bridge Inspection Guidelines, Oklahoma Department of Transportation (subcontract through Infrastructure Engineers, Inc.), Total Budget: \$107,142, Harvey Share: 60% (PI), Co-PI: K K Muraleetharan, PoP: 1 May 2015 to 30 June 2017.

Industry-Sponsored Research (\$5,000 total; \$5,000 individual credit)

I1. Shake Table Testing on WorkSafe Technologies' ISO-Base and OCTO-Base Seismic Isolation Platforms, Total Budget: \$5,000, Harvey Share: 100% (PI), PoP: 1 February to 31 March 2017.

University Grants (\$26,315 total; \$21,315 individual credit)

- U1. Developing an Experiential Learning Module on Earthquake Engineering, Ed Cline Faculty Development Award, Faculty Senate, University of Oklahoma, Total Budget: \$2,465, Harvey Share: 100% (PI), PoP: 1 March 2018 to 31 August 2018.
- U2. Assessment of Earthquake Ground-motion Hazards and Mitigation with Equipment Isolation, Faculty Investment Program, Vice President for Research, University of Oklahoma, Total Budget: \$13,850, Harvey Share: 100% (PI), PoP: 1 March 2016 to 30 September 2016.
- U3. Safer School Buildings for Wind and Earthquakes: A Multidisciplinary Approach, College of Engineering, University of Oklahoma, Total Budget: \$10,000, Harvey Share: 50% (PI), PoP: 1 August 2015 to 31 August 2016.

# PUBLICATIONS

**Key:** \* = graduate student (co-)author; <sup>+</sup> = undergraduate student (co-)author

# **REFEREED JOURNAL ARTICLES**

#### Published/Accepted

- J1. R Campos<sup>\*</sup>, B L Puxley, M A Long, & **P S Harvey Jr**, "The 2023 Oklahoma wildfire outbreak: a case study in meteorological conditions, wildfire hazard, and community resilience," *Natural Hazards* (in press). doi:10.1007/s11069-024-06824-6
- J2. R Campos\*, **PS Harvey Jr**, & G Hou (2023), "Analytical fragility curves for trees subject to ice loading in a changing climate," *Sustainable and Resilient Infrastructure* 8(6): 555–571. doi: 10.1080/23789689.2023.2202962
- J3. HM Kays, AM Sadri, KK Muraleetharan, **PS Harvey Jr**, & GA Miller (2024), "Exploring the interdependencies between transportation and stormwater networks: The case of Norman, Oklahoma," *Transportation Research Record* 2678(5): 491–513. doi:10.1177/03611981231189747
- J4. L N Virgin & **PS Harvey Jr** (2023), "A lateral–torsional buckling demonstration model using 3D printing," *Engineering Structures* 280: 115682. doi:10.1016/j.engstruct.2023.115682
- J5. G Hou, KK Muraleetharan, V Panchalogaranjan, P Moses, A Javid, H Al-Dakheeli, R Bulut, R Campos\*, PS Harvey, G Miller, K Boldes, & M Narayanan (2023), "Resilience assessment and enhancement evaluation of power distribution systems subjected to ice storms," *Reliability Engineering & System Safety* 230: 108964. doi:10.1016/j.ress.2022.108964
- J6. B A Covarrubias Vargas\*, P S Harvey Jr, L Cao, J M Ricles, S Al-Subaihawi, & E Villalobos Vega\* (2022), "Characterization and real-time hybrid simulation testing of rolling pendulum isolation bearings with different surface treatments," *Earthquake Engineering & Structural Dynamics* 51(11): 2668–2689. doi:10.1002/eqe.3694
- J7. P Bin\* & **PS Harvey Jr** (2022), "A dual-mode floor isolation system to achieve vibration isolation and absorption: Experiments and theory," *Journal of Sound and Vibration* 525: 116757. doi:10.1016/j.jsv.2022.116757
- J8. P Bin\*, MH Tehrani\*, M Nisa<sup>†</sup>, **PS Harvey Jr**, & A A Taflanidis (2021), "Analysis and optimization of a nonlinear dual-mode floor isolation system subjected to earthquake excitations," *Earthquake Engineering & Structural Dynamics* 50(9): 2334–2354. doi:10.1002/eqe.3449
- J9. D Di Maio & **PS Harvey Jr** (2021), "Special issue on computer vision and scanning laser vibrometry methods," *Experimental Techniques* 45: 237–239. doi:10.1007/s40799-021-00480-2
- J10. M H SoleimaniBabakamali, A Moghadam, R Sarlo, M H Hebdon & **P S Harvey Jr** (2021), "Mast arm monitoring via traffic camera footage: A pixel-based modal analysis approach," *Experimental Techniques* 45: 329–343. doi:10.1007/s40799-020-00422-4
- J11. A Z Hosseinzadeh\*, MH Tehrani\*, & PS Harvey Jr (2021), "Modal identification of building structures using vision-based measurements from multiple interior surveillance cameras," *Engineering Structures* 288: 111517. doi:10.1016/j.engstruct.2020.111517
- J12. **PS Harvey Jr**, R Wiebe, & TMN Cain\* (2020), "Inextensibility and its effect on the number of equilibria of shallow buckled beams," *ASME Journal of Applied Mechanics* 87(12): 121007. doi:10.1115/1.4048199
- J13. TMN Cain\*, **PS Harvey Jr**, & KK Walsh (2020), "Modeling, characterizing, and testing a simple, smooth negative-stiffness device to achieve apparent weakening," *Journal of Engineering Mechanics* 146(10): 04020114. doi:10.1061/(ASCE)EM.1943-7889.0001823
- J14. **P S Harvey Jr** & T M N Cain<sup>†</sup> (2020), "Buckling of elastic columns with initial imperfections and load eccentricity," *Structures* 23: 660–664. doi:10.1016/j.istruc.2019.09.021
- J15. A Z Hosseinzadeh\* & PS Harvey Jr (2019), "Pixel-based operating modes from surveillance

videos for structural vibration monitoring: A preliminary experimental study," *Measurement* 148: 106911. doi:10.1016/j.measurement.2019.106911

- J16. R Wiebe & **PS Harvey Jr** (2019), "On the Euler-Lagrange equation for planar systems of rigid-bodies or lumped masses," *ASME Journal of Computational and Nonlinear Dynamics* 14(9): 094502. doi:10.1115/1.4044145
- J17. **PS Harvey Jr**, LN Virgin, & MH Tehrani<sup>\*</sup> (2019), "Buckling of elastic columns with secondmode imperfections," *Meccanica* 54: 1245–1255. doi:10.1007/s11012-019-01025-z
- J18. J H Porter<sup>†</sup> & **P S Harvey Jr** (2019), "Imposing nodes at desired locations along a beam under harmonic base excitation: Theory and experiment," *Journal of Vibration and Acoustics* 141(6): 061003. doi:10.1115/1.4044186
- J19. MH Tehrani<sup>\*</sup> & **PS Harvey Jr** (2019), "Enhanced passive control of dual-mode systems under extreme seismic loading: An optimal control approach," *Structural Control and Health Monitoring* 26: e2367. doi:10.1002/stc.2367
- J20. SJ Calhoun\*, MH Tehrani\*, & **PS Harvey Jr** (2019), "On the performance of double rolling isolation systems," *Journal of Sound and Vibration* 449: 330–348. doi:10.1016/j.jsv.2019.02.030
- J21. J H Porter<sup>†</sup>, T M Cain<sup>†</sup>, S L Fox<sup>†</sup>, & **P S Harvey Jr** (2019), "Influence of infill properties on flexural rigidity of 3D-printed structural members," *Virtual and Physical Prototyping* 14(2): 148–159. doi:10.1080/17452759.2018.1537064
- J22. MH Tehrani<sup>\*</sup> & **PS Harvey Jr** (2019), "Generation of synthetic accelerograms for telecommunications equipment: fragility assessment of a rolling isolation system," *Bulletin of Earthquake Engineering* 17: 1715–1735. doi:10.1007/s10518-018-0505-7
- J23. MH Tehrani<sup>\*</sup>, **PS Harvey Jr**, HP Gavin, & A M Mirza (2018), "Inelastic condensed dynamic models for estimating seismic demands for buildings," *Engineering Structures* 177: 616–629. doi:10.1016/j.engstruct.2018.07.083
- J24. **PS Harvey Jr** & G Elisha<sup>†</sup> (2018), "Vision-based vibration monitoring using existing cameras installed within a building," *Structural Control and Health Monitoring* 25:e2235. doi:10.1002/stc. 2235
- J25. CDCasey<sup>\*</sup>, **PS Harvey Jr**, & WSong (2018), "Multi-unit rolling isolation system arrays: Analytical model and sensitivity analysis," *Engineering Structures* 173: 656–668. doi:10.1016/j. engstruct.2018.06.118
- J26. SJ Calhoun\* & **P S Harvey Jr** (2018), "Enhancing the teaching of seismic isolation using additive manufacturing," *Engineering Structures* 167: 494–503. doi:10.1016/j.engstruct.2018.03.084
- J27. **P S Harvey Jr**, G Elisha<sup>†</sup>, & C D Casey<sup>\*</sup> (2018), "Experimental investigation of an impact-based, dual-mode vibration isolator/absorber system," *International Journal of Non-Linear Mechanics* 104: 59–66. doi:10.1016/j.ijnonlinmec.2018.02.013
- J28. **P S Harvey Jr**, SK Heinrich<sup>\*</sup>, & KK Muraleetharan (2018), "A framework for post-earthquake response planning in emerging seismic regions: An Oklahoma case study," *Earthquake Spectra* 34(2): 503–525. doi:10.1193/053117EQS100M
- J29. **P S Harvey Jr**, I A Kaid Bay Cortez<sup>\*</sup>, & SK Heinrich<sup>\*</sup> (2018), "Response of a typical Oklahoma bridge to the September 3, 2016, 5.8-magnitude earthquake near Pawnee, Oklahoma," *Journal* of Bridge Engineering 23(2): 04017130. doi:10.1061/(ASCE)BE.1943-5592.0001178
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- C6. PS Harvey Jr, RW Floyd, J-S Pei, L Gruenwald, P Tang\*, DV Doan\*, & JP Havlicek (2017), "Nonlinear vibrations based damage detection for building structural systems," in *Proceedings* of AEI 2017, Oklahoma City, OK, 11–13 April 2017, pp. 638–646. doi:10.1061/9780784480502.053
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- R2. **PS Harvey Jr**, KK Muraleetharan, & S Sivakumaran\*, <u>Rapid Retrofitting Techniques For Induced Earthquakes</u>, Technical Report No. ABC-UTC-2016-C1-OU02-Final, ABC-UTC Florida International University, Miami, FL, January 2020, 88 pp.
- R3. **PS Harvey Jr** & KK Muraleetharan, <u>ABC-UTC Guide for Assessing the Effects of Frequent</u>, <u>Low-Level Seismic Events</u>, ABC-UTC Florida International University, Miami, FL, January 2020, 16 pp.

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- R7. I A Kaid Bay Cortez<sup>\*</sup>, **PS Harvey Jr**, & KK Muraleetharan, <u>Seismic Analysis of the I-35/S. Canadian River Bridge: Structural Aspects</u>, Oklahoma Department of Transportation, Oklahoma City, OK, 7 July 2016, 57 pp.
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#### DATA SETS

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#### PRESENTATIONS

**Key:** \* = graduate student (co-)author; <sup>+</sup> = undergraduate student (co-)author; <u>underline</u> = presenter

#### **NATIONAL AND INTERNATIONAL PRESENTATIONS**

- P1. <u>R Campos</u><sup>\*</sup>, **P S Harvey Jr**, & K K Muraleetharan, "A Preliminary Analysis of the Wildfire Hazard in Oklahoma," 2023 ASCE Engineering Mechanics Institute Conference, Georgia Tech, Atlanta, GA, 6–9 June 2023.
- P2. <u>E Villalobos Vega</u>\*, E N Vanderheiden<sup>†</sup>, & **P S Harvey Jr**, "Investigation on the Performance of a Rolling Pendulum Isolation System Subject to 3D Seismic Excitations," 2023 ASCE Engineering Mechanics Institute Conference, Georgia Tech, Atlanta, GA, 6–9 June 2023.
- P3. MA Griffin<sup>†</sup> & <u>PS Harvey Jr</u>, "On the Effect of Vertical Flexibility in Objects Isolated on Pendulum-type Systems," 2023 ASCE Engineering Mechanics Institute Conference, Georgia Tech, Atlanta, GA, 6–9 June 2023.
- P4. <u>E Villalobos Vega</u>\*, **PS Harvey Jr**, JM Ricles, L Cao, DM Torres Burgos<sup>†</sup>, & Demetra Karras<sup>†</sup>, "Results of a Multi-Directional Real-Time Hybrid Simulation Study of Rolling Pendulum Isolation Systems for Critical Building Contents," 2023 International Modal Analysis Conference XLI, Austin, TX, 13–16 February 2023.
- P5. M Payan<sup>†</sup>, E Villalobos Vega<sup>\*</sup>, & <u>PS HarveyJr</u>, "A Double Rolling Isolation System with Response-Based Adaptive Behavior," 2023 International Modal Analysis Conference XLI, Austin, TX, 13–16 February 2023.
- P6. <u>E Villalobos Vega</u>\*, **PS Harvey Jr**, JM Ricles, L Cao, & DM Torres Burgos<sup>†</sup>, "Multi-directional real-time hybrid simulation study of rolling pendulum isolation systems for seismic risk mitigation of critical building contents," 12th National Conference in Earthquake Engineering, Salt Lake City, UT, 27 June 1 July 2022. [poster]
- P7. <u>**PS Harvey Jr</u>** & CL Hibbard<sup>†</sup>, "Enhancing the Undergraduate Civil Engineering Experience through 3D-Printing, Problem-Based Learning Opportunities," 2022 ASEE Annual Conference, Minneapolis, MN, 26 29 June 2022.</u>
- P8. <u>A R Thomas</u><sup>†</sup> & P S Harvey Jr, "A Bio-Inspired Quadrilateral Shape (BIQS) Isolation Systems for Vibration Reduction of In-Orbit Captures," 2022 ASCE Engineering Mechanics Institute Conference, Johns Hopkins University, Baltimore, MD, 31 May – 3 June 2022.
- P9. <u>E Villalobos Vega</u><sup>\*</sup>, **P S Harvey Jr**, J M Ricles, L Cao, & D M Torres Burgos<sup>†</sup>, "Characterization and Modeling of the Multi-Directional Behavior of Rolling Pendulum Isolation Systems for Critical Building Contents," 2022 ASCE Engineering Mechanics Institute Conference, Johns

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- P10. SL Brackett<sup>\*</sup>, S Navarro Garcia<sup>\*</sup>, & <u>PS Harvey Jr</u>, "Harnessing the Nonlinear Behavior of a Laterally Loaded Arch for Vertical Vibration Isolation," 2022 ASCE Engineering Mechanics Institute Conference, Johns Hopkins University, Baltimore, MD, 31 May 3 June 2022. [keynote presentation]
- P11. <u>E Villalobos Vega</u>\*, **PS Harvey Jr**, J M Ricles, L Cao, & D M Torres Burgos<sup>†</sup>, "Multi-directional real-time hybrid simulation study of rolling pendulum isolation systems for seismic risk mitigation of critical building contents," 2022 International Modal Analysis Conference XL, Orlando, FL, 7–10 February 2022.
- P12. SL Brackett\* & <u>PS Harvey Jr</u>, "Experimental design and evaluation of a vertical isolation system using quasi-zero stiffness," 2022 International Modal Analysis Conference XL, Orlando, FL, 7–10 February 2022.
- P13. <u>E Villalobos Vega</u>\*, B A Covarrubias Vargas\*, PS Harvey Jr, S Al-Subaihawi, L Cao, & J M Ricles, "Real-time hybrid simulation study of multi-functional floor isolation systems," 2021 ASCE Engineering Mechanics Institute Conference (virtual), Columbia University, New York, NY, 25–28 May 2021.
- P14. P Bin\*, <u>PS Harvey Jr</u>, M Nisa<sup>†</sup>, & M H Tehrani\*, "Evaluating the performance of a nonlinear dual-mode vibration isolator/absorber system," 2021 ASCE Engineering Mechanics Institute Conference (virtual), Columbia University, New York City, NY, 25–28 May 2021.
- P15. <u>B A Covarrubias Vargas</u>\*, **P S Harvey Jr**, L Cao, S Al-Subaihawi, & J M Ricles, "Real-time hybrid simulation study of multi-functional floor isolation systems with building-isolator-equipment interactions," 2021 International Modal Analysis Conference XXXIX (virtual), 8–11 February 2021.
- P16. <u>P Bin</u>\* & **P S Harvey Jr**, "Experimental evaluation of the performance of a nonlinear dual-mode vibration isolator/absorber system," 2021 International Modal Analysis Conference XXXIX (virtual), 8–11 February 2021.
- P17. <u>**PS Harvey Jr**</u>, S Sivakumaran<sup>\*</sup>, & K K Muraleetharan, "Rapid retrofitting techniques for induced earthquakes – Phase I," ABC-UTC Research Seminar, online, 30 April 2020.
- P18. MH Tehrani<sup>\*</sup> & <u>PS HarveyJr</u>, "Dynamic coupling of nonlinear equipment isolation systems and the supporting structure," International Modal Analysis Conference XXXVIII, Society of Experimental Mechanics, Houston, TX, 10–13 February 2020.
- P19. <u>PS Harvey Jr</u>, S Sivakumaran<sup>\*</sup>, & K K Muraleetharan, "A framework to quantify the cumulative damage due to induced seismicity," International Accelerated Bridge Construction Conference, Miami, FL, 12–13 December 2019.
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- P21. <u>**PS Harvey Jr**</u>, KK Muraleetharan, & S Sivakumaran<sup>\*</sup>, "Rapid retrofitting techniques for induced earthquakes," ABC-UTC Research Day Meeting, online, 7 May 2019.
- P22. <u>**P S Harvey Jr**</u>, "Light-payload seismic isolation: Passive solutions for multiple objectives," NSF PREEMPTIVE Advanced Studies Institute, Costa Rica, 7 February 2019. [invited]
- P23. <u>A Z Hosseinzadeh</u>\* & **P S Harvey Jr**, "Building vibration monitoring and damage assessment using surveillance cameras," International Modal Analysis Conference XXXVII, Society of Experimental Mechanics, Orlando, FL, 28–31 January 2019.

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- P25. <u>P S Harvey Jr</u>, I A Kaid Bay Cortez\*, KK Muraleetharn, & SK Heinrich\*, "Response of typical Oklahoma bridges to recent earthquakes," 11th National Conference on Earthquake Engineering, Earthquake Engineering Research Institute, Los Angeles, CA, 25–29 June 2018. [invited]
- P26. <u>M H Tehrani</u><sup>\*</sup> & **P S Harvey Jr**, "Enhanced passive isolation under extreme seismic loading: An optimal control approach," EMI Conference 2018, Cambridge, MA, 29 May 1 June 2018.
- P27. SJ Calhoun<sup>\*</sup>, <u>PS Harvey Jr</u>, & MH Tehrani<sup>\*</sup>, "Robust design of double-layer isolation devices," EMI Conference 2018, Cambridge, MA, 29 May – 1 June 2018.
- P28. <u>Z Jiang</u>, A W Maxwell, Z H Merchant, **P S Harvey Jr**, N Tsuchiya, & C Chen, "Evaluation of the effectiveness of using mobile learning in engineering dynamics and vibrations courses," 2018 ASEE Annual Conference & Exposition, American Society for Engineering Education, Salt Lake City, UT, 24–27 June 2018. [poster]
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- P30. <u>**PS Harvey Jr</u>**, "Advancements in light-payload isolation: Theory, experiments, and future needs," NHERI Lehigh Seminar Series, online, 21 March 2018. [invited]</u>
- P31. <u>**PS Harvey Jr**</u>, "Framework for post-earthquake response planning in emerging seismic regions: An Oklahoma case study," Oklahoma Seismicity Workshop, Oklahoma Geological Survey, Norman, OK, 22 February 2018. [invited]
- P32. <u>**P S Harvey Jr</u> & G Elisha<sup>†</sup>**, "Vision-based vibration monitoring using existing cameras installed within a building," International Modal Analysis Conference XXXVI, Society of Experimental Mechanics, Orlando, FL, 12–15 February 2018.</u>
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- P34. <u>**PS Harvey Jr**</u>, CD Casey<sup>\*</sup>, & W Song, "Multi-unit rolling isolation system arrays: Analytical model and experimental validation," EMI Conference 2017, San Diego, CA, 4–7 June 2017.
- P35. <u>GA Hostetler</u>, **PS Harvey Jr**, KK Muraleetharn, S Jacobi, & WL Peters, "Earthquake preparedness and response; Oklahoma DOT's proactive approach for bridges," 11th International Bridge & Structure Management Conference, Mesa, AZ, 23–25 April 2017.
- P36. <u>**PS Harvey Jr**</u>, "Recent Oklahoma earthquakes and the built environment," AEI Conference 2017, Oklahoma City, OK, 11–13 April 2017. [**invited panelist**]
- P37. <u>**PS Harvey Jr</u>** & ND Halaba Arachchige Senarathna<sup>†</sup>, "Inter-story drift measurement with surveillance camera video: An experimental investigation," AEI Conference 2017, Oklahoma City, OK, 11–13 April 2017.</u>
- P38. <u>**P S Harvey Jr**</u>, <u>R W Floyd</u>, J-S Pei, L Gruenwald, P Tang<sup>\*</sup>, D V Doan<sup>\*</sup>, & J P Havlicek, "Nonlinear vibrations based damage detection for building structural systems," AEI Conference 2017, Oklahoma City, OK, 11–13 April 2017.
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- P40. <u>**PS Harvey Jr**</u>, ND Halaba Arachchige Senarathna<sup>†</sup>, & CD Casey<sup>\*</sup>, "Experimental evaluation of multi-functional nonlinear floor isolation systems," International Modal Analysis Conference

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- P42. <u>**PS Harvey Jr</u>**, KK Muraleetharn, SK Heinrich<sup>\*</sup>, & IA Kaid Bay Cortez<sup>\*</sup>, "Post-earthquake bridge inspection protocol for the Oklahoma Department of Transportation," Oklahoma Seismicity Workshop, Oklahoma Geological Survey, Norman, OK, 7–8 September 2016. [invited]</u>
- P43. <u>**P S Harvey Jr**</u>, N D Halaba Arachchige Senarathna<sup>†</sup>, & S J Calhoun<sup>†</sup>, "Application of floor isolation systems for multi-functional seismic mitigation: Computational results." QuakeCoRE Annual Meeting 2016, Taupo, New Zealand, 31 August – 2 September 2016. [poster]
- P44. **PS Harvey Jr** & SJ Calhoun<sup>†</sup>, "Analysis of the rocking response of unrestrained equipment on rolling isolation systems," EMI Conference 2016, Nashville, TN, 22–25 May 2016.
- P45. <u>PS Harvey Jr</u>, <u>H Kanno</u>, <u>H Kishida</u>, & <u>GP Warn</u>, "Base Isolation: Case Study," First International Workshop to Promote Seismic Protective Systems for Civil Structures, Sendai, Japan, 21–22 November 2015.
- P46. <u>**P S Harvey Jr**</u>, "Modeling of multi-unit rolling isolation system arrays," JAEE Annual Conference and International Symposium on Earthquake Engineering, Tokyo, Japan, 19–20 November 2015. [poster]
- P47. <u>**PS Harvey Jr**</u>, "Vertical accelerations in pendulum-type isolation systems: Fundamentally necessary yet potentially destructive," EMI Conference 2015, Stanford, CA, 16–19 June 2015.
- P48. <u>**PS Harvey Jr</u>** & LN Virgin, "Natural frequencies of stiffened plates," International Modal Analysis Conference XXXIII, Society of Experimental Mechanics, Orlando, FL, 2–5 February 2015.</u>
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- P51. **P S Harvey Jr**, G-P Zéhil, & <u>HP Gavin</u>, "Experimental validation of a model for a rolling isolation system," 10th National Conference on Earthquake Engineering, Earthquake Engineering Research Institute, Anchorage, AK, 21–25 July 2014.
- P52. <u>**PS Harvey Jr**</u> & HP Gavin, "Seismic equipment isolation: From physics-based modeling to experimental validation, and beyond," EMI Conference 2013, Evanston, IL, 4–7 August 2013.
- P53. <u>**P S Harvey Jr**</u>, J T Scruggs, & H P Gavin, "A dual method for determining the performance limits of a semiactively constrained control systems," 2012 American Controls Conference, Montréal, Canada, 27–29 June 2012.
- P54. <u>**PS Harvey Jr</u>** & HP Gavin, "Optimal performance of semi-actively constrained control systems," EMI/PMC Conference 2012, Notre Dame, IN, 17–20 June 2012.</u>
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- P57. <u>**PS Harvey Jr</u> & HP Gavin, "Approximate solutions to nonlinearly-constrained optimal control problems**," EMI Conference 2011, Boston, MA, 2–4 June 2011.</u>
- P58. HP Gavin & PS Harvey Jr, "Modeling of rolling equipment isolation systems," EMI Confer-

ence 2011, Boston, MA, 2–4 June 2011.

P59. **P S Harvey Jr** & H P Gavin, "Performance limits imposed by semi-active damping constraints," 2010 American Controls Conference, Baltimore, MD, 30 June – 2 July 2010.

### **REGIONAL AND STATE PRESENTATIONS**

- P60. <u>E Villalobos Vega</u>\*, **PS Harvey Jr**, & RW Floyd, "Precast Ductile End-Diaphragm System for Accelerated Construction of Prestressed Concrete Bridges in Seismic Regions," Oklahoma Transportation Research Day, Oklahoma City, OK, 17 October 2023. [poster]
- P61. <u>M Payan<sup>†</sup></u>, **PS Harvey Jr**, & E Villalobos Vega<sup>\*</sup>, "A double rolling isolation system with response-based adaptive behavior," OK-LSAMP 29th Annual Research Symposium, Oklahoma Louis Stokes Alliance for Minority Participation (OK-LSAMP), Stillwater, OK, 23 September 2023. [2nd place oral presentation]
- P62. <u>E Villalobos Vega</u>\*, **PS Harvey Jr**, & RW Floyd, "Precast Ductile End-Diaphragm System for Accelerated Construction of Prestressed Concrete Bridges in Seismic Regions," Oklahoma Transportation Summer Symposium, Oklahoma City, OK, 24 July 2023. [poster]
- P63. <u>S Sivakumaran</u><sup>\*</sup>, **PS Harvey Jr**, & KK Muraleetharan, "Cumulative damage to Oklahoma bridges due to large number of small earthquakes," 2018 Oklahoma Transportation Research Day, Oklahoma City, OK, 23 October 2018. [poster; honorable mention]
- P64. <u>S Sivakumaran</u>\*, **PS Harvey Jr**, & KK Muraleetharan, "Cumulative damage to Oklahoma bridges due to large number of small earthquakes," Oklahoma Women Impacting STEM and Entrepreneurship (OK-WISE) Conference, Norman, Oklahoma, 13–14 September 2018. [poster]
- P65. <u>S Sivakumaran</u>\*, **PS Harvey Jr**, & KK Muraleetharan, "Cumulative damage to Oklahoma bridges due to large number of small earthquakes," 2018 Summer Symposium, Southern Plains Transportation Center, Oklahoma City, OK, 14 August 2018.
- P66. <u>**PS Harvey Jr**</u> & <u>KK Muraleetharan</u>, "Managing risk to Oklahoma bridges from emerging seismic hazard," National Institute for Risk & Resilience, Norman, OK, 17 October 2017.
- P67. <u>SJ Calhoun</u><sup>†</sup> & PS Harvey Jr, "Performance of isolation systems to protect sensitive equipment under blast & seismic," OK-LSAMP 23rd Annual Research Symposium, Oklahoma Louis Stokes Alliance for Minority Participation (OK-LSAMP), Stillwater, OK, 16 September 2017. [poster, 2nd place]
- P68. I A Kaid Bay Cortez<sup>\*</sup>, <u>SK Heinrich</u><sup>\*</sup>, **PS Harvey Jr**, & KK Muraleetharan, "Seismic response analysis of Oklahoma bridges," 2016 Summer Symposium, Southern Plains Transportation Center, Oklahoma City, OK, 10 August 2016.
- P69. <u>GA Hostetler</u> & <u>PS Harvey Jr</u>, "Oklahoma DOT's post-earthquake bridge inspection guidelines," May 2016 Meeting, Society of American Military Engineers - Tulsa Chapter, Tulsa, OK, 10 May 2016.
- P70. <u>SJ Calhoun</u><sup>†</sup> & **P S Harvey Jr**, "Seismic hazard mitigation for liquid storage tanks with rolling isolation systems," 21st Annual Research Day at the Capital, Oklahoma EPSCoR, Oklahoma City, OK, 29 March 2016. [poster]
- P71. <u>SK Heinrich</u><sup>†</sup>, **PS Harvey Jr**, & KK Muraleetharan, "Smart post-earthquake bridge inspection protocol for Oklahoma," 2015 Oklahoma Transportation Research Day, Oklahoma City, OK, 20 October 2015. [poster; **2nd place**]
- P72. <u>SJ Calhoun</u><sup>†</sup> & **PS Harvey Jr**, "Understanding vertical accelerations in pendulum-type isolation systems," OK-LSAMP 21st Annual Research Symposium, Oklahoma Louis Stokes Alliance for Minority Participation (OK-LSAMP), Stillwater, OK, 26 September 2015. [poster, **2nd place**]

- P73. <u>GA Hostetler</u>, <u>**PS Harvey Jr**</u>, "Oklahoma DOT's post-earthquake bridge inspection guidelines," 2015 Annual Conference, American Society of Civil Engineers - Oklahoma Section, Stillwater, OK, 21 August 2015.
- P74. <u>SJ Calhoun</u><sup>†</sup> & **P S Harvey Jr**, "Importance of vertical accelerations in pendulum-type isolation systems," 2015 Oklahoma Engineering Conference, Oklahoma Society of Professional Engineers, Oklahoma City, OK, 18–19 June 2015. [poster]

### **HONORS & AWARDS**

#### **AWARDS AND FELLOWSHIPS**

President's Associates Presidential Professor, University of Oklahoma	2024 - 2028
Annual Award for Excellence in Research Grants, VPRP, University of Oklahoma	2021
$\cdot$ Recognized for contribution as a PI/co-PI on a grant acquiring \$1 million or more	e in 2020
EERI Registration Grant Recipient, Earthquake Engineering Research Institute	2018
$\cdot$ Selected among a group of early career professionals to receive grant to attend 11	NCEE
Faculty Leadership Academy Fellow, Vice President for Research, University of Okla	homa 2017
<ul> <li>Nominated to participate in a semester-long leadership development program fo faculty</li> </ul>	r early career
James B Duke Fellowship, Duke University	2009 - 2013
<ul> <li>Awarded to exceptional PhD applicants</li> </ul>	
<ul> <li>Provides a \$5,000/year stipend supplement (on top of regular stipend) for four y</li> </ul>	ears
Student Travel Award, American Controls Conference (ACC)	2012
<ul> <li>Selected and awarded by ACC Organizing Committee</li> </ul>	
<ul> <li>Received partial travel support (\$905) to present a paper at 2012 ACC</li> </ul>	
OTHER HONORS	
Invited Member, NHERI Lehigh Experimental Facility Advisory Council 2	021 – present
<ul> <li>Provide input on new directions in natural hazards engineering that promote consiliency, and provide advice to the facility to enable it to broaden its user base in the second se</li></ul>	ommunity re- research
Invited Faculty Lecturer/Mentor, NSF PREEMPTIVE Advanced Studies Institute (AS	I) 2019
• Mentored PhD students during week-long workshop in Costa Rica (February 201	19)
Invited Participant, NSF PREEMPTIVE SAVI Workshops	2015 - 2018
<ul> <li>Attended workshops in Sendai, Japan (November 2015); Christchurch, New Zea 2016); Santiago, Chile (January 2017); and Los Angeles, CA (June 2018)</li> </ul>	land (August
Funded Participant, Asia-Pacific Summer School (APSS), Tokyo, Japan	2010
<ul> <li>Participated in a three week program funded by NSF addressing the hardware, s informatics, and applications of smart structures technology</li> </ul>	oftware, data
<ul> <li>Collaborated with students from Japan, Korea, the US, and China through cou tures, labs, and site visits</li> </ul>	rsework, lec-

# PROFESSIONAL ACTIVITIES AND SERVICE

# **PROFESSIONAL REGISTRATION**

• Registered Professional Engineering, State of Oklahoma, PE with SE, No. 29596 (6/2017 – present)

### **PROFESSIONAL SERVICE/LEADERSHIP**

#### American Society of Civil Engineers (ASCE)

- Member, Engineering Mechanics Institute (EMI)
- Member, EMI Dynamics Committee
- Member, EMI Structural Health Monitoring and Control Committee
- Session Co-organize/Chair, Innovations and Advances in Passive, Active, and Semi-Active Structural Control (MS 603), EMI Conference 2022, Baltimore, MD, 1–3 June 2022
- Session Co-organizer/Chair, Innovations and Advances in Structural Control (MS 603), EMI Conference 2021, New York, NY (online), 25–28 May 2021
- Panelist/Paper Reviewer, EMI Dynamics Committee Student Paper Competition, EMI Conference 2021, New York, NY (online), 25–28 May 2021
- Session Co-organizer, Innovations and Advances in Passive Structural Control (MS 59), EMI Conference 2019, Pasadena, CA, 18–21 June 2019
- Panelist/Paper Reviewer, EMI Dynamics Committee Student Paper Competition, EMI Conference 2019, Pasadena, CA, 18–21 June 2019
- Session Co-organizer, Innovations and Advances in Passive Structural Control (MS 45), EMI Conference 2018, Cambridge, MA, 29 May – 1 June 2018
- Session Chair, Innovations and Advances in Passive Structural Control (MS 45), EMI Conference 2018, Cambridge, MA, 29 May 1 June 2018
- Panelist/Paper Reviewer, Student Paper Competition, EMI Conference 2017, San Diego, CA, 4–7 June 2017
- Invited Panelist, Recent Oklahoma Earthquakes and the Built Environment, AEI Conference 2017, Oklahoma City, OK, 11–13 April 2017
- Session Moderator, Building Envelope (Session 22), AEI Conference 2017, Oklahoma City, OK, 11–13 April 2017
- Session Chair, Seismic Protective Devices for Structures and Nonstructural Components (MS 96), EMI Conference 2017, San Diego, CA, 4–7 June 2017

#### American Society for Engineering Education (ASEE)

• Member, ASEE (2022 – present)

#### Earthquake Engineering Research Institute (EERI)

- Member, EERI (2015 present)
- Session Moderator, Seismic Isolation 2 (TT022), 11th National Conference on Earthquake Engineering, Los Angeles, CA, 25–29 June 2018

# National Science Foundation (NSF)

- Proposal Review Panelist, 2018
- Ad-Hoc Review, 2020

#### Society for Experimental Mechanics (SEM)

- Member, SEM
- Member, Dynamics of Civil Structures Technical Division
- Vice Chair, Dynamics of Civil Structures Technical Division (2/2023 present)
- Secretary, Dynamics of Civil Structures Technical Division (2/2021 2/2023)
- Member, Optical Methods & Computer Vision for Structural Dynamics Focus Group
- · Secretary, Optical Methods & Computer Vision for Structural Dynamics Focus Group (2/2020-1/2021)
- Vice Chair, Optical Methods & Computer Vision for Structural Dynamics Focus Group (1/2019-1/2020)
- Session Chair, Dynamics of Bridges (Session 19), International Modal Analysis Conference XL, Orlando, FL, 7–10 February 2022
- Session Chair, Human-Structure Interaction (Session 15), Advanced Imaging Approaches (Session 64), International Modal Analysis Conference XXXIX, virtual, 8–10 February 2021
- Session Chair, Best Paper Optical Techniques I (Session 68), Best Paper Optical Techniques II (Session 76), Experimental Testing of Civil Structures I (Session 82), International Modal Analysis Conference XXXVIII, Houston, TX, 10–13 February 2020
- Session Chair, Optical Methods I (Session 03), International Modal Analysis Conference XXXVII, Orlando, FL, 28–31 January 2019
- Guest Co-Editor, Special Issue of *Experimental Techniques* (SEM) on Optical Methods, 2019 2021

# Southern Plains Transportation Center (SPTC)

- Session Moderator, Transportation, Geotech and Roadway Safety (Session 2), SPTC Summer Symposium, Oklahoma City, OK, 8 August 2019
- Session Moderator, Bridges and Other Infrastructure (Session 4), SPTC Summer Symposium, Oklahoma City, OK, 14 August 2018
- Session Moderator, Bridges and Infrastructure (Session 2), SPTC Summer Symposium, Oklahoma City, OK, 10 August 2016

# **TECHNICAL REVIEWER**

# Journal Articles (101 total articles reviewed)

- Buildings, MDPI (1)
- Bulletin of Earthquake Engineering, Springer (1)
- *Earthquake Engineering and Soil Dynamics*, Elsevier (5)
- Earthquake Engineering & Structural Dynamics, Wiley (5)
- Earthquake Spectra, EERI (5)
- Earthquakes and Structures, An International Journal, Techno Press (2)
- Engineering Structures, Elsevier (13)
- International Journal of Applied Mechanics, Elsevier (1)
- International Journal of Mechanical Engineering Education, Sage (2)
- International Journal of Mechanical System Dynamics, Wiley (1)
- International Journal of Non-linear Mechanics, Elsevier (4)
- International Journal of Solids and Structures, Elsevier (2)
- International Journal of Structural Stability and Dynamics, World Scientific (1)

- Journal of Bridge Engineering, ASCE (1)
- Journal of Computing in Civil Engineering, ASCE (1)
- Journal of Earthquake Engineering, Taylor & Francis (1)
- Journal of Engineering Mechanics, ASCE (13)
- Journal of Low Frequency Noise, Vibration & Active Control, Sage (1)
- *Journal of Sound and Vibration,* Elsevier (3)
- Journal of Structural Engineering, ASCE (9)
- Journal of Vibration and Control, Sage (2)
- Mechanical Systems and Signal Processing, Elsevier (3)
- Risk Analysis, Wiley (1)
- Sensors, MDPI (1)
- Smart Structures and Systems, Techno Press (1)
- Structural Control & Health Monitoring, Wiley (8)
- Structural Health Monitoring, Sage (1)
- *Structures*, Elsevier (2)
- Sustainable and Resilient Infrastructure, Taylor & Francis (1)
- *Thin-Walled Structures*, Elsevier (3)
- *Virtual and Physical Prototyping*, Taylor & Francis (1)

# Conference Papers (8 total papers reviewed)

- 2022 ASEE Annual Conference & Exposition, Minneapolis, MN, 26–29 July 2022 (3)
- 2021 ASEE Annual Conference & Exposition, virtual, 26–29 July 2021 (1)
- 11th National Conference on Earthquake Engineering, Los Angeles, CA, 25–29 June 2018 (2)
- AEI Conference 2017, Oklahoma City, OK, 11–13 April 2017 (2)

# UNIVERSITY SERVICE

# Department

- Chair, Structural Engineering Faculty Search Committee (9/2021 5/2022)
- Structural Engineering Representative, Graduate Studies Committee (8/2015 present)
- Member, Service/Outreach Committee (8/2014 present)
- · Faculty Advisor, Chi Epsilon (8/2014 present)
- Member, Transportation Engineering Faculty Search Committee (10/2020 5/2021)
- Guest Speaker, CEES 1112 Introduction to Civil Engineering and Environmental Science (29 September 2015, 4 October 2016, 5 October 2017)
- · Guest Speaker, CEES 1000 Seminar (8 September 2014, 23 October 2017)

# College/University

- NSF EPSCoR Track-2 Review Panelist, Office of Research Services (2023)
- Activity Organizer, Engineering Open House (22 February 2023)
- NSF EPSCoR Track-4 Review Panelist, Office of Research Services (2023)
- NSF EPSCoR Track-4 Review Panelist, Office of Research Services (2020)
- Faculty Advisor, Sooner Power Vehicle, AME (8/2017 5/2019)
- Activity Organizer, OU Boeing Engineering Days (8 June 2018, 14 June 2019)