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

Civil Engineering & Environmental Science
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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 5/2012
Thesis: *Modeling and control of an equipment isolation system for critical facilities*

BSE Civil & Environmental Engineering, Duke University, Durham, NC 5/2009
Magna Cum Laude, Graduation with Distinction in Civil Engineering

EMPLOYMENT

ACADEMIC EMPLOYMENT

Associate Professor, The University of Oklahoma, Norman, OK 7/2020 – present
- School of Civil Engineering and Environmental Science

Assistant Professor, The University of Oklahoma, Norman, OK 8/2014 – 6/2020
- School of Civil Engineering and Environmental Science

Postdoctoral Associate, Duke University, Durham, NC 8/2013 – 8/2014
- Supervisor: Professor Lawrence N Virgin, Mechanical Engineering & Material Science

Adjunct Professor of Engineering, Duke University, Durham, NC 1/2014 – 5/2014
- Department of Mechanical Engineering & Material Science

Graduate Research Assistant, Duke University, Durham, NC 8/2009 – 7/2013
- Advisor: Professor Henri P Gavin, Civil & Environmental Engineering

Teaching Assistant, Duke University, Durham, NC 1/2008 – 7/2013
- CEE 423 Metallic Structures, Fall 2012
- CEE 134 Metallic Structures, Fall 2011 and Fall 2008
- CEE 130 Structural Design and Optimization, Spring 2011 and Spring 2008

Pratt Undergraduate Research Fellow, Duke University, Durham, NC 8/2008 – 5/2009
- Advisor: Professor Zbigniew J Kabala, Civil & Environmental Engineering

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 construction 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: TBD (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

- 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), Topic: Mechanical Properties of 3D-Printed Brackets for Art Exhibits (Fall 2022)
- Edita Pipic (HERE 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), Topic: 3D-Printed Double Rolling Isolation Systems (Spring 2021)
- Chase L Hibbard ($3D^3$ 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), 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), 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 Post-earthquake 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), 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), 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^3) Scholars, The University of Oklahoma

- Amanda G Mundt (Fall 2022)
- Menziwokuhle B Thwala (Fall 2022)
- Mia A Griffin (Fall 2022)
- Robbie E Yarbrough (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)

Courses Taught	***Enrollment***	***I***	***D***	***C***
CEES 4903/4993 CE/AE Capstone, Spring 2023§	43/16	–	–	–
CEES 5663 Structural Analysis II, Spring 2023	11	–	–	–
CEES 5683 Dynamics of Structures, Spring 2023‡	12	–	–	–
CEES 4901/4991 Intro to CE/AE Capstone, Fall 2022§	43/17	–	–	–
CEES 4903/4993 CE/AE Capstone, Spring 2022§	36/17	–	–	–
CEES 5683 Dynamics of Structures, Spring 2022‡	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§	48/15	4.467	4.363	4.192
CEES 5683 Dynamics of Structures, Spring 2021‡	17	4.222	4.363	4.192
CEES 5970 Structural Analysis II, Spring 2021	12	4.714	4.363	4.192
CEES 4901/4991 Intro to CE/AE Capstone, Fall 2020§	48/16	4.571	4.189	4.205
CEES 4903/4993 CE/AE Capstone, Spring 2020§	62/9	4.309	4.364	4.205
CEES 5683 Dynamics of Structures, Spring 2020‡	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: ‡ = online; § = co-taught; *I* = individual score, *D* = departmental average score, *C* = college of engineering average score; Scale: 1 (poor) to 5 (excellent)

- **Independent Studies and Professional Internships**

	Enrollment
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

- 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 *($21,097,376 total; $1,604,705 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. 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.

F4. 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.

F5. 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.

F6. 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: K K Muraleetharan, PoP: 1 January 2019 to 31 December 2019.

F7. 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 *($210,471 total; $146,949 individual credit)*

S1. Maintenance of ShakeCast-ODOT, Oklahoma Department of Transportation, Total Budget: $20,972, Harvey Share: 80% (PI), Co-PI: K K Muraleetharan, PoP: 23 January 2023 to 22 January 2026.

S2. 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.

S3. 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.

S4. 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.

S5. 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.

S6. 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; † = undergraduate student (co-)author

REFEREED JOURNAL ARTICLES

Published/Accepted

J1. L N Virgin & **P S Harvey Jr** (2023), "A lateral–torsional buckling demonstration model using 3D printing," *Engineering Structures* 280: 115682. doi:10.1016/j.engstruct.2023.115682

J2. G Hou, K K Muraleetharan, V Panchalogaranjan, P Moses, A Javid, H Al-Dakheeli, R Bulut, R Campos*, **P S 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

J3. 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

J4. P Bin* & **P S 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

J5. P Bin*, M H Tehrani*, M Nisa†, **P S 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

J6. D Di Maio & **P S 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

J7. 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

J8. A Z Hosseinzadeh*, M H Tehrani*, & **P S 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

J9. **P S Harvey Jr**, R Wiebe, & T M N 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

J10. T M N Cain*, **P S Harvey Jr**, & K K 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

J11. **P S Harvey Jr** & T M N Cain[†] (2020), "Buckling of elastic columns with initial imperfections and load eccentricity," *Structures* 23: 660–664. doi:10.1016/j.istruc.2019.09.021

J12. A Z Hosseinzadeh[*] & **P S 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

J13. R Wiebe & **P S 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

J14. **P S Harvey Jr**, L N Virgin, & M H Tehrani[*] (2019), "Buckling of elastic columns with second-mode imperfections," *Meccanica* 54: 1245–1255. doi:10.1007/s11012-019-01025-z

J15. J H Porter[†] & **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

J16. M H Tehrani[*] & **P S 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

J17. S J Calhoun[*], M H Tehrani[*], & **P S 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

J18. J H Porter[†], T M Cain[†], S L Fox[†], & **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

J19. M H Tehrani[*] & **P S 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

J20. M H Tehrani[*], **P S Harvey Jr**, H P 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

J21. **P S Harvey Jr** & G Elisha[†] (2018), "Vision-based vibration monitoring using existing cameras installed within a building," *Structural Control and Health Monitoring* 25:e2235. doi:10.1002/stc.2235

J22. C D Casey[*], **P S Harvey Jr**, & W Song (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

J23. S J 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

J24. **P S Harvey Jr**, G Elisha[†], & C D Casey[*] (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

J25. **P S Harvey Jr**, S K Heinrich[*], & K K 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

J26. **P S Harvey Jr**, I A Kaid Bay Cortez[*], & S K Heinrich[*] (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

J27. **P S Harvey Jr** & L N Virgin (2018), "Effect of stiffener geometry on the response of grid-stiffened panels," *Journal of Engineering Mechanics* 144(2): 06017021. doi:10.1061/(ASCE)EM.1943-7889.0001415

J28. **P S Harvey Jr** (2017), "Behavior of a rocking block resting on a rolling isolation system," *ASCE Journal of Engineering Mechanics* 143(8): 04017045. doi:10.1061/(ASCE)EM.1943-7889.0001249

J29. **P S Harvey Jr** & K C Kelly* (2016), "A review of rolling-type seismic isolation: Historical development and future directions," *Engineering Structures* 125: 521–531. doi:10.1016/j.engstruct.2016.07.031

J30. **P S Harvey Jr** (2016), "Vertical accelerations in rolling isolation systems: Experiments and simulations," *ASCE Journal of Engineering Mechanics* 142(3): 04015091. doi:10.1061/(ASCE)EM.1943-7889.0001017

J31. **P S Harvey Jr** & H P Gavin (2015), "Assessment of a rolling isolation system using reduced order structural models," *Engineering Structures* 99: 708–725. doi:10.1016/j.engstruct.2015.05.022

J32. **P S Harvey Jr** & L N Virgin (2015), "Coexisting equilibria and stability boundaries of a shallow arch: Unilateral displacement-control experiments and theory," *International Journal of Solids and Structures* 54: 1–11. doi:10.1016/j.ijsolstr.2014.11.016

J33. **P S Harvey Jr** & H P Gavin (2014), "Truly isotropic biaxial hysteresis with arbitrary knee sharpness,"' *Earthquake Engineering & Structural Dynamics* 43: 2051–2057. doi:10.1002/eqe.2436

J34. **P S Harvey Jr** & H P Gavin (2014), "Double rolling isolation systems: a mathematical model and experimental validation," *International Journal of Non-Linear Mechanics*, 61: 80–92. doi:10.1016/j.ijnonlinmec.2014.01.011

J35. **P S Harvey Jr**, G-P Zéhil, & H P Gavin (2014), "Experimental validation of a simplified model for rolling isolation systems," *Earthquake Engineering & Structural Dynamics*, 43: 1067–1088. doi:10.1002/eqe.2387

J36. **P S Harvey Jr**, H P Gavin, J T Scruggs, & J M Rinker (2014), "Determining the physical limits on semi-active control performance: a tutorial," *Structural Control and Health Monitoring*, 21: 803–816. doi:10.1002/stc.1602

J37. **P S Harvey Jr** & H P Gavin (2014), "Assessing the accuracy of vision-based accelerometry," *Experimental Mechanics*, 54: 273–277. doi:10.1007/s11340-013-9783-9

J38. **P S Harvey Jr**, R Wiebe, & H P Gavin (2013), "On the chaotic response of a nonlinear rolling isolation system," *Physica D* 256: 36–42. doi:10.1016/j.physd.2013.04.013

J39. **P S Harvey Jr** & H P Gavin (2013), "The nonholonomic and chaotic nature of a rolling isolation system," *Journal of Sound and Vibration* 332: 3535–3551. doi: 10.1016/j.jsv.2013.01.036

J40. **P S Harvey Jr**, H P Gavin, & J T Scruggs (2012), "Optimal performance of constrained control systems," *Smart Materials and Structures* 21: 085001. doi:10.1088/0964-1726/21/8/085001

Under Review

J41. R Campos*, **P S Harvey Jr**, & G Hou, "Analytical fragility curves for trees subject to ice loading considering climate change," *Sustainable and Resilient Infrastructure* [submitted 10 August 2022]

Refereed Conference Papers

C1. E Villalobos Vega*, **P S Harvey Jr**, J M Ricles, L Cao, & D M Torres Burgos† (2022), "Multi-directional real-time hybrid simulation study of rolling pendulum isolation systems for seismic risk mitigation of critical building contents," in *Proceedings of the 12th National Conference in*

Earthquake Engineering, Earthquake Engineering Research Institute, Salt Lake City, UT, 27 June – 1 July 2022.

C2. **P S Harvey Jr**, K K Muraleetharn, I A Kaid Bay Cortez*, & S K Heinrich*, "Response of typical Oklahoma bridges to recent earthquakes," in *Proceedings of the 11th National Conference on Earthquake Engineering*, Earthquake Engineering Research Institute (EERI), Los Angeles, CA, 25–29 June 2018, Paper No. 1616, 7 pp.

C3. Z Jiang, A W Maxwell, Z H Merchant, **P S Harvey Jr**, N Tsuchiya, & C Chen (2018), "Evaluation of the effectiveness of using mobile learning in engineering dynamics and vibrations courses," in *Proceedings of the 2018 ASEE Annual Conference & Exposition*, American Society for Engineering Education (ASEE), Salt Lake City, UT, 24–27 June 2018, Paper ID #21188, 15 pp.

C4. G A Hostetler, **P S Harvey Jr**, K K Muraleetharn, S Jacobi, & W Peters, "Earthquake preparedness and response; Oklahoma DOT's proactive approach for bridges," in *Proceedings of the 34th International Bridge Conference*, National Harbor, MD, 5–8 June 2017, Paper No. IBC 17-93, 10 pp.

C5. **P S Harvey Jr**, R W Floyd, J-S Pei, L Gruenwald, P Tang*, D V Doan*, & J P 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

C6. **P S Harvey Jr** & N D Halaba Arachchige Senarathna† (2017), "Modeling and design of multi-functional floor isolation systems," in *Proceedings of AEI 2017*, Oklahoma City, OK, 11–13 April 2017, pp. 615–624. doi:10.1061/9780784480502.051

C7. **P S Harvey Jr**, N D Halaba Arachchige Senarathna†, & C D Casey* (2017), "Experimental evaluation of multi-functional nonlinear floor isolation systems," *Dynamics of Coupled Structures, Volume 4, Proceedings of the 35th IMAC*, Garden Grove, CA, 30 January – 2 February 2017. doi:10.1007/978-3-319-54930-9_28

C8. **P S Harvey Jr**, G-P Zéhil, & H P Gavin (2014), "Experimental validation of a model for a rolling isolation system," in *Proceedings of the 10th National Conference in Earthquake Engineering*, Earthquake Engineering Research Institute, Anchorage, AK, 21–25 July 2014, 11 pp.

C9. **P S Harvey Jr**, J T Scruggs, & H P Gavin (2012), "A dual method for determining the performance limits of a semiactively constrained control systems," in *Proceedings of the 2012 American Controls Conference*, pp. 1549–1554. doi:10.1109/ACC.2012.6315106

C10. **P S Harvey Jr** & H P Gavin (2011), "Approximate solutions to nonlinearly-constrained optimal control problems," in *Proceedings of the 2011 American Controls Conference*, pp. 3122–3128. doi:10.1109/ACC.2011.5991215

C11. **P S Harvey Jr** & H P Gavin (2010), "Performance limits imposed by semi-active damping constraints," in *Proceedings of the 2010 American Controls Conference*, pp. 732–737. doi:10.1109/ACC.2010.5530907

Technical Reports and Manuals

R1. **P S Harvey Jr**, K K Muraleetharan, & S Sivakumaran*, Development of ABC Course Module – The Risk Due to Induced Earthquakes and Accelerated Solutions, Technical Report No. ABC-UTC-2016-C2-OU02-Final, ABC-UTC Florida International University, Miami, FL, April 2020, 50 pp.

R2. **P S Harvey Jr**, K K Muraleetharan, & S Sivakumaran*, Rapid Retrofitting Techniques For Induced Earthquakes, Technical Report No. ABC-UTC-2016-C1-OU02-Final, ABC-UTC Florida International University, Miami, FL, January 2020, 88 pp.

R3. **P S Harvey Jr** & K K Muraleetharan, ABC-UTC Guide for Assessing the Effects of Frequent, Low-Level Seismic Events, ABC-UTC Florida International University, Miami, FL, January 2020, 16 pp.

R4. G H Hostetler, **P S Harvey Jr**, K K Muraleetharan, & S K Heinrich*, Post-Earthquake Response Plan for Oklahoma's Bridges (Rev. Ed.), Oklahoma Department of Transportation, Oklahoma City, OK, October 2017, 69 pp.

R5. G H Hostetler, **P S Harvey Jr**, K K Muraleetharan, & S K Heinrich*, Post-Earthquake Bridge Inspection Manual (Rev. Ed.), Oklahoma Department of Transportation, Oklahoma City, OK, October 2017, 67 pp.

R6. I A Kaid Bay Cortez*, **P S Harvey Jr**, & K K Muraleetharan, Seismic Analysis of the SH-11/I-35 Bridge: Structural Aspects, Oklahoma Department of Transportation, Oklahoma City, OK, 7 July 2016, 28 pp.

R7. I A Kaid Bay Cortez*, **P S Harvey Jr**, & K K Muraleetharan, Seismic Analysis of the I-35/S. Canadian River Bridge: Structural Aspects, Oklahoma Department of Transportation, Oklahoma City, OK, 7 July 2016, 57 pp.

R8. S K Heinrich*, **P S Harvey Jr**, & K K Muraleetharan, Seismic Analysis of the I-35/Cimarron River Bridge: Structural Aspects, Oklahoma Department of Transportation, Oklahoma City, OK, 7 July 2016, 47 pp.

R9. S K Heinrich*, **P S Harvey Jr**, & K K Muraleetharan, Post-Earthquake Smart Bridge Inspection Radii, Oklahoma Department of Transportation, Oklahoma City, OK, 23 August 2015, 26 pp.

Data Sets

D1. A Mundt†, E Vanderheiden†, & **P S Harvey Jr** (2022) "Structural Dynamics Through the Lens of 3-D Printing," in *3D-Printing Dynamics Design (3D3) Competition – Fall 2022*. DesignSafe-CI. doi:10.17603/ds2-d689-jr55

D2. M Griffin†, E Vanderheiden†, & **P S Harvey Jr** (2022) "Exploration of Dynamics through 3-D Printed Designs," in *3D-Printing Dynamics Design (3D3) Competition – Fall 2022*. DesignSafe-CI. doi:10.17603/ds2-2k0d-3e48

D3. M Thwala†, E Vanderheiden†, & **P S Harvey Jr** (2022) "Exploring Structural Dynamics Principles Using 3D Printing Methods," in *3D-Printing Dynamics Design (3D3) Competition – Fall 2022*. DesignSafe-CI. doi:10.17603/ds2-ff3m-rn02

D4. R Yarbrough†, E Vanderheiden†, & **P S Harvey Jr** (2022) "Scotch Yoke Movement of a Shake Table," in *3D-Printing Dynamics Design (3D3) Competition – Fall 2022*. DesignSafe-CI. doi:10.17603/ds2-jghh-nx53

D5. **P S Harvey Jr** (2022), "Vision-based Vibration Monitoring Using Existing Cameras Installed Within a Building: Data Reuse Study from the BNCS Project," in *System Identification using Surveillance Camera Videos*. DesignSafe-CI. doi:10.17603/ds2-ja7b-1y85

D6. **P S Harvey Jr**, B A Covarrubias Vargas†, L Cao, & J M Ricles (2022), "Characterization Tests of Rolling Pendulum Isolation Bearings with Different Surface Treatments," in *Characterization of Rolling Pendulum Isolation Bearings*, DesignSafe-CI. doi:10.17603/ds2-5je0-5f35

D7. **P S Harvey Jr** & P Bin† (2021), "Shake table tests of a coupled primary structure-floor isolation system," in *Experimental Study of the Seismic Performance of a Dual-mode Floor Isolation System*, DesignSafe-CI. doi:10.17603/ds2-r06w-fy29

D8. **P S Harvey Jr** & K K Muraleetharan (2021), "Rapid Retrofitting Techniques For Induced Earthquakes – Phase I [ABC-UTC-2016-C1-OU02]," FIU Research Data Portal, V1. doi:10.34703/

gzx1-9v95/QCKJEW

PRESENTATIONS

Key: * = graduate student (co-)author; † = undergraduate student (co-)author; underline = presenter

NATIONAL AND INTERNATIONAL PRESENTATIONS

P1. E Villalobos Vega*, **P S Harvey Jr**, J M Ricles, L Cao, D M Torres Burgos†, & Demetra Karras"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.

P2. M Payan†, E Villalobos Vega*, & **P S Harvey Jr**, "A Double Rolling Isolation System with Response-Based Adaptive Behavior," 2023 International Modal Analysis Conference XLI, Austin, TX, 13–16 February 2023.

P3. E Villalobos Vega*, **P S Harvey Jr**, J M Ricles, L Cao, & D M Torres Burgos†, "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]

P4. **P S Harvey Jr** & C L Hibbard†, "Enhancing the Undergraduate Civil Engineering Experience through 3D-Printing, Problem-Based Learning Opportunities," 2022 ASEE Annual Conference, Minneapolis, MN, 26 – 29 June 2022.

P5. A R Thomas† & **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.

P6. E Villalobos Vega*, **P S Harvey Jr**, J M Ricles, L Cao, & D M Torres Burgos†, "Characterization and Modeling of the Multi-Directional Behavior of Rolling Pendulum Isolation Systems for Critical Building Contents," 2022 ASCE Engineering Mechanics Institute Conference, Johns Hopkins University, Baltimore, MD, 31 May – 3 June 2022.

P7. S L Brackett*, S Navarro Garcia*, & **P S Harvey Jr**, "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**]

P8. E Villalobos Vega*, **P S Harvey Jr**, J M Ricles, L Cao, & D M Torres Burgos†, "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.

P9. S L Brackett* & **P S Harvey Jr**, "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.

P10. E Villalobos Vega*, B A Covarrubias Vargas*, **P S 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.

P11. P Bin*, **P S Harvey Jr**, M Nisa†, & 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.

P12. B A Covarrubias Vargas*, **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.

P13. P Bin* & **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.

P14. **P S Harvey Jr**, S Sivakumaran*, & K K Muraleetharan, "Rapid retrofitting techniques for induced earthquakes – Phase I," ABC-UTC Research Seminar, online, 30 April 2020.

P15. M H Tehrani* & **P S Harvey Jr**, "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.

P16. **P S Harvey Jr**, S Sivakumaran*, & 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.

P17. T M Cain†, **P S Harvey Jr**, & K K Walsh, "Modeling, characterizing, and testing a simple negative-stiffness device to achieve apparent weakening," EMI Conference 2019, Pasadena, CA, 18–21 June 2019.

P18. **P S Harvey Jr**, K K Muraleetharan, & S Sivakumaran*, "Rapid retrofitting techniques for induced earthquakes," ABC-UTC Research Day Meeting, online, 7 May 2019.

P19. **P S Harvey Jr**, "Light-payload seismic isolation: Passive solutions for multiple objectives," NSF PREEMPTIVE Advanced Studies Institute, Costa Rica, 7 February 2019. [**invited**]

P20. A Z Hosseinzadeh* & **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.

P21. **P S Harvey Jr**, K K Muraleetharan, & S Sivakumaran*, "Rapid retrofitting techniques for induced earthquakes," ABC-UTC Research Day 2 Meeting, online, 15 November 2018.

P22. **P S Harvey Jr**, I A Kaid Bay Cortez*, K K Muraleetharn, & S K 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**]

P23. M H Tehrani* & **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.

P24. S J Calhoun*, **P S Harvey Jr**, & M H Tehrani*, "Robust design of double-layer isolation devices," EMI Conference 2018, Cambridge, MA, 29 May – 1 June 2018.

P25. Z Jiang, 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]

P26. **P S Harvey Jr**, K K Muraleetharan, & S Sivakumaran*, "Rapid retrofitting techniques for induced earthquakes," ABC-UTC Research Day Meeting, online, 21 May 2018.

P27. **P S Harvey Jr**, "Advancements in light-payload isolation: Theory, experiments, and future needs," NHERI Lehigh Seminar Series, online, 21 March 2018. [**invited**]

P28. **P S Harvey Jr**, "Framework for post-earthquake response planning in emerging seismic re-

gions: An Oklahoma case study," Oklahoma Seismicity Workshop, Oklahoma Geological Survey, Norman, OK, 22 February 2018. [**invited**]

P29. **P S Harvey Jr** & G Elisha[†], "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.

P30. G A Hostetler, **P S Harvey Jr**, K K Muraleetharn, S Jacobi, & W Peters, "Earthquake preparedness and response; Oklahoma DOT's proactive approach for bridges," 34th International Bridge Conference, National Harbor, MD, 5–8 June 2017.

P31. **P S Harvey Jr**, C D Casey[*], & W Song, "Multi-unit rolling isolation system arrays: Analytical model and experimental validation," EMI Conference 2017, San Diego, CA, 4–7 June 2017.

P32. G A Hostetler, **P S Harvey Jr**, K K Muraleetharn, S Jacobi, & W L Peters, "Earthquake preparedness and response; Oklahoma DOT's proactive approach for bridges," 11th International Bridge & Structure Management Conference, Mesa, AZ, 23–25 April 2017.

P33. **P S Harvey Jr**, "Recent Oklahoma earthquakes and the built environment," AEI Conference 2017, Oklahoma City, OK, 11–13 April 2017. [**invited panelist**]

P34. **P S Harvey Jr** & N D Halaba Arachchige Senarathna[†], "Inter-story drift measurement with surveillance camera video: An experimental investigation," AEI Conference 2017, Oklahoma City, OK, 11–13 April 2017.

P35. **P S Harvey Jr**, R W Floyd, J-S Pei, L Gruenwald, P Tang[*], D V Doan[*], & J P Havlicek, "Nonlinear vibrations based damage detection for building structural systems," AEI Conference 2017, Oklahoma City, OK, 11–13 April 2017.

P36. **P S Harvey Jr** & N D Halaba Arachchige Senarathna[†], "Modeling and design of multi-functional floor isolation systems," AEI Conference 2017, Oklahoma City, OK, 11–13 April 2017.

P37. **P S Harvey Jr**, N D Halaba Arachchige Senarathna[†], & C D Casey[*], "Experimental evaluation of multi-functional nonlinear floor isolation systems," International Modal Analysis Conference XXXV, Garden Grove, CA, 30 January – 2 February 2017.

P38. W L Peters, G A Hostetler, **P S Harvey Jr**, & K K Muraleetharn, "Bridge performance during the 2014-2017 Oklahoma earthquakes due to waste water disposal in deep injection wells," 2017 TRB Annual Meeting, Washington, DC, 8–12 January 2017.

P39. **P S Harvey Jr**, K K Muraleetharn, S K Heinrich[*], & I A Kaid Bay Cortez[*], "Post-earthquake bridge inspection protocol for the Oklahoma Department of Transportation," Oklahoma Seismicity Workshop, Oklahoma Geological Survey, Norman, OK, 7–8 September 2016. [**invited**]

P40. **P S Harvey Jr**, N D Halaba Arachchige Senarathna[†], & S J Calhoun[†], "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]

P41. **P S Harvey Jr** & S J Calhoun[†], "Analysis of the rocking response of unrestrained equipment on rolling isolation systems," EMI Conference 2016, Nashville, TN, 22–25 May 2016.

P42. **P S Harvey Jr**, H Kanno, H Kishida, & G P Warn, "Base Isolation: Case Study," First International Workshop to Promote Seismic Protective Systems for Civil Structures, Sendai, Japan, 21–22 November 2015.

P43. **P S Harvey Jr**, "Modeling of multi-unit rolling isolation system arrays," JAEE Annual Conference and International Symposium on Earthquake Engineering, Tokyo, Japan, 19–20 November 2015. [poster]

P44. **P S Harvey Jr**, "Vertical accelerations in pendulum-type isolation systems: Fundamentally necessary yet potentially destructive," EMI Conference 2015, Stanford, CA, 16–19 June 2015.

P45. **P S Harvey Jr** & L N Virgin, "Natural frequencies of stiffened plates," International Modal Analysis Conference XXXIII, Society of Experimental Mechanics, Orlando, FL, 2–5 February 2015.

P46. **P S Harvey Jr** & H P Gavin, "Hazard mitigation for building contents: Advancing the state-of-the-art in equipment isolation," EMI Conference 2014, Ontario, Canada, 5–8 August 2014.

P47. **P S Harvey Jr** & L N Virgin, "Mode jumping and snap-through in shallow arches under displacement-controlled loading," EMI Conference 2014, Ontario, Canada, 5–8 August 2014.

P48. **P S Harvey Jr**, G-P Zéhil, & H P Gavin, "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.

P49. **P S Harvey Jr** & H P Gavin, "Seismic equipment isolation: From physics-based modeling to experimental validation, and beyond," EMI Conference 2013, Evanston, IL, 4–7 August 2013.

P50. **P S Harvey Jr**, 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.

P51. **P S Harvey Jr** & H P Gavin, "Optimal performance of semi-actively constrained control systems," EMI/PMC Conference 2012, Notre Dame, IN, 17–20 June 2012.

P52. **P S Harvey Jr** & H P Gavin, "The nonholonomic and chaotic nature of a rolling isolation system," EMI/PMC Conference 2012, Notre Dame, IN, 17–20 June 2012.

P53. **P S Harvey Jr** & H P Gavin, "Approximate solutions to nonlinearly-constrained optimal control problems," 2011 American Controls Conference, San Francisco, CA, 29 June – 1 July 2011.

P54. **P S Harvey Jr** & H P Gavin, "Approximate solutions to nonlinearly-constrained optimal control problems," EMI Conference 2011, Boston, MA, 2–4 June 2011.

P55. H P Gavin & **P S Harvey Jr**, "Modeling of rolling equipment isolation systems," EMI Conference 2011, Boston, MA, 2–4 June 2011.

P56. **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

P57. S Sivakumaran*, **P S Harvey Jr**, & K K 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**]

P58. S Sivakumaran*, **P S Harvey Jr**, & K K 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]

P59. S Sivakumaran*, **P S Harvey Jr**, & K K 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.

P60. **P S Harvey Jr** & K K Muraleetharan, "Managing risk to Oklahoma bridges from emerging seismic hazard," National Institute for Risk & Resilience, Norman, OK, 17 October 2017.

P61. S J Calhoun† & **P S 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]

P62. I A Kaid Bay Cortez*, S K Heinrich*, **P S Harvey Jr**, & K K Muraleetharan, "Seismic response analysis of Oklahoma bridges," 2016 Summer Symposium, Southern Plains Transportation Center, Oklahoma City, OK, 10 August 2016.

P63. G A Hostetler & **P S Harvey Jr**, "Oklahoma DOT's post-earthquake bridge inspection guidelines," May 2016 Meeting, Society of American Military Engineers - Tulsa Chapter, Tulsa, OK, 10 May 2016.

P64. S J Calhoun† & **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]

P65. **P S Harvey Jr**, "What's Shakin'? Oklahoma earthquakes and seismic hazard mitigation," University of Arkansas Seminar Series, Fayetteville, AR, 5 November 2015.

P66. S K Heinrich†, **P S Harvey Jr**, & K K Muraleetharan, "Smart post-earthquake bridge inspection protocol for Oklahoma," 2015 Oklahoma Transportation Research Day, Oklahoma City, OK, 20 October 2015. [poster; **2nd place**]

P67. S J Calhoun† & **P S 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**]

P68. G A Hostetler, **P S Harvey Jr**, "Oklahoma DOT's post-earthquake bridge inspection guidelines," 2015 Annual Conference, American Society of Civil Engineers - Oklahoma Section, Stillwater, OK, 21 August 2015.

P69. S J Calhoun† & **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

Alan T. Waterman Award (nominee), National Science Foundation 2021

- Nominated by the School of Civil Engineering and Environmental Science Committee A

Annual Award for Excellence in Research Grants, VPRP, University of Oklahoma 2021

- Recognized for contribution as a PI/co-PI on a grant acquiring $1 million or more in 2020

Teaching Scholars Initiative (nominee), College of Engineering, University of Oklahoma 2021

- Nominated by the School of Civil Engineering and Environmental Science Committee A

Teaching Scholars Initiative (nominee), College of Engineering, University of Oklahoma 2019

- Nominated by the School of Civil Engineering and Environmental Science Committee A

Teaching Scholars Initiative (nominee), College of Engineering, University of Oklahoma 2018

- Nominated by the School of Civil Engineering and Environmental Science Committee A

EERI Registration Grant Recipient, Earthquake Engineering Research Institute 2018

- Selected among a group of early career professionals to receive grant to attend 11NCEE

Faculty Leadership Academy Fellow, Vice President for Research, University of Oklahoma 2017

- Nominated to participate in a semester-long leadership development program for early career

faculty

James B Duke Fellowship, Duke University 2009 – 2013

- Awarded to exceptional PhD applicants
- Provides a $5,000/year stipend supplement (on top of regular stipend) for four years

Student Travel Award, American Controls Conference (ACC) 2012

- Selected and awarded by ACC Organizing Committee
- Received partial travel support ($905) to present a paper at 2012 ACC

Other Honors

Invited Member, NHERI Lehigh Experimental Facility Advisory Council 2021 – present

- Provide input on new directions in natural hazards engineering that promote community resiliency, and provide advice to the facility to enable it to broaden its user base in research

Invited Faculty Lecturer/Mentor, NSF PREEMPTIVE Advanced Studies Institute (ASI) 2019

- Mentored PhD students during week-long workshop in Costa Rica (February 2019)

Invited Participant, NSF PREEMPTIVE SAVI Workshops 2015 – 2018

- Attended workshops in Sendai, Japan (November 2015); Christchurch, New Zealand (August 2016); Santiago, Chile (January 2017); and Los Angeles, CA (June 2018)

Funded Participant, Asia-Pacific Summer School (APSS), Tokyo, Japan 2010

- Participated in a three week program funded by NSF addressing the hardware, software, data informatics, and applications of smart structures technology
- Collaborated with students from Japan, Korea, the US, and China through coursework, lectures, labs, and site visits

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 Confer-

ence 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 (79 total articles reviewed)

- *Buildings*, MDPI (1)
- *Bulletin of Earthquake Engineering*, Springer (1)
- *Earthquake Engineering and Soil Dynamics*, Elsevier (4)
- *Earthquake Engineering & Structural Dynamics*, Wiley (5)
- *Earthquake Spectra*, EERI (5)
- *Earthquakes and Structures, An International Journal*, Techno Press (2)
- *Engineering Structures*, Elsevier (10)
- *International Journal of Applied Mechanics*, Elsevier (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 Engineering Mechanics*, ASCE (9)
- *Journal of Low Frequency Noise, Vibration & Active Control*, Sage (1)
- *Journal of Sound and Vibration*, Elsevier (3)
- *Journal of Structural Engineering*, ASCE (8)
- *Journal of Vibration and Control*, Sage (2)
- *Mechanical Systems and Signal Processing*, Elsevier (2)
- *Risk Analysis*, Wiley (1)
- *Sensors*, MDPI (1)
- *Smart Structures and Systems*, Techno Press (1)
- *Structural Control & Health Monitoring*, Wiley (6)
- *Structural Health Monitoring*, Sage (1)
- *Structures*, Elsevier (2)
- *Thin-Walled Structures*, Elsevier (3)
- *Virtual and Physical Prototyping*, Taylor & Francis (1)

Conference Papers (7 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-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)