

Kevin L. Rens, PhD PE (short Vita)

Specialty

Inspection, Rating, Maintenance, Repair, Nondestructive Evaluation, Failure Analysis, and preservation of Infrastructure; Construction defect litigation; Construction Engineering and Management

Education

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|-----------------------|------|------|--------------------------------|
| Dordt College | 1985 | | Pre-Engineering |
| Iowa State University | 1988 | BS | Civil Engineering |
| Iowa State University | 1989 | MS | Civil Engineering (Structural) |
| Iowa State University | 1994 | Ph.D | Civil Engineering (Structural) |

Professional Experience (PE Iowa & Colorado)

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| 2014-present | Director, Construction Engineering and Management |
| 2009-present | Professor and Chair, University of Colorado Denver |
| 2007-present | Professor, University of Colorado Denver |
| 2001-2007 | Associate Professor, University of Colorado Denver CO |
| 1995-2001 | Assistant Professor, University of Colorado Denver CO |
| 1995-present | Western Engineering (Forensic), Denver CO (Part-time) |
| 1994-1995 | Structural Engineer, Todd and Sargent, Ames, IA |
| 1987-1994 | Research Assistant, Iowa State University, Ames, IA |
| 1986, 1987 | Intern Project Engineer (summers), Firestone Bldg, Indianapolis |

Publications Since 1995

55 Refereed Journals (most co-authored by my UCD graduate students)
43 Refereed Conference Papers (most co-authored by my UCD graduate students)
1 United States Patent

External Funding Since 1995 (principal Investigator)

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|-------------------------------------|-----------------------|
| City and County of Denver (ongoing) | \$12,500,000 (approx) |
| National Science Foundation | \$189,000 |
| Historic Preservation | \$59,000 |
| Other | \$50,000 (approx.) |

Selected Recent Awards

University of Colorado excellence in Mentorship
College of Engineering excellence in Research
College of Engineering excellence in Teaching
College of Engineering excellence in Service
ASCE JPCF paper of the year

Teaching

Multiple online and in-class undergraduate and graduate civil/structural engineering

Extracurricular

Father, Runner, Cyclist, Swimmer, Mountaineer, and 18x IRONMAN

2017 & 2018 RECENT publications – Kevin Lee Rens

Nogueira, C. L., Rens, K. L., ***Effect of Acoustoelasticity on Ultrasonic pulses and Damage of concrete under tensile Stresses***, ACI Materials Journal, V. 115 (3) 2018:381-391.

Nogueira, C. L., Rens, K. L., ***Experimental analysis of cement-based materials under shear stress***, ELSEVIER Construction and Building Materials, 170 (2018) 392–401.

Nogueira, C. L., Rens, K. L., ***Ultrasonic wave propagation in EPS lightweight concrete and effective elastic properties***, ELSEVIER Construction and Building Materials, 184 (2018) 634–642.

Nogueira, C. L., Rens, K. L., ***Acoustoelastic Response of Concrete under Uniaxial Compression***, submitted to ACI Materials Journal.

Nogueira, C. L., Rens, K. L., ***Third-Order Elastic Parameters of Plain Concrete in Tension***, submitted to Materials and Structures.

Xin Jiang, Kevin L. Rens, Carnot L. Nogueira, ***Non-Biased Bridge Health Index Coefficients for Bridge Management Systems – A Theoretical Approach to the Actual Bridge Condition. Part I – Methodology***, submitted to ASCE Journal of Performance of Constructed Facilities.

Xin Jiang, Kevin L. Rens, Carnot L. Nogueira, ***Non-Biased Bridge Health Index Coefficients for Bridge Management Systems – A Theoretical Approach to the Actual Bridge Condition. Part II – Implementation***, submitted to ASCE Journal of Performance of Constructed Facilities.

Y. Zhou, C. L. Nogueira, C. Li, K. Rens, ***Long Term Durability Problems of Steel Girder Bridges Due to Temperature Variation***, 4th World Congress and Exhibition on Construction and Steel Structure, Trending Technologies and Techniques in Construction and Steel Structure, October 16-18, 2017, Atlanta, USA

Samir Mizyed, K.L. Rens, and CY Li ***Repair and Rehabilitation of cracked concrete piers using post-tensioned CFRP Rods: 8th Avenue Viaduct Case Study***. ASCE Congress on technical Advancement, Duluth Minnesota 2017

Wanting Wang, A. Hager, K.L. Rens, and C. Nogueira ***Temperature differential and curling behavior in asphalt pavement***. Engineering Mechanics institute conference 2018 University of Massachusetts Dartmouth 2018

Wanting Wang, A. Hager, K.L. Rens, and C. Nogueira ***Monitoring Temperature differential and volumetric water content between asphalt pavement and subgrade layers***. Forensic Engineering 8th congress 2018 Austin Texas