

Refereed journal publications

- Patil, P. and **Jones, C.** (2022). *Identifying Uncertainties in Nanoindentation Experiments for Cementitious Materials*. Accepted for publication in Transportation Research Record.
- Athe, P., **Jones, C.**, and Dinh, N. (2021). *Assessment of the Predictive Capability of VERA - CS for CASL Challenge Problems*. Journal of Verification, Validation and Uncertainty Quantification, 6 (2).
- Islam, S., Bose, A., **Jones, C.**, Hossain, M., and Vahl, C. (2020). *Developing an Automated Technique to Calibrate the AASHTOWare Pavement ME Design Software*. Transportation Research Record, 2674 (9), 867-877.
- Tavakol, M., Kulesza, S., **Jones, C.**, and Hossain, M. (2020). *Effect of Low-Quality Recycled Concrete Aggregate on Stabilized Clay Properties*. Journal of Materials in Civil Engineering, 32 (8), 04020196.
- Qadri, F. **Jones, C.** (2020). *Durable High Early Strength Concrete via Internal Curing Approach Using Saturated Lightweight and Recycled Concrete Aggregates*. Transportation Research Record, 2674 (7), 67-76.
- Porras, Y., **Jones, C.**, and Schmiedeke, N. (2020). *Freezing and Thawing Durability of High Early Strength Portland Cement Concrete*. Journal of Materials in Civil Engineering, 32 (5), 04020077.
- Kramer, S.L., Jones, A., Mostafa, A., Ravaji, B., Tancogne-Dejean, T., Roth, C.C., Bandpay, M.G., Pack, K., Foster, J.T., Behzadinasab, M. and Sobotka, J.C., McFarland, J.M., Stein, J., Spear, A.D., Newel, P., Czbaj, M.W., Williams, B., Simha, H., Gesing, M., Gilkey, L.N., **Jones, C.A.**, Dingreville, R., Sanborn, S.E., Bignell, J.L., Cerrone, A.R., Keim, V., Nonn, A., Cooreman, S., Thibaux, P., Ames, N., Connor, D.O., Parno, M., Davis, B., Tucker, J., Coudrillier, B., Karlson, K.N., Ostien, J.T., Foulk, J.W., Hammetter, C.I., Grange, S., Emery, J.M., Brown, J.A., Bishop, J.A., Bishop, J.E., Johnson, K.L., Ford, K.R., Brinckmann, S., Neilsen, M.K., Jackiewicz, J., Ravi-Chandar, K., Ivanoff, T., Salzbrenner, B.C., and Boyce, B. (2019). *The third Sandia Fracture Challenge: predictions of ductile fracture in additively manufactured metal*. International Journal of Fracture, 218(1-2), pp.5-61.
- Islam, S., Hossain, M., **Jones, C. A.**, Bose, A., Barrett, R., & Velasquez Jr, N. (2019). *Implementation of AASHTOWare Pavement ME Design Software for Asphalt Pavements in Kansas*. Transportation Research Record, 0361198119835540.
- Gordon, N., Gilkey, L., Smith, R. C., Michaud, I., Williams, B., Mousseau, V., & **Jones, C.** (2019). *A Mutual Information-Based Experimental Design Framework to Use High-Fidelity Nuclear Reactor Codes to Calibrate Low-Fidelity Codes*. Nuclear Technology, 1-12.
- Boyce, B.L., S.L.B. Kramer, et al. (2016). *The second Sandia Fracture Challenge: predictions of ductile failure under quasi-static and moderate-rate dynamic loading*. International Journal of Fracture. 198 (1): p. 5-100.
- **Jones, C.A.**, R.A. Dameron, M. Sircar. (2015). *Improving the state of the art in FEM analysis of PCCVs with bonded and unbonded prestress tendons*. Nuclear Engineering and Design. 295: p. 782-788.
- **Jones, C.A.**, Z.C. Grasley, and J.A. Ohlhausen. (2011). *Measurement of elastic properties of calcium silicate hydrate with atomic force microscopy*. Cement and Concrete Composites. 34 (4): p. 468-477.
- **Jones, C.A.** and Z.C. Grasley (2010). *Short term creep of cement paste during nanoindentation*. Cement and Concrete Composites.33(1): p. 12-18.
- **Jones, C.A.** and Z.C. Grasley (2009). *Correlation of radial flow-through and hollow cylinder dynamic pressurization test for measuring permeability*. Journal of Materials in Civil Engineering. 21(10): p. 594-600.
- **Jones, C.A.** and Z.C. Grasley (2009). *Correlation of hollow and solid cylinder dynamic pressurization tests for measuring permeability*. Cement and Concrete Research. 39(4): p. 345-352.
- **Jones, C.A.** and Z.C. Grasley (2009). *Novel and flexible dual permeability measurement device for cementitious materials*. ACI Materials Journal. 106(2): p. 192-197.

Book chapters

- Eberhardt, A.C., Smith, C.T., Hessheimer, M.F., Jovall, O., **Jones, C.A.**, 2018. "Code for Concrete Containments," Companion Guide to the ASME Boiler and Pressure Vessel Codes, Volume 1, Fifth Edition, K.R. Rao, ASME, New York, 26 pp.

Refereed conference proceedings

- Chen, Y., **Jones, C.** and Peterman, R. 2022, April. Estimating Uncertainties in Concrete Monoblock Railroad Tie Flexural Behavior Through Monte Carlo Simulation. JRC2022-78215. *Joint Rail Conference*. Baltimore, MD.
- Chen, Y., **Jones, C.** and Peterman, R. 2022, April. Experimental Flexural Testing of Virgin and Post-Service Concrete Monoblock Tie for Computational Tool Development. JRC2022-78213. *Joint Rail Conference*. Baltimore, MD.
- Chen, Y., **Jones, C.** and Peterman, R. 2022, April. Development And Verification of a Moment-Curvature Based Railroad Tie Analysis Program. JRC2022-79510. *Joint Rail Conference*. Baltimore, MD.
- Schrag, E., Qadri, F. and **Jones, C.** 2021, June. Temperature Prediction for High Early Strength Concrete Pavement Repair. *International Airfield and Highway Pavements Conference*. Austin, TX.
- Nikumbh, R. and **Jones, C.**, 2021, January. Predicting Spacing Factor in Hardened Concrete. In *Transportation Research Board 100th Annual Meeting*. Washington, D.C. Transportation Research Board.
- Qadri, F., **Jones, C.A.**, Wichtner, C. 2020, January. Durable High Early Strength Concrete via Internal Curing Approach Using Saturated Lightweight and Recycled Concrete Aggregate. In *Transportation Research Board 99th Annual Meeting*. Washington, D.C. Transportation Research Board.
- **Jones, C.A.**, Reinot, T. and Jankowiak, R. 2020, January. Laser-Induced Fluorescence Spectroscopy to Predict Aggregate Freeze-Thaw Susceptibility. In *Transportation Research Board 99th Annual Meeting*. Washington, D.C. Transportation Research Board.
- Riding, K., Armstrong, C., Mosavi, H., and **Jones, C.A.**, 2020, January. Accelerating and Improving the Predictive Capability of Concrete Freezing and Thawing Tests by the Inclusion of Dissolved Ionic Species. In *Transportation Research Board 99th Annual Meeting*. Washington, D.C. Transportation Research Board.
- Islam, S., Bose, A., Hossain, M., **Jones, C.A.**, Vahl, C. 2020, January. Developing an Automated Technique to Calibrate the AASHTOWare Pavement ME Design Software. In *Transportation Research Board 99th Annual Meeting*. Washington, D.C. Transportation Research Board.
- Islam, S., Hossain, M. and **Jones, C.A.**, 2019, July. Effect of Concrete Mixture and Strength Properties on Concrete Pavement Design. In *Airfield and Highway Pavements 2019: Testing and Characterization of Pavement Materials* (pp. 417-426). Reston, VA: American Society of Civil Engineers.
- Mhamankar, S. and **Jones, C.A.** 2019, August. Stress-State and Time-Dependent Deformation Characteristics for Cementitious Materials. In *Structural Mechanics in Reactor Technology-25*. Charlotte, NC, IASMIPT.
- Gilkey, L. N., et al. "Blind Prediction of the Response of an Additively Manufactured Tensile Test Coupon Loaded to Failure." *ASME 2018 Pressure Vessels and Piping Conference*. American Society of Mechanical Engineers, 2018.

Technical reports

- Riding, K., Armstrong, C. Mosavi, H., Vosahlik, J. and **Jones, C.** (2020). *Kansas Sustainable Concrete Pavements Initiative Phase II: Acceleration of Aggregate Qualification Procedures*. K-TRAN-KSU-15-1. Kansas Department of Transportation, Topeka, KS.
- **Jones, C.A.**, Hetzler, A., Dinh, N., Athe, P., Sieger, M., (2019). *Final Verification and Validation Assessment for VERA*, CASL-U-2018-1310-000, Oak Ridge National Laboratory, Oak Ridge, TN.
- **Jones, C.A.**, Reinot, T., Jankowiak, R. (2018). Preliminary investigation of Laser Induced Florescence Spectroscopy to Predict Limestone Aggregate Freeze Thaw Susceptibility. K-TRAN-KSU-18-4. Kansas Department of Transportation, Topeka, KS.
- **Jones, C.A.**, Hetzler, A., Dinh, N., Athe, P., Sieger, M., (2018). *Updated Verification and Validation Assessment for VERA*, CASL-U-2018-1310-000, Oak Ridge National Laboratory, Oak Ridge, TN.
- **Jones, C.A.**, Hogancamp, J., Mata, G.A., Coffin, P., (2017). *IRIS-III Benchmark, Team Report*, SAND2017-0031R, Sandia National Laboratories, Albuquerque, NM.
- **Jones, C.A.**, Hetzler, A., Dinh, N., Athe, P., Sieger, M., (2017). *Initial Verification and Validation Assessment for VERA*, CASL-U-2017-1310-000, Oak Ridge National Laboratory, Oak Ridge, TN.

Technical presentations

- Patil, P., **Jones, C.** (2020). "Reducing Uncertainties in Nanoindentation Experiments for Cementitious Materials", The Virtual ACI's Concrete Convention and Exposition, October 24 – 29, 2020, Farmington Hills, Michigan, United States.
- Qadri, F. and **Jones, C.**, (2019). "Durable High-Early-Strength Concrete via Internal Curing Approach Using Saturated Lightweight Aggregate and Recycled Concrete," *American Concrete Institute*. ACI 123, Research In Progress. Quebec City, Quebec. March.
- **Jones, C.A.** and S. Mhamankar (2019). "Cementitious Creep for Multiple Stress States and Implications for Isotropic Viscoelasticity," 10th Advances in Cement Based Materials, American Ceramics Society. Champaign, IL, June.
- Qadri, F. and **Jones, C.**, (2019). "Durable High-Early-Strength Concrete via Internal Curing Approach Using Saturated Lightweight Aggregate and Recycled Concrete," *American Concrete Institute*. ACI 123, Research In Progress. Quebec City, Quebec. March.
- Patil, P. and **Jones, C.**, (2019). "Utilization of Nanoindentation to Characterize the Aging Viscoelastic Properties of Cement Paste," *American Concrete Institute*. ACI 123, Research In Progress. Quebec City, Quebec. March.
- Mhamankar, S. and **Jones, C.**, (2019). "A New S-Notch Cube Geometry for Testing Shear Properties of Cementitious Materials," *American Concrete Institute*. ACI 123, Research In Progress. Quebec City, Quebec. March.
- Nikumbh, R. and **Jones, C.**, (2019). "Determining the Optimum Air Content in Fresh Concrete by Using Super Air Meter," *American Concrete Institute*. ACI 123, Research In Progress. Quebec City, Quebec. March.