

**REMY D. LEQUESNE, PH.D., P.E., FACI, M.ASCE**  
rlequesne@ku.edu • 785.864.6849

**Education**

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Ph.D., Structural Engineering	University of Michigan, Ann Arbor, MI	2011
M.S.E., Civil Engineering	University of Michigan, Ann Arbor, MI	2007
B.S.E., Civil Engineering	University of Michigan, Ann Arbor, MI	2005

**Employment History**

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University of Kansas in Lawrence, Kansas		
<i>Stanley T. and Phyllis W. Rolfe Chair's Council Associate Professor</i>		2022 - Present
<i>Associate Professor</i>		2019 - 2022
<i>Chair's Council Assistant Professor</i>		2018 - 2019
<i>Assistant Professor</i>		2013 - 2018
University of Wisconsin in Madison, Wisconsin		
<i>Post-Doctoral Research Associate</i>		2012 - 2013
Wiss, Janney, Elstner Associates, Inc., Northbrook, IL		
<i>Engineering Associate II</i>		2011 - 2012

**Licensure**

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Licensed Professional Engineer, Kansas State Board of Technical Professions	2015 - Present
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**Individual Honors and Awards**

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Fellow of the American Concrete Institute	2023
Mete A. Sozen Award for Excellence in Structural Research	2022
<i>Awarded by the American Concrete Institute for: Huq, M. S., Burgos, E. A., Lequesne, R. D., &amp; Lepage, A. (2021). High-Strength Steel Bars in Earthquake-Resistant RC T-Shaped Walls. <i>ACI Structural Journal</i>, 118(1), 215-226.</i>	
Stanley T. and Phyllis W. Rolfe Chair's Council Associate Professor of Civil Engineering	2022
Chair's Council Assistant Professor of Civil Engineering	2018
ACI Young Member Award for Professional Achievement	2017
<i>For contributions advancing the use of fiber-reinforced concrete in structural concrete, mentoring students, and service to ACI technical committees.</i>	
Miller Scholar Award	2017
<i>Awarded by the University of Kansas School of Engineering for research excellence.</i>	
Gould Outstanding Undergraduate Educator Award	2016
<i>Awarded by the University of Kansas School of Engineering for excellence in teaching. One annual awardee nominated and selected by students from among tenure-track engineering faculty.</i>	

- Wason Medal for Most Meritorious Paper 2016  
*Awarded by the American Concrete Institute for: Lequesne, R. D. & Pincheira, J. A. (2014). Proposed Revisions to the Strength-Reduction Factor for Axially Loaded Members. Concrete International, 36(9), 43-49.*
- Miller Scholar Award 2015  
*Awarded by the University of Kansas School of Engineering for outstanding overall achievement in teaching, research, and service.*
- Outstanding Graduate Student Instructor 2011  
*Awarded by University of Michigan Rackham Graduate School for teaching excellence. Up to twenty awardees are selected annually from among graduate students nominated by faculty.*

## Publications

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### Peer-Reviewed

#### Journal Articles

- Pujol, S., Bedirhanoflu, I., Donmez, C., Dowgala, J. D., Eryilmaz Yildirim, M., Klaboe, K., Koroglu, F. B., Lequesne, R. D., Ozturk, B., Pledger, L., and Sonmez, E., (Accepted). Quantitative Evaluation of the Damage to RC Buildings Caused by 2023 South-East Turkey Earthquake Sequence, *Earthquake Spectra*.
- Chin, C.-H., Cheng, M.-Y., Lepage, A., & Lequesne, R. D., (2024). Shake Table Tests to Compare the Seismic Response of Concrete Frames with Conventional and High-Strength Reinforcement. *Earthquake Engineering and Structural Dynamics*, 53(1), 89-115. doi:10.1002/eqe.4008
- Lepage, A., Lequesne, R. D., Weber-Kamin, A. S., Ameen, S., & Cheng, M.-Y., (2023). Chord Rotation Capacity and Strength of Diagonally-Reinforced Concrete Coupling Beams. *ACI Structural Journal*, 120(6), 137-150. doi: 10.14359/51739092, hdl.handle.net/1808/34852
- Ahmad, T., Gharehbaghi, V., Li, J., Bennett, C., & Lequesne, R. D., (2023). Crack Segmentation in the Wild using Convolutional Neural Networks and Bootstrapping. *Earthquake Engineering and Resilience*, 2(3), 348-363. doi: 10.1002/eer2.52
- Lee, H.-J., Lequesne, R. D., Lepage, A., Lin, J.-X., Wang, J.-C., & Yin, Y.-L., (2023). Minimum Joint Depth for Moment Frames with High-Strength Materials. *ACI Structural Journal*, 120(1), 225-239. doi: 10.14359/51737141, hdl.handle.net/1808/34196
- Daniel, L., Mazumder, R. K., Enderami, S. A., Sutley, E. J., & Lequesne, R. D., (2022). Community Capitals Framework for Linking Buildings and Organizations for Enhancing Community Resilience through the Built Environment. *ASCE Journal of Infrastructure Systems*, 28(1). doi:10.1061/(ASCE)IS.1943-555X.0000668
- Poudel, A., Ameen, S., Lequesne, R. D., & Lepage, A., (2021). Diagonally Reinforced Concrete Coupling Beams: Effects of Axial Restraint. *ACI Structural Journal*, 118(6), 293-303. doi:10.14359/51732991, hdl.handle.net/1808/32695
- Sutley, E. J., Kim, J. H., Kirkham, W. J., & Lequesne, R. D., (2021). Examining Tornado Vulnerability in Kansas with Recent Findings from an EF4 Tornado. *Natural Hazards Review*, 22(3). doi:10.1061/(ASCE)NH.1527-6996.0000476
- Huq, M. S., Burgos, E. A., Lequesne, R. D., & Lepage, A., (2021). High-Strength Steel Bars in Earthquake-Resistant RC T-Shaped Walls. *ACI Structural Journal*, 118(1), 215-226. doi:10.14359/51728091, hdl.handle.net/1808/32694

- Cheng, M.-Y., Wibowo, L. S. B., Giduquio, M. B., & Lequesne, R. D., (2021). Strength and Deformation Capacity of RC Squat Walls Constructed with High-Strength Materials. *ACI Structural Journal*, 118(1), 125-137. doi:10.14359/51728082, hdl.handle.net/1808/32693
- Alcocer, S., Behrouzi, A., Brena, S., Elwood, K., Irfanoglu, A., Kreger, M., Lequesne, R. D., Mosqueda, G., Pujol, S., Puranam, A., Rodriguez, M., Shah, P., Stavridis, A., & Wood, R., (2020). Observations about the Seismic Response of RC Buildings in Mexico City. *EERI Earthquake Spectra*, 36(S2), 154-174. doi:10.1177/8755293020942523
- Ameen, S., Lequesne, R. D., & Lepage, A., (2020). Diagonally-Reinforced Concrete Coupling Beams with Grade 120 (830) High-Strength Steel Bars. *ACI Structural Journal*, 117(6), 199-210. doi:10.14359/51728067, hdl.handle.net/1808/32691
- Lequesne, R. D., Collins, W., Lucon, E., Darwin, D., & Poudel, A., (2020). Interlaboratory Study of Standard Methods for Testing Multi-Wire Steel Prestressing Strand. *PCI Journal*, 65(4), 71-86. doi:10.15554/pcij65.4-03, hdl.handle.net/1808/32686
- Li, C., Lequesne, R. D., & Matamoros, A., (2019). Girder-Deck Interface: Partial Debonding, Deck Replacement, and Composite Action. *ASCE Journal of Bridge Engineering*, 24(1), 14 pp. doi:10.1061/(ASCE)BE.1943-5592.0001311, hdl.handle.net/1808/32690
- Sperry, J., Darwin, D., O'Reilly, M., Lepage, A., Lequesne, R. D., Matamoros, A., Feldman, L., Yasso, S., Searle, N., DeRubeis, M., & Ajaam, A., (2018). Conventional and High-Strength Steel Hooked Bars: Detailing Effects. *ACI Structural Journal*, 115(1), 248-258. doi:10.14359/51700920, hdl.handle.net/1808/25915
- Sperry, J., Darwin, D., O'Reilly, M., Lequesne, R. D., Yasso, S., Matamoros, A., Feldman, L., & Lepage, A., (2017). Conventional and High-Strength Hooked Bars - Part 2: Data Analysis. *ACI Structural Journal*, 114(1), 267-276. doi:10.14359/51689457, hdl.handle.net/1808/23282
- Sperry, J., Yasso, S., Searle, N., DeRubeis, M., Darwin, D., O'Reilly, M., Matamoros, A., Feldman, L. R., Lepage, A., Lequesne, R. D., & Ajaam, A., (2017). Conventional and High-Strength Hooked Bars - Part 1: Anchorage Tests. *ACI Structural Journal*, 114(1), 255-265. doi:10.14359/51689456, hdl.handle.net/1808/23283
- Cheng, M.-Y., Hung, S.-C., Lequesne, R. D., & Lepage, A., (2016). Earthquake-Resistant Squat Walls Reinforced with High-Strength Steel. *ACI Structural Journal*, 113(5), 1065-1076. doi:10.14359/51688825, hdl.handle.net/1808/23427
- Lequesne, R. D., Parra-Montesinos, G. J., & Wight, J. K., (2016). Seismic Response of Fiber-Reinforced Concrete Coupled Walls. *ACI Structural Journal*, 113(3), 435-445. doi:10.14359/51688822, hdl.handle.net/1808/23430
- Matzke, E. M., Lequesne, R. D., Parra-Montesinos, G. J., & Shield, C. K., (2015). Behavior of Biaxially Loaded Slab-Column Connections with Shear Studs. *ACI Structural Journal*, 112(3). doi:10.14359/51687408, hdl.handle.net/1808/30081
- Lequesne, R. D., Parra-Montesinos, G. J., & Wight, J. K., (2013). Seismic Behavior and Detailing of High-Performance Fiber-Reinforced Concrete Coupling Beams and Coupled Wall Systems. *ASCE Journal of Structural Engineering*, 139, 1362-1370. doi:10.1061/(ASCE)ST.1943-541X.0000687

#### Magazine Articles

- Lequesne, R. D., & Pincheira, J. A., (2014). Proposed Revisions to the Strength-Reduction Factor for Axially Loaded Members. *Concrete International*, 36(9), 43-49. hdl.handle.net/1808/23431

Special Publications of the American Concrete Institute

- Lequesne, R. D., & Collins, W. N., (2020). Load Rating Reinforced Concrete Bridges without Plans: State-of-the-Practice. In *SP-342: Advanced Analysis and Testing Methods for Concrete Bridge Evaluation and Design*. Farmington hills, MI: American Concrete Institute. 80-97. doi:10.14359/51725938, hdl.handle.net/1808/32692
- Parra-Montesinos, G. J., Wight, J. K., Kopczynski, C., Lequesne, R. D., Setkit, M., Conforti, A., & Ferzli, J., (2017). Earthquake-Resistant Fiber Reinforced Concrete Coupling Beams Without Diagonal Bars. In *SP-310: Fibre-Reinforced Concrete: From Design to Structural Applications*. Farmington Hills, MI: American Concrete Institute. doi:10.35789/fib.bull.0079.ch43, hdl.handle.net/1808/24874
- Parra-Montesinos, G. J., Wight, J. K., Kopczynski, C., Lequesne, R. D., Setkit, M., Conforti, A., & Ferzli, J., (2017). Elimination of Diagonal Reinforcement in Earthquake-Resistant Coupling Beams through Use of Fiber-Reinforced Concrete. In *SP-313: Proceedings of the First ACI & JCI Joint Seminar: Design of Concrete Structures Against Earthquake and Tsunami Disasters*. Farmington Hills, MI: American Concrete Institute. doi:10.14359/51689686, hdl.handle.net/1808/24873
- Cheng, M.-Y., Wibowo, L. S. B., Lequesne, R. D., & Lepage, A., (2016). Deformation Capacity and Strength of RC Frame Members with High-Strength Materials. In *SP-311: James K. Wight: A Tribute from his Students and Colleagues*. Farmington Hills, MI: American Concrete Institute. doi:10.14359/51689315, hdl.handle.net/1808/23428
- Lequesne, R. D. & Parra-Montesinos, G. J., (2016). A Review of Research on Shear Strength Decay in Members under Load Reversals. In *SP-311: James K. Wight: A Tribute from his Students and Colleagues*. Farmington Hills, MI: American Concrete Institute. doi:10.14359/51689314, hdl.handle.net/1808/23429
- Lequesne, R. D., Setkit, M., Kopczynski, C., Ferzli, J., Cheng, M.-Y., Parra-Montesinos, G. J., & Wight, J. K., (2011). Implementation of High-Performance Fiber Reinforced Concrete Coupling Beams in High-Rise Core-Wall Structures. In *SP-280: Advances in FRC Durability and Field Applications*. Farmington Hills, MI: American Concrete Institute. doi:10.14359/51683585, hdl.handle.net/1808/32689
- Lequesne, R. D., Setkit, M., Parra-Montesinos, G. J., & Wight, J. K., (2010). Seismic Detailing and Behavior of Coupling Beams Incorporating High-Performance Fiber Reinforced Concrete. In *SP-272: Antoine E. Naaman Symposium: Four Decades of Progress in Prestressed Concrete, Fiber Reinforced Concrete and Thin Laminate Composites*. Farmington Hills, MI: American Concrete Institute. doi:10.14359/51664093, hdl.handle.net/1808/32688
- Lequesne, R. D., Parra-Montesinos, G. J., & Wight, J. K., (2009). Test of a Coupled Wall with High Performance Fiber Reinforced Concrete Coupling Beams. In *SP-265: Thomas T. C. Hsu Symposium: Shear and Torsion of Concrete Structures*. Farmington Hills, MI: American Concrete Institute. doi:10.14359/51663288, hdl.handle.net/1808/32687

Conference Proceedings

- Donmez, C., Dowgala, J., Eryilmaz-Yildirim, M., Gullu, M. F., Iturburu, L., Koroglu, F. B., Lequesne, R. D., Ozturk, B., Pujol, S., Rincon, J. D., Sim, C., and Speicher, M. S., (submitted). Lessons from the 2023 South-East Turkiye Earthquakes: A Study on Damaged RC Buildings Considering the Hassan Index. *18<sup>th</sup> World Conference on Earthquake Engineering*. Milan, Italy.

- Lepage, A., Lequesne, R. D., Weber-Kamin, A. S., & Ameen, S., (2022). Chord Rotation Capacity of Diagonally Reinforced Concrete Coupling Beams. *12<sup>th</sup> National Conference on Earthquake Engineering*. Salt Lake City, Utah.
- Burgos, E. A., Huq, M. S., Lequesne, R. D., & Lepage, A., (2022). Moment-Curvature Analysis for Strain Estimates of Concrete T-Shaped Walls Reinforced with High-Strength Steel. *12<sup>th</sup> National Conference on Earthquake Engineering*. Salt Lake City, Utah.
- Burgos, E. A., Huq, M. S., Lequesne, R. D., & Lepage, A., (2022). Moment-Curvature Analysis for Deformation Capacity of Reinforced Concrete T-Shaped Walls with High-Strength Steel. *12<sup>th</sup> National Conference on Earthquake Engineering*. Salt Lake City, Utah.
- Valentini, G., Lequesne, R. D., Lepage, A., & Darwin, D., (2022). Development and Lap Splice Length of Straight Bars in Compression. *Proceedings: Bond in Concrete 2022*. Stuttgart, Germany, 14-25.
- Rulon, R., Lequesne, R. D., Darwin, D., & Lepage, A., (2022). Lap Splicing of Large High-Strength Steel Reinforcing Bars. *Proceedings: Bond in Concrete 2022*. Stuttgart, Germany, 542-553.
- Banaeipour, A., Darwin, D., O'Reilly, M., Lepage, A., & Lequesne, R. D., (2022). Anchorage of High-Strength No. 14 (43 mm) Hooked Bars. *Proceedings: Bond in Concrete 2022*. Stuttgart, Germany, 627-638.
- Ameen, S., Weber-Kamin, A. S., Lequesne, R. D., & Lepage, A., (2018). Diagonally-Reinforced Concrete Coupling Beams with High-Strength Steel Bars. *Eleventh U.S. National Conference on Earthquake Engineering*. Los Angeles, California.
- Huq, M. S., Burgos, E. A., Lequesne, R. D., & Lepage, A., (2018). High-Strength Steel Bars in T-Shaped Concrete Walls. *Eleventh U.S. National Conference on Earthquake Engineering*. Los Angeles, California.
- McVey, M., Bennett, C., Collins, W., Lequesne, R. D., Luchies, C., Wilson, S., Sutley, E., Fadden, M., & Melgares, C., (2018). Peer Mentoring for All: Investigating the Feasibility of a Curricular-Embedded Peer Mentoring Structure. *American Society for Engineering Education Annual Conference and Exposition*. Salt Lake City, Utah.
- McVey, M., Bennett, C., Luchies, C., & Lequesne, R. D., (2018). An Investigation of the Effect of Curriculum-Embedded Peer Mentoring on Student Learning in Two Undergraduate Mechanics Courses. *American Society for Engineering Education Annual Conference and Exposition*. Salt Lake City, Utah.
- Ameen, S., Lequesne, R. D., Lepage, A., Weber-Kamin, A. S., & Ameen, S., (2017). Behavior of Diagonally-Reinforced Concrete Coupling Beams with High-Strength Steel Bars. *16WCEE - 16<sup>th</sup> World Conference on Earthquake Engineering*. Santiago, Chile. 8 pp.
- Huq, M. S., Lepage, A., Lequesne, R. D., Weber-Kamin, A. S., & Ameen, S., (2017). Influence of Mechanical Properties of High-Strength Steel on Deformation Capacity of Reinforced Concrete Walls. *16WCEE - 16<sup>th</sup> World Conference on Earthquake Engineering*. Santiago, Chile. 8 pp.

Committee Reports and Technical Standards with Contributions from R. Lequesne

- ACI Committee 318 (2019). *Building Code Requirements for Structural Concrete (ACI 318-19) and Commentary on Building Code Requirements for Structural Concrete (ACI 318R-19)*. Farmington Hills, Michigan: American Concrete Institute. 623 pp. doi:10.14359/51716937

**Not Peer-Reviewed***Conference Proceedings*

- Burgos, E. A., Lepage, A., & Lequesne, R. D., (2023). “Influencia de las Propiedades Mecánicas del Acero de Alta Resistencia en el Comportamiento de Muros de Concreto”. Proceedings of CONIA 2023. El Salvador. 9 pp.
- Lee, H.-J., Lin, J.-X., Lequesne, R. D., Lepage, A., & Wang, J.-C., (2019). Experimental Study on Minimum Interior Joint Depth for Special Moment Frames with High-Strength Reinforcement and Concrete. *The 21st Japan-Taiwan-Korea Joint Seminar on Earthquake Engineering for Building Structures (SEEBUS 2019)*. Hsinchu, Taiwan.
- Tameemi, W., Perez-Irizarry, A. L., Dudnik, V., Lequesne, R. D., & Parra-Montesinos, G. J., (2016). Correlations between Results from Compressive, Flexural, and Tensile Tests of Steel Fiber Reinforced Concrete. *BEFIB2016 - 9<sup>th</sup> Rilem International Symposium on Fiber Reinforced Concrete*. Vancouver, Canada.
- Monfardini, L., Lequesne, R. D., Minelli, F., Parra-Montesinos, G. J., & Pincheira, J. A., (2015). Stability of Reinforcing Bars in Steel Fiber Reinforced Concrete Flexural Members. *HPFRCC 7 - High Performance Fiber Reinforced Cement Composites*. Stuttgart, Germany.
- Parra-Montesinos, G. J., Wight, J. K., Kopczyński, C., Lequesne, R. D., Setkit, M., Conforti, A., & Ferzli, J., (2014). High-Performance Fiber Reinforced Concrete Coupling Beams: From Research to Practice. *Tenth U.S. National Conference on Earthquake Engineering*. Anchorage, AK.
- Lequesne, R. D., Setkit, M., Parra-Montesinos, G. J., & Wight, J. K., (2011). High-Strength Steel Fibers as Replacement for Diagonal and Confinement Reinforcement in Coupling Beams. *9<sup>th</sup> International Symposium on High Performance Concrete – Design, Verification and Utilization*. Christchurch, NZ. 8 pp.
- Parra-Montesinos, G. J., Wight, J. K., Lequesne, R. D., & Setkit, M., (2011). A Summary of Ten Years of Research on HPFRC Coupling Beams. *High Performance Fiber-Reinforced Cement Composites (HPFRCC6)*, Ann Arbor, MI. 9 pp.
- Wight, J. K., Parra-Montesinos, G. J., & Lequesne, R. D., (2011). The Use of High-Performance Fiber-Reinforced Concrete in the Design of Coupled Wall Systems for Earthquake Motions. *fib Symposium 2011*. Prague, Czech Republic, 503-506.
- Lequesne, R. D., Wight, J. K., & Parra-Montesinos, G. J., (2010). High-Performance Fiber-Reinforced Concrete Coupled-Wall Systems: Design and Behavior. *14<sup>th</sup> European Conference on Earthquake Engineering*. Ohrid, Republic of Macedonia.
- Lequesne, R. D., Wight, J. K., & Parra-Montesinos, G. J., (2010). Seismic Detailing and Behavior of Coupled-Wall Systems with High-Performance Fiber-Reinforced Concrete. *9<sup>th</sup> National and 10<sup>th</sup> Canadian Conference on Earthquake Engineering*. Toronto, Canada. 10 pp.
- Lequesne, R. D., Wight, J. K., & Parra-Montesinos, G. J., (2010). Large-Scale Testing of High-Performance Fiber-Reinforced Concrete Coupled Walls. *Joint Conference Proceedings of 7CUEE & 5ICEE*. Tokyo, Japan. 9 pp.
- Wight, J. K., Parra-Montesinos, G. J., & Lequesne, R. D., (2009). The Design of Coupled Wall Systems for Earthquake Motions with High-Performance Fiber Reinforced Concrete. *WCCE-ECCE-TCCE Joint Conference Earthquake & Tsunami*. Istanbul, Turkey. 13 pp.
- Wight, J. K. & Lequesne, R. D., (2008). Earthquake-Resistant Design of Coupling Beam Elements Incorporating High-Performance Fiber Reinforced Concrete. *International Seminar on Seismic-Resistant Design of Reinforced Concrete Structures*. Bogota, Columbia. 97-108.

Wight, J. K., Parra-Montesinos, G. J., & Lequesne, R. D., (2007). High-Performance Fiber Reinforced Concrete for Earthquake-Resistant Design of Coupled Wall Systems. *Fifth International RILEM Workshop, High Performance Fiber-Reinforced Cement Composites (HPFRCC5)*. Mainz, Germany. 8 pp.

### Reports

- Banaeipour, A., Darwin, D., O'Reilly, M., Lequesne, R. D., Lepage, A., & Blessent, M., (2023). *SM Report No. 153: Development of Large High-Strength Reinforcing Bars with Standard Hooks and Heads*. 426 pp. University of Kansas Center for Research, Inc.
- Aljawad, Y., Lequesne, R. D., & O'Reilly, M., (2022). *SL Report 22-3: Low-Shrinkage Ultra-High-Performance Concrete*. 69 pp. University of Kansas Center for Research, Inc. [hdl.handle.net/1808/33326](https://hdl.handle.net/1808/33326)
- Rulon, R., Lequesne, R. D., Lepage, A., & Darwin, D., (2022). *SM Report No. 148: Lap Splicing of Large High-Strength Steel Reinforcing Bars*. 136 pp. University of Kansas Center for Research, Inc. [hdl.handle.net/1808/32586](https://hdl.handle.net/1808/32586)
- Burgos, E. A., Lequesne, R. D., & Lepage, A., (2020). *SM Report No. 142: Earthquake-Resistant T-Shaped Concrete Walls with High-Strength Steel Bars*. 356 pp. University of Kansas Center for Research, Inc. [hdl.handle.net/1808/30768](https://hdl.handle.net/1808/30768)
- Weber-Kamin, A. S., Lequesne, R. D., & Lepage, A., (2020). *SM Report No. 143: Reinforced Concrete Coupling Beams with High-Strength Steel Bars*. 598 pp. University of Kansas Center for Research, Inc. [hdl.handle.net/1808/30647](https://hdl.handle.net/1808/30647)
- Al-Sabawy, A., Lequesne, R. D., O'Reilly, M., Darwin, D., & Lepage, A., (2020). *SM Report No. 139: Headed and High-Strength Shear Reinforcement in Concrete Members*. 498 pp. University of Kansas Center for Research, Inc. [hdl.handle.net/1808/30355](https://hdl.handle.net/1808/30355)
- Ameen, S., Lequesne, R. D., & Lepage, A., (2020). *SM Report No. 138: Diagonally-Reinforced Concrete Coupling Beams with High-Strength Steel Bars*. 346 pp. University of Kansas Center for Research, Inc. [hdl.handle.net/1808/30314](https://hdl.handle.net/1808/30314)
- Lucon, E., Lequesne, R. D., Collins, W., & Darwin, D., (2020). *Research Report A01-2000 - Interlaboratory Study to Establish Precision Statements for ASTM A1061/A1061M-20, Standard Test Methods for Testing Multi-Wire Steel Prestressing Strand*. 30 pp. ASTM International.
- Sutley, E., Lequesne, R. D., Gelino, B., Reed, D., Phan, N., Smith, M., Dumler, M., Bhatta, A., Enderami, S., & Snay, A., (2020). *May 28, 2019 EF4 Linwood Tornado: Six-Month Post-Tornado Recovery Report. StEER - 28 MAY 2019 LINWOOD, KS EF4 TORNADO: FIELD ASSESSMENT STRUCTURAL TEAM 1 (FAST-1)*. 54 pp. DesignSafe-CI. doi: 10.17603/ds2-qbsx-ma75
- Blessent, M., Darwin, D., Lepage, A., Lequesne, R. D., & O'Reilly, M., (2020). *SL Report 20-3: Anchorage of Large High-Strength Reinforcing Bars with Standard Hooks and Heads: Initial Tests*. 52 pp. University of Kansas Center for Research, Inc. [hdl.handle.net/1808/34594](https://hdl.handle.net/1808/34594)
- Mudaliar, T., Lequesne, R. D., & Fadden, M., (2020). *SL Report 20-1: Topology Optimized Reinforced Concrete Walls Constructed with 3D Printed Formwork*. 152 pp. University of Kansas Center for Research, Inc. [hdl.handle.net/1808/30279](https://hdl.handle.net/1808/30279)
- Weber-Kamin, A. S., Ameen, S., Lequesne, R. D., & Lepage, A., (2020). *Reinforced Concrete Coupling Beams with High-Strength Steel Bars*. 424 pp. Charles Pankow Foundation.

- Sutley, E., Lequesne, R. D., Li, J., Kirkham, W., Chen, Z., Al-Sabawy, A., Daniel, L., Enderami, S., Kim, J., Mudaliar, T., Taher, S., Sharma, P., & Roueche, D., (2019). *StEER - 28 May 2019 Linwood, KS EF4 Tornado: Field Assessment Structural Team (FAST) Early Access Reconnaissance Report (EARR)*. DesignSafe-CI. doi:10.17603/ds2-xz1j-nm14
- Lequesne, R. D. & Collins, W., (2019). *SL Report 19-2: Synthesis of Rating Methodologies for Concrete Bridges without Plans*. 292 pp. University of Kansas Center for Research, Inc. hdl.handle.net/1808/28738
- Lequesne, R. D., Collins, W., Lucon, E., Poudel, A., & Darwin, D., (2019). *SM Report No. 131: Development of a Precision Statement for ASTM A1061*. 126 pp. University of Kansas Center for Research, Inc. hdl.handle.net/1808/28740
- Also published as: Lequesne, R. D., Collins, W., Lucon, E., Poudel, A., & Darwin, D., (2019). *Development of a Precision Statement for ASTM A1061*. 121 pp. Precast/Prestressed Concrete Institute. www.pci.org/PCI\_Docs/Design\_Resources/Research\_and\_Development/ASTM%20A1061%20PCI%20Final%20Report%20Kansas.pdf
- Weber-Kamin, A. S., Lequesne, R. D., & Lepage, A., (2019). *SL Report 19-1: RC Coupling Beams with High-Strength Steel Bars: Summary of Test Results*. 136 pp. University of Kansas Center for Research. hdl.handle.net/1808/27676
- Poudel, A., Lequesne, R. D., & Lepage, A., (2018). *SL Report 18-3: Diagonally Reinforced Concrete Coupling Beams: Effects of Axial Restraint*. 48 pp. University of Kansas Center for Research. hdl.handle.net/1808/26713
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- Li, C., Lequesne, R. D., & Matamoros, A., (2017). *Composite Action in Prestressed NU I-Girder Bridge Deck Systems Constructed with Bond Breakers to Facilitate Deck Removal*. No. KTRAN: KU-15-1. 188 pp. Kansas Department of Transportation.
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#### Datasets

- Chin, C.-H., Cheng, M.-Y., Lepage, A., and Lequesne, R. D., (2023). *DATASET: Test Results from Shake Table Tests of Reinforced Concrete Frames with Grade 60 or 100 (420 or 690) Reinforcement*, KU Scholarworks, Lawrence, KS. hdl.handle.net/1808/34872
- Dumler, M., Sutley, E., & Lequesne, R. D., (2021). "Contractors' Perceptions of Tornado-Resistant Building Design," in *PRJ-3298: Local Perceptions on Building Safety and Building Performance after the 2019 EF4 Linwood, Kansas, Tornado*. DesignSafe-CI. doi: 10.17603/ds2-f9db-p423.
- Sutley, E., Reed, D., Lequesne, R. D., Kirkham, W., Li, J., Kim, J., Gelina, B., Enderami, S., Dumler, M., Taher, S., Bhatta, A., Vazquez, K., & Caraway-Short, L., (2021). "Six-Month Post-Tornado Repair Progress: Wave 2," in *PRJ-2397: StEER-28 May 2019 Linwood, KS, EF4 Tornado: Field Assessment Structural Team 1 (FAST-1)*. DesignSafe-CI. doi: 10.17603/ds2-an2v-2c39.
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- Weber-Kamin, A., Ameen, S., Lequesne, R. D., & Lepage, A., (2021). *PRJ-3053: Database of Diagonally-Reinforced Concrete Coupling Beams*. DesignSafe-CI. doi: 10.17603/ds2-46wc-n185

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- Sutley, E., Li, J., Chen, Z., Chao, H., Daniel, L., Lequesne, R. D., Sharma, P., Roueche, D., Taher, S., Kirkham, W., Kim, J., & Clements, J., (2020). *PRJ-2397: STEER - 28 May 2019 Linwood, KS EF4 Tornado: Field Assessment Structural Team 1 (FAST-1)*. DesignSafe-CI. doi: 10.17603/ds2-a06x-f358
- Pujol, S., Puranam, A., Stavridis, A., Behrouzi, A., Elwood, K., Lequesne, R. D., Mosqueda, G., Wood, R., Brena, S., & Shah, P., (2019). *PRJ-2285: Buildings Surveyed after 2017 Mexico City Earthquakes*. DesignSafe-CI. doi: 10.17603/ds2-4132-bn84
- Huq, M. S., Lequesne, R. D., & Lepage, A., (2018). *PRJ-1817: Earthquake-Resistant T-shaped Concrete Walls with High-Strength Steel Bars*. DesignSafe-CI. doi: 10.17603/DS28D72

#### Dissertation

- Lequesne, R. D., (2011). *Behavior and Design of High-Performance Fiber-Reinforced Concrete Coupling Beams and Coupled-Wall Systems*. Ann Arbor, MI: University of Michigan. 277 pp. hdl.handle.net/2027.42/86316

#### **Presentations (name of presenter underlined)**

- Lequesne, R. D., (2023, December 1). *ACI 318-19 Development of Hooked and Headed Bars: A Brief History*. Taiwan Concrete Institute Convention, Taipei, Taiwan. Invited Keynote Lecture.
- Lequesne, R. D., (2023, October 30). *2023 Turkey-Syria Earthquakes: Observations on Reinforcement Detailing*. ACI Fall Convention, Boston, MA.
- Lequesne, R. D., (2023, October 26). *Structural Engineering and Materials*. KU-VTT Collaboration Seminar (remote).
- Lequesne, R. D., (2023, October 21). *ACI 133 Survey of Concrete Buildings*. ASCE Convention, Chicago, IL.
- Neupane, U., Lequesne, R. D., Lepage, A., & Darwin, D., (2023, April 3). *Behavior of Earthquake-Resistant Rectangular Walls with Mechanical Splices*. ACI Spring Convention, San Francisco, CA.
- Huq, M. S., Burgos, E. A., Lequesne, R. D., & Lepage, A., (2022, October 25). *High-Strength Steel Bars in Earthquake Resistant Reinforced Concrete T-Shaped Walls*. ACI Fall Convention, Dallas, TX.
- Lequesne, R. D., (2022, July 27). *Update on Bond Provisions in ACI Committees 408 and 318*. 5<sup>th</sup> Bond in Concrete, Stuttgart, Germany.
- Banaeipour, A., Darwin, D., O'Reilly, M., Lepage, A., & Lequesne, R. D., (2022, July 26). *Anchorage of High-Strength 43-mm Hooked Bars*. 5<sup>th</sup> Bond in Concrete, Stuttgart, Germany.
- Rulon, R., Lequesne, R. D., Darwin, D., & Lepage, A., (2022, July 25). *Lap Splicing Large Reinforcing Bars*. 5<sup>th</sup> Bond in Concrete, Stuttgart, Germany.
- Valentini, G., Lequesne, R. D., Lepage, A., & Darwin, D., (2022, July 25). *Development and Lap Splice Length of Straight Bars in Compression*. 5<sup>th</sup> Bond in Concrete, Stuttgart, Germany.

- Lepage, A., Lequesne, R. D., Weber-Kamin, A. S., & Ameen, S., (2022, June 29). *Chord Rotation Capacity of Diagonally-Reinforced Concrete Coupling Beams*. 12<sup>th</sup> National Conference on Earthquake Engineering, Salt Lake City, Utah.
- Burgos, E. A., Huq, M. S., Lequesne, R. D., & Lepage, A., (2022, June 28). POSTER: *Moment-Curvature Analysis for Strain Estimates of Concrete T-Shaped Walls Reinforced with High-Strength Steel*. 12<sup>th</sup> National Conference on Earthquake Engineering. Salt Lake City, Utah.
- Burgos, E. A., Huq, M. S., Lequesne, R. D., & Lepage, A., (2022, June 28). POSTER: *Moment-Curvature Analysis for Deformation Capacity of Reinforced Concrete T-Shaped Walls with High-Strength Steel*. 12<sup>th</sup> National Conference on Earthquake Engineering. Salt Lake City, Utah.
- Lequesne, R. D., Darwin, D., Lepage, A., Rulon, R., Neupane, U., & Niyonyungu, F., (2022, May 24). *Lap Splicing of Large Steel Reinforcing Bars*. Construction Innovation Workshop for Advanced Nuclear Reactors, Electric Power Research Institute, Charlotte, NC.
- Valentini, G., Lequesne, R. D., Lepage, A., & Darwin, D., (2021, October 17). *Development and Splice Length of Straight Bars in Compression*. ACI 408 Committee, Remote.
- Lequesne, R. D., (2020, June 4). *Update on Progress of ACI Committees 408 and 318*. fib Task Group 2.5, Remote.
- Lee, H.-J., Lin, J.-X., Lequesne, R. D., & Lepage, A., (2020, June 3). *Bond of High-Strength Reinforcement in Joints of Earthquake-Resistant Concrete Moment Frames*. ACI Summer Virtual Sessions, Remote.
- Kim, J., Sutley, E. J., Lequesne, R. D., Kirkham, B., Li, J., & Chen, Z., (2020, April). *Multi-Hazard Damage Observations from the May 2019 Linwood, KS Tornado*. ASCE SEI Structures Congress, St. Louis, MO.
- Sutley, E. J., Lequesne, R. D., Kim, J., Kirkham, W., & Clements, J., (2019, October). *Leveraging Recent Post-Tornado Damage Findings to Evaluate Kansas Tornado Vulnerability*. THWARTS: Tornado Hazard Wind Assessment and ReducTION Symposium, Urbana-Champaign, IL.
- Lequesne, R. D., (2019, July 25). *Simpler Robust Coupling Beams*. National Center for Research on Earthquake Engineering (NCREE) and National Taiwan University (NTU), Taipei, Taiwan.
- Lequesne, R. D., Collins, W., Darwin, D., Poudel, A., & Lucon, E., (2019, May 15). *Proposed Revisions of the ASTM A1061 Standard*. ASTM Committee Days, Denver, CO (remote).
- Mudaliar, T., Lequesne, R. D., & Fadden, M., (2019, April 25). *Structural Behavior of Optimized RC Walls Constructed with 3D Printed Formwork*. ASCE SEI Structures Congress, Orlando, FL.
- Lequesne, R. D. & Collins, W., (2019, March 26). *Load Rating Reinforced Concrete Bridges without Plans: State-of-the-Practice*. ACI Spring Convention, Quebec City, QC, CA.
- Lequesne, R. D., Collins, W., Darwin, D., Poudel, A., & Lucon, E., (2019, March 1). *Development of a Precision Statement for the ASTM A1061 Test Method*. PCI Spring Convention, Louisville, KY.
- Lequesne, R. D., (2018, October 25). *Developments in Bond at ACI Committees 408 and 318*. fib Task Group 2.5, Turin, Italy.
- Lequesne, R. D., Collins, W., Darwin, D., Poudel, A., & Lucon, E., (2018, October 13). *Development of a Precision and Bias Statement for the ASTM A1061 Test Method*. PCI Committee Days, Research and Development Council, Rosemont, IL.

- Lequesne, R. D., Collins, W., Darwin, D., Poudel, A., & Lucon, E., (2018, October 11). *Development of a Precision and Bias Statement for the ASTM A1061 Test Method*. PCI Committee Days, Committee on High Strength Steel and Prestressed Reinforcement, Rosemont, IL.
- Lequesne, R. D., Ameen, S., Weber-Kamin, A. S., & Lepage, A., (2018, June 28). *Diagonally-Reinforced Concrete Coupling Beams with High-Strength Steel Bars*. 11<sup>th</sup> National Conference on Earthquake Engineering, Los Angeles, CA.
- Lequesne, R. D., Huq, M. S., Burgos, E. A., & Lepage, A., (2018, June 28). *High-Strength Steel Bars in T-Shaped Concrete Walls*. 11<sup>th</sup> National Conference on Earthquake Engineering, Los Angeles, CA.
- McVey, M., Bennett, C., Collins, W., Lequesne, R. D., Luchies, C., Wilson, S., Sutley, E., Fadden, M., & Melgares, C., (2018, June 26). POSTER: *Peer Mentoring for All: Investigating the Feasibility of a Curricular-Embedded Peer Mentoring Structure*. American Society for Engineering Education Annual Conference and Exposition, Salt Lake City, UT.
- McVey, M., Bennett, C., Luchies, C., & Lequesne, R. D., (2018, June 25). *An Investigation of the Effect of Curriculum-Embedded Peer Mentoring on Student Learning in Two Undergraduate Mechanics Courses*. American Society for Engineering Education Annual Conference and Exposition, Salt Lake City, UT.
- Lequesne, R. D. & Lepage, A., (2018, March 1). *High-Strength Steel in Structural Concrete: From Research to Building Codes*. 63<sup>rd</sup> Annual Structural Engineering Conference, Lawrence, Kansas.
- Pincheira, J.A., Olson, C., & Lequesne, R. D., (2017, November). *Vibraciones de Pisa en un Edificio con Losas Aligeradas*. 5<sup>th</sup> International Congress of Engineering Materials and Structures, Universidad Militar Nueva Granada, Bogota, Colombia.
- Yasso, S., Lepage, A., Darwin, D., Lequesne, R., & O'Reilly, M., (2017, March 27). *Development Length of High-Strength Bars in Tension*. American Concrete Institute Spring 2017 Conference, Detroit, MI.
- Weber-Kamin, A., Ameen, S., Lequesne, R., Lepage, A., & Huq, M. S., (2017, January). *Behavior of Diagonally Reinforced Concrete Coupling Beams with High-Strength Steel Bars*. 16WCEE - 16<sup>th</sup> World Conference on Earthquake Engineering, 16WCEE - 16<sup>th</sup> World Conference on Earthquake Engineering. Santiago, Chile.
- Weber-Kamin, A., Huq, M. S., Lepage, A., Lequesne, R., & Ameen, S., (2017, January). POSTER: *Influence of Mechanical Properties of High-Strength Steel on Deformation Capacity of Reinforced Concrete Walls*. 16WCEE - 16<sup>th</sup> World Conference on Earthquake Engineering, 16WCEE - 16<sup>th</sup> World Conference on Earthquake Engineering. Santiago, Chile.
- Lequesne, R. D., Tameemi, W., Perez-Irizarry, A. L., Dudnik, V., & Parra-Montesinos, G. J., (2016, September 20). *Correlations between Results from Compressive, Flexural, and Tensile Tests of Steel Fiber Reinforced Concrete*. BEFIB2016 - 9<sup>th</sup> International Symposium on Fiber Reinforced Concrete, Vancouver, Canada.
- Lequesne, R. D., Darwin, D., Lepage, A., O'Reilly, M., Al-Sabawy, A., & Spradling, D., (2016, April 18). *Use of Headed Grade 80 Bars as Shear Reinforcement*. ACI Convention, Committee 445 Meeting, Milwaukee, Wisconsin.

- Parra-Montesinos, G. J., Lequesne, R. D., Monfardini, L., Minelli, F., & Pincheira, J. A., (2015, June 2). *Stability of Reinforcing Bars in Steel Fiber Reinforced Concrete Flexural Members*. High Performance Fiber Reinforced Cementitious Composites 7 (HPFRCC 7), Stuttgart, Germany.
- Cheng, M.-Y., Wibowo, L. S.B., Lequesne, R. D., Lepage, A., & Giduquio, M. B., (2014, October 27). *Deformation Capacity and Strength of RC Frame Members Constructed with High-Strength Materials*. ACI Fall Convention, Session: James K. Wight: A Tribute from His Students and Colleagues, Washington, D.C.
- Lequesne, R. D. & Parra-Montesinos, G. J., (2014, October 26). *Understanding Shear Behavior under Load Reversals through James K. Wight's Research*. ACI Fall Convention, Session: James K. Wight: A Tribute from His Students and Colleagues, Washington, D.C.
- Lequesne, R. D., (2014, June 12). *Strut-and-Tie Models for Shear Design: AASHTO Specifications*. Kansas ASCE Structural Group Meeting, Topeka, KS.
- Lequesne, R. D., (2014, March 6). *Fiber-Reinforced Concrete and Earthquake-Resistant Design*. 59<sup>th</sup> Annual Structural Engineering Conference, Lawrence, KS.
- Lequesne, R. D., Parra-Montesinos, G. J., & Wight, J. K., (2013, March 28). *Behavior and Design of High-Performance Fiber Reinforced Concrete Coupling Beams and Coupled Wall Systems*. University of Nebraska, Lincoln, NE.
- Lequesne, R. D., Parra-Montesinos, G. J., & Wight, J. K., (2013, February 28). *Behavior and Design of Coupling Beams and Coupled Walls Constructed with High-Performance Fiber Reinforced Concrete*. University of Kansas, Lawrence, KS.
- Lequesne, R. D., Parra-Montesinos, G. J., & Wight, J. K., (2013, February 7). *High-Performance Fiber Reinforced Concrete Coupling Beams and Coupled Wall Systems: Behavior and Design*. University of Minnesota, Duluth, MN.
- Lequesne, R. D., Parra-Montesinos, G. J., & Wight, J. K., (2011, September 16). *Behavior and Design of High-Performance Fiber Reinforced Concrete Coupling Beams and Coupled Wall Systems*. Structural Engineers Association of Ohio, Annual Meeting, Columbus, OH.
- Lequesne, R. D., Wight, J. K., & Parra-Montesinos, G. J., (2010, July 28). *Seismic Detailing and Behavior of Coupled Wall Systems with High-Performance Fiber-Reinforced Concrete*. 9<sup>th</sup> National and 10<sup>th</sup> Canadian Conference on Earthquake Engineering, Toronto, ON, Canada.
- Lequesne, R. D., Parra-Montesinos, G. J., & Wight, J. K., (2010, March 20). *Seismic Response of High-Performance Fiber-Reinforced Concrete Coupled Walls*. 6<sup>th</sup> International Workshop on Structural Concrete in the Americas, Chicago, IL.
- Lequesne, R. D., Parra-Montesinos, G. J., & Wight, J. K., (2009, June 10). POSTER: *Innovative Applications of Damage Tolerant Fiber-Reinforced Cementitious Materials for New Earthquake-Resistant Structural Systems and Retrofit of Existing Structures*. NSF Program CMMI Meeting, Honolulu, Hawaii.
- Lequesne, R. D., Parra-Montesinos, G. J., & Wight, J. K., (2009, February 12). POSTER: *Seismic Detailing and Behavior of Precast High-Performance Fiber Reinforced Concrete Coupling Beams*. EERI Annual Meeting, Salt Lake City, Utah.
- Lequesne, R. D., Wight, J. K., & Parra-Montesinos, G. J., (2008, November 3). *Earthquake Resistant Design of Coupled Wall Systems Incorporating High-Performance Fiber-Reinforced Concrete*. 2008 ACI Fall Convention, Session: ACI Student Fellowships and Young Member Initiatives, St. Louis, MO.

Lequesne, R. D., Parra-Montesinos, G. J., & Wight, J. K., (2008, March 31). *High Performance Fiber Reinforced Concrete in Earthquake-Resistant Coupled Wall Systems*. 2008 ACI Spring Convention, Session: Part 1: Session Honoring Antoine E. Naaman: Four Decades of Progress in Fiber Reinforced Concrete, Los Angeles, CA.

Lequesne, R. D., Wight, J. K., & Parra-Montesinos, G. J., (2007, July 10). *High Performance Fiber Reinforced Concrete for Earthquake Resistant Design of Coupled Wall Systems*. Fifth International RILEM Workshop, High Performance Fiber-Reinforced Cement Composites (HPFRCC5), Mainz, Germany.

## Grants

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### External Research Funding

#### Funded

Lequesne, R. D., (Principal, University of Kansas), & Sharma, A., (Co-Principal, Purdue University). *Advanced Nuclear Reactors: Bond under High Temperature*, Electric Power Research Institute, \$395,000 (\$197,500 at the University of Kansas) (January 2023 – June 2025).

Bennett, C., (Principal), Lequesne, R. D., (Co-Principal), Li, J., (Co-Principal), Collins, W., (Co-Principal), Lepage, A., (Co-Principal), Darwin, D., (Co-Principal), O'Reilly, M., (Co-Principal), Hansen, A., (Co-Principal), & Husic, A., (Co-Principal), *Improving the Performance of Concrete Dam Infrastructure through Use of Fiber Reinforced Polymers*, U.S. Army Corp of Engineers. Budgeted amount: \$7,740,921 (April 2022 – April 2027). Y1 to Y3 appropriated for a total of \$4,286,377; Y4 and Y5 under contract, pending appropriation.

Lequesne, R. D., (Principal), Lepage, A., (Co-Principal), & Darwin, D., (Co-Principal), *Splicing, Coupling, and Anchorage of Large High-Strength Steel Reinforcing Bars in Earthquake-Resistant Structures*, Electric Power Research Institute, \$650,000 (March 2020 – December 2023).

Darwin, D., (Principal), Lequesne, R. D., (Co-Principal), & O'Reilly, M., (Co-Principal), *Bond Behavior of Epoxy Coated Reinforcing Bars in Non-proprietary UHPC*, Oklahoma Department of Transportation, \$251,820 (October 2021 – September 2023).

Lequesne, R. D., (Principal), & Collins, W., (Co-Principal), *Re-decking Prestressed Concrete Girders Phase II: Examining Long-term Impacts using Monte Carlo Simulations*, Kansas Department of Transportation, \$44,049 (August 2022 – August 2024).

Lequesne, R. D., (Principal), & Collins, W., (Co-Principal), *Re-decking Prestressed Concrete Girders Phase I: State-of-the-Practice and Preliminary Analysis Recommendations*, Kansas Department of Transportation, \$73,329 (August 2021 – May 2023).

Lequesne, R. D., (Principal), Lepage, A., (Co-Principal), & Darwin, D., (Co-Principal), *Development of Hooked, Headed, and Straight Bars in Compression*, Concrete Reinforcing Steel Institute, \$90,000 (May 2020 – December 2022).

Husic, A., (Principal), Collins, W., (Co-Principal), Lequesne, R. D., (Co-Principal), & Roundy, J., (Co-Principal), *Development of Condition Factors and Bridge Load Ratings through Statistical Analyses of the NBI Database*, Kansas Department of Transportation, \$46,501 (August 2021 – August 2022).

- Darwin, D., (Principal), Lequesne, R. D., (Co-Principal), Lepage, A., (Co-Principal), & O'Reilly, M., (Co-Principal), *Development of Large High-Strength Headed Reinforcing Bars*, Charles Pankow Foundation, ACI Foundation, BarSplice Products, Headed Reinforcement Corporation, Pentair, and CRSI Education and Research Foundation, \$380,000 (August 2018 – August 2022).
- Lequesne, R. D., (Principal), & O'Reilly, M., (Co-Principal), *UHPC Mixture Design for Accelerated Bridge Construction*, Kansas Department of Transportation, \$56,702 (January 2021 – December 2021).
- Lequesne, R. D., (Principal), & Collins, W., (Co-Principal), *Synthesis of Rating Methodologies for Concrete Bridges without Plans*, Kansas Department of Transportation and Federal Highway Administration, \$39,488 (February 2018 – January 2019).
- Lequesne, R. D., (Principal), Collins, W., (Co-Principal), Darwin, D., (Co-Principal), & Lucon, E., (Consultant), *Development of Precision and Bias Statement for ASTM A1061*, Precast/Prestressed Concrete Institute, \$105,288 (October 2017 – September 2018).
- Lepage, A., (Principal), & Lequesne, R. D., (Co-Principal), *Reinforced Concrete Coupling Beams with High-Strength Steel Bars*, Charles Pankow Foundation, \$150,000, (January 2017 – September 2018).
- Lepage, A., (Principal), & Lequesne, R. D., (Co-Principal), *Deformation Capacity of Concrete Structural Walls Reinforced with Grade 100 Steel Bars*, CMC, \$50,000 (September 2016 – March 2018).
- Lepage, A., (Principal), & Lequesne, R. D., (Co-Principal), *Deformation Capacity of Concrete Structural Walls Reinforced with ASTM A1035 Steel Bars*, MMFX Technologies Corporation, \$55,000 (July 2016 – December 2017).
- Darwin, D., (Principal), Lequesne, R. D., (Co-Principal), Lepage, A., (Co-Principal), & O'Reilly, M., (Co-Principal), *Use of Headed Bars as Shear Reinforcement*, Electric Power Research Institute, \$400,000 (August 2014 – August 2017).
- Lequesne, R. D., (Principal), & Matamoros, A., (Co-Principal), *Composite Action in Prestressed NU I-Girder Bridge Deck Systems Constructed with Bond Breakers to Facilitate Deck Removal*, Kansas Department of Transportation, \$83,000 (August 2014 – April 2017).
- Lepage, A., (Principal), & Lequesne, R. D., (Co-Principal), *High-Strength Steel Bars in Reinforced Concrete Walls: Influence of Mechanical Properties of Steel on Deformation Capacity*, Charles Pankow Foundation, \$112,000 (November 2014 – October 2016).

### **Internal Funding**

- Hutchinson, J., (Principal), Bennett, C., (Co-Principal), & Lequesne, R. D., (Co-Principal), *The Mapping and Assessment Planning (MAP) Program - CEAE*, University of Kansas Center for Teaching Excellence, \$3,600, (February 2023 – February 2024).
- Lequesne, R. D., (Principal), *ASCEND Funding: High Temperature Effects on Bond in Concrete*, KU School of Engineering, \$15,000, (January 2023 – December 2023).
- Roundy, J., (Principal), Husic, A., (Co-Principal), Hansen, A., (Co-Principal), Tran, D., (Co-Principal), Lequesne, R. D., (Co-Principal), Young, B., (Co-Principal), & Misra, A., (Co-Principal), *Integrating PYTHON Based Active Learning Modules into the CEAE Curriculum*, CTE Course Transformation Grant, \$3,000 (March 2021 – May 2022).

- Parsons, R., (Principal), Bennett, C., (Co-Principal), Kondyli, A., (Co-Principal), Lequesne, R. D., (Co-Principal), Li, J., (Co-Principal), Lines, B., (Co-Principal), McVey, M., (Co-Principal), Medina, M., (Co-Principal), Roundy, J., (Co-Principal), & Sutley, E., (Co-Principal), *Benchmarks for Teaching Effectiveness Project; Application for Cohort Three: Department of Civil, Environmental, and Architectural Engineering*, Internal Sub-Award from larger National Science Foundation Grant, \$5,000, (December 2019 – December 2020).
- Lequesne, R. D., (Principal), *Pilot Study: Deformation Capacity of Interior Slab-Column Connections with Openings*, University of Kansas General Research Fund, \$7,280, (July 2016 – June 2017).
- Fadden, M., (Principal), Lequesne, R. D., (Co-Principal), & McVey, M., (Co-Principal), *University of Kansas TRESTLE Course Transformation Grant: CE 310 - Strength of Materials Laboratory Transformation*, Internal Sub-Award from larger National Science Foundation Grant, \$3,750 (October 2016 – May 2017).
- Lequesne, R. D., (Principal), *Quantification of Fiber Distribution and Orientation in Fiber Reinforced Concrete Materials*, University of Kansas New Faculty General Research Fund, \$7,951 (September 2015 – August 2017).

### **Graduate Student Supervision**

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#### **Ph.D.**

- U. Neupane, *Mechanical Bar Couplers in Earthquake-Resistant Construction*, Chair (ongoing)
- A. Al-Sabawy, *Headed and High-Strength Shear Reinforcement in Concrete Members*, Chair (May 2020)
- S. Ameen, *Diagonally-Reinforced Concrete Coupling Beams with High-Strength Steel Bars*, Co-Chair (December 2018)
- M. S. Huq, *High-Strength Steel Bars in Earthquake-Resistant T-Shaped Concrete Walls*, Co-Chair (August 2018)
- C. Li, *Composite Action in Prestressed NU I-Girder Bridge Deck Systems Constructed with Bond Breakers to Facilitate Deck Removal*, Chair (August 2017)

#### **M.S. Thesis Option**

- G. Friess, *Behavior and Retrofitting of Concrete Dam Lift Joints*, Chair (ongoing)
- B. Giri, *Bond and Anchorage under High Temperature*, Chair (ongoing)
- F. Niyonyungu, *Earthquake-Resistant Column-Foundation Connections*, Chair (ongoing)
- B. Adhikari, *Long-term Implications of Redecking Bridges with Prestressed Concrete Girders*, Chair (May 2023)
- G. Valentini, *Compression Lap Splices of Straight Bars and Compression Development of Headed and Hooked Bars in Beam-Column Joints*, Chair (September 2022)
- Y. Aljawad, *Low-Shrinkage Ultra-High-Performance Concrete*, Chair (June 2022)
- R. Rulon, *Lap Splicing of Large High-Strength Steel Reinforcing Bars*, Chair (December 2021)
- T. Mudaliar, *Topology Optimized Reinforced Concrete Walls Constructed with 3D Printed Formwork*, Chair (January 2020)
- W. Tameemi, *Correlations between Compressive, Flexural, and Tensile Behavior of Self-Consolidating Fiber Reinforced Concrete*, Chair (September 2015)



**M.S. Project Option**

- A. Poudel, *Diagonally-Reinforced Concrete Coupling Beams: Effects of Axial Restraint*, Chair (July 2018)
- K. Carleton, *Charts for Preliminary Selection of NU Girder Sections Based on Kansas Department of Transportation LRF Design Guidelines for Prestressed Concrete Beams*, Chair (May 2016)
- C. Lomonaco, *Influence of Bar Size on Shear Strength of Reinforced Concrete Beams without Stirrups*, Chair (May 2015)

**Postdoctoral Fellows and Visiting Scholars**

- Md. Kobir Hossain, Ph.D., Postdoctoral researcher (ongoing)
- Juan Sebastián Spinel Penuela, Visiting scholar and doctoral candidate at the Universidad de los Andes in Bogota, Columbia (ongoing)

**Press Coverage**

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- Staff (2023). “KU Engineering Professor Surveys Earthquake Damage in Turkey”, *KU Today*.  
<https://news.ku.edu/2023/06/20/ku-engineering-professor-surveys-earthquake-damage-turkey>
- Lynch, B., (2023). “KU Researchers Strengthen American Dams, Levees with Technological Innovation”, *KU Today*.  
<https://news.ku.edu/2023/03/29/ku-researchers-strengthen-american-dams-and-levees-technological-innovation>
- Staff (2023). “KU Engineering Part of \$7.7 million Federal Project to Extend the Life of Old Dams Across the U.S.”, *Lawrence-Journal World*.  
<https://www2.ljworld.com/news/ku/2023/mar/29/ku-engineering-part-of-7-7-million-federal-project-to-extend-the-life-of-old-dams-across-the-u-s/>
- Lynch, B., (2019). “Rapid-Response Damage Assessment Gives New Insight into Recent Kansas Tornado”, *KU Today*.  
<https://news.ku.edu/2019/06/10/rapid-response-damage-assessment-provides-new-insight-recent-kansas-tornado>
- Post, N., (2018). “Tests of Concrete Walls with High-Strength Rebar Lay Foundation for Code Change”, *Engineering News-Record*.  
<https://www.enr.com/articles/43713-tests-of-concrete-walls-with-high-strength-rebar-lay-foundation-for-code-change>
- Post, N., (2010). “Steel Fibers Show Promise as ‘Rebar Decongestants’”, *Engineering News-Record*.  
<https://www.enr.com/articles/9704-steel-fibers-show-promise-as-8216-rebar-decongestants-8217>

**Teaching**

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**Courses Taught: University of Kansas**

- CE 310 - Strength of Materials (Eleven semesters, mean evaluation: 4.8/5.0)
- CE 563 - Design of Reinforced Concrete Structures (Four semesters, mean evaluation: 4.8/5.0)
- CE 764 - Advanced Design of Reinforced Concrete Structures (Seven semesters, mean evaluation: 4.8/5.0)
- CE 862 - Behavior of Reinforced Concrete Members (Two semesters, mean evaluation: 4.7/5.0)

**Courses Taught: University of Wisconsin – Madison**

CEE 340 - Structural Analysis I (mean evaluation: 4.5/5.0)

**Enrichment Activities**

Participant in *Center for Teaching Excellence Best Practices Institute* (2014)

**Service**

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**Professional Memberships**

American Concrete Institute (ACI) (Since 2006)

American Society of Civil Engineers (ASCE) (Student Member Grade 2003 - 2010, Associate Member Grade 2014 - 2016, Member Grade Since 2016)

Earthquake Engineering Research Institute (EERI) (2014 - 2020)

Precast Concrete Institute (PCI) (Since 2018)

**International Professional Service***Member*

fib Task Group 2.5 - Bond and Material Models (Since 2019)

ACI Reconnaissance Team for the February 6, 2023, Turkey-Syria Earthquake (2023)

Bond in Concrete 2022 Scientific Committee (2022)

ACI Reconnaissance Team for the September 19, 2017, Central Mexico Earthquake (2017)

**National Professional Service***Chair*

ACI-ASCE Committee 408 - Bond and Development of Steel Reinforcement (Since 2018)

ACI-ASCE Committee 352-Task Group 2 - Beam-Column Joints & Connections (Since 2016)

*Secretary*

ACI-ASCE Committee 408 - Development and Splicing of Deformed Bars (2012 - 2018)

*Member*

ACI Sub-Committee 445F - Interface Shear (Since 2023)

ACI Committee 133 - Disaster Reconnaissance (Since 2021)

PCI Prestressing Reinforcement Committee (Since 2019)

ACI-ASCE/SEI Committee 90-03 - TAC Subcommittee on ACI/ASCE-SEI Joint Committees. (Since 2018)

ACI Sub-Committee 318-J - Joints and Connections (Since 2014)

ACI-ASCE Committee 352 - Joints and Connections in Monolithic Concrete Structures (Since 2014)

ACI-ASCE Committee 352-Task Group 1 - Slab-Column Joints & Connections (Since 2014)

ACI Committee on Awards for Papers - Subcommittee SC3 Mete A. Sozen Award for Excellence in Structural Research (Appointed) (2020, 2021, 2023)

StEER Linwood, KS, Tornado Reconnaissance Team (2019)

Associate Member

ACI Committee 445 - Shear and Torsion; Member of Sub-Committee 445-C - Punching Shear (Since 2014)

ACI Committee 374 - Performance-Based Seismic Design of Concrete Buildings (Since 2008)

ACI Committee 544 - Fiber-Reinforced Concrete (2014 - 2017)

Session Organizer / Moderator

Co-Moderator of the *Transfer and Development* session, Bond in Concrete (2022)

Co-Moderator of the *Joint FIB/ACI* session, Bond in Concrete (2022)

Moderator of the *Buildings Session*, 66<sup>th</sup> Annual KU Structural Engineering Conference (2021)

Co-Moderator of *The Intersection of Bond, Development Length, and Anchorage*, Fall ACI Convention (2020)

Co-Moderator of *Recent Findings in High-Strength Steel and Engineered Cementitious Composites (ECC)*, 11<sup>th</sup> National Conference on Earthquake Engineering (2018)

Co-Organizer of three *Bond in Concrete* sessions at the Spring ACI Convention (2017)

Co-Moderator of *Bond in Concrete – Part 3*, Spring ACI Convention (2017)

Proposal Reviewer

Small Business Innovation Research Program Phase I / Small Business Technology Transfer Program Phase I, National Science Foundation (2019 - 2020)

Engineering for Civil Infrastructure Program, National Science Foundation (2018)

Engineering for Natural Hazards Program, National Science Foundation (2016)

Manuscript Reviewer

ACI Concrete International (2016, 2018)

ACI Special Publications (2013 - 2015, 2019)

ACI Structural Journal (2013 - 2019, 2021)

ACI Technical Activities Council, External Ad-hoc Reviewer (2019 - 2020)

ASCE Journal of Structural Engineering (2013 - 2017, 2019 - 2022)

ASCE Journal of Materials Engineering (2015)

Canadian Journal of Civil Engineering (2013, 2014, 2020)

EERI Earthquake Spectra (2017 - 2019)

Engineering Structures (2015 - 2016, 2021)

Journal of Building Engineering (2016, 2020 - 2021)

PCI Journal (2021, 2023)

Structural Engineering and Mechanics (2016)

Structural Engineering International (2017)

Oxford University Press; Textbook Chapter Pre-Publication Technical Review (2020)

University Representative

Consortium of Universities for Research in Earthquake Engineering (2014 - 2016)

**University Service**

President

Faculty Senate President (Elected) (2021 - 2022)

Chair

Faculty Senate Executive Committee (Elected) (Ex-Officio) (2021 - 2022)

Member

Open Access Advisory Board (Since 2023)

Shulenburg Award Committee (2023)

Kansas Board of Regents Council of Faculty Senate Presidents (Elected) (2021 - 2022)

Staff Senate (Ex-Officio) (2021 - 2022)

Staff Senate Executive Committee (Ex-Officio) (2021 - 2022)

University Senate Executive Committee (Elected) (Ex-Officio) (2021 - 2022)

Ad-Hoc Committee: Review of Procedures of the Faculty Rights Board for Hearing Cases  
Involving Dismissal of a Tenured Faculty Member (2021 - 2022)

Faculty Rights Board (2020 - 2022)

Faculty Senate (Elected) (2019 - 2022)

University Senate (Elected) (2019 - 2022)

Libraries Committee (2019 - 2022)

Return to Campus Simulation Committee (2020)

**School of Engineering Service**

Member

Student Academic Misconduct Hearing Panel (2019, 2022)

Diversity Task Force (2019 - 2021)

Academic Standards Committee (2015 - 2016)

Other

Instructor at Project Discovery Summer Camp (2015, 2017)

Judge for Graduate Engineering Association Research Competition (2014, 2016)

**Civil, Environmental, and Architectural Engineering Department Service**

Chair

Retention Committee (Since 2022)

Search Committee - Teaching Professor/Professor of Practice (2023)

Sabbatical Leave Committee (2022)

Member

Graduate Studies Committee (Since 2019)  
 Promotion and Tenure Committee (Committee of the Whole) (Since 2019)  
 Structural Engineering Conference Planning Committee (Since 2013)  
 Search Committee - Department Chair (2022)  
 Diversity and Equity Task Force (2020 - 2021)  
 Search Committee - Construction Engineering Faculty Member (2019 - 2020)  
 Student Retention Committee (2013 - 2016)  
 Search Committee - Laboratory Technician (2016)  
 Search Committee - Three Structural Engineering Faculty Members (2014 - 2015)

Faculty Advisor

American Society of Civil Engineers Student Chapter (2014 - 2020)  
 American Concrete Institute Student Chapter (2013 - 2016)

External Member

Annual Internal ABET Review of Geomaterials Group (2016)  
 Annual Internal ABET Review of Transportation Group (2016)

Reviewer

Peer Teaching Evaluation (Since 2019)

**Service Presentations**

Lequesne, R. (2020, February 19). *On Licensure and Ethics*. National Society of Professional Engineers - KU Student Chapter.

Lequesne, R. (Spring 2016, 2018 - 2020). *F.E. Exam Review, Topic: Strength of Materials*. Civil, Environmental, and Architectural Engineering at the University of Kansas.

Lequesne, R. (2016, September 13). *Why Structural Engineering?* Architectural Engineering Institute - KU Student Chapter.

Lequesne, R. (2016, February 17). *Structural Engineering; Why I Enjoy It*. American Concrete Institute - KU Student Chapter.

Lequesne, R. D. (2014, October). *Introduction to Structural Engineering*. Three lectures for CE 191 – Introduction to Civil Engineering.

Lequesne, R. (2014, March 31). *Strut-and-Tie Models: AASHTO Specifications vs. ACI Code*. KU CEAE Department Professional Development Series.