

David A. Lange

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David A. Lange is Professor of Civil Engineering at the University of Illinois at Urbana-Champaign. His research area is concrete materials, microstructure-property relationships, airport pavements, concrete rail crosstie durability, foamed cement materials, and recycled concrete. He serves as Director of the Center of Excellence for Airport Technology, a research center sponsored by the O'Hare Modernization Program and the Federal Aviation Administration. Lange has published over 100 technical papers and reports, including over 90 refereed journal papers. He is a Fellow of the American Ceramic Society. He is also a Fellow of the American Concrete Institute and winner of its Wason Medal in 2003 and 2018. He serves as President of ACI, member of the ACI Board of Direction, past chair of the ACI Technical Activities Committee, and has served ACI in many other roles.

Education

Ph.D., Civil Engineering, Northwestern University, 1991
M.B.A., Wichita State University, 1984
B.S., Civil Engineering, Valparaiso University, 1981

Professional Experience

2005-present	Professor, Department of Civil and Environmental Engineering, UIUC
2004-present	Director, Center of Excellence for Airport Technology
2004-2010	Associate Head, Department of Civil and Environmental Engineering, UIUC
1999-2005	Associate Professor, University of Illinois at Urbana-Champaign
2003-2004	Associate Director of the NSF Center for Advanced Cement-Based Materials
1993-1999	Assistant Professor, University of Illinois at Urbana-Champaign
1992-1993	Visiting Assistant Professor, University of Illinois at Urbana-Champaign
1987-1992	Graduate researcher, Northwestern University, Evanston, IL
1981-1987	Engineer, Boeing Military Airplane Co., Wichita, Kansas

Professional Licensure

Professional Engineer, State of Illinois, License # 062-049600

Selected honors

American Concrete Institute, Wason Medal for Most Meritorious Paper, 2018
Distinguished Professor, University of Jinan, China, 2017
J. William Fulbright Scholar Award, 2013
College of Engineering Teaching Excellence Award, 2013
Stanley Pierce Award for faculty-student relations, 2011
Chi Epsilon, Honorary Member, 2010
UIUC iFoundry Fellow, 2008
ASCE Glen L. Martin Best Paper Award with co-authors J. Evans, D. Lynch, 2008
American Ceramic Society Fellow, 2005
Xerox Award for Faculty Research, 2004
American Concrete Institute, Wason Medal for Most Meritorious Paper, 2003
American Concrete Institute Fellow, 2002
Narbey Khachaturian Faculty Scholar, 1998
NSF Career Award, 1996

Ten Recent Journal Publications

1. J. Xiao, C. Sun, D.A. Lange, "Effect of joint interface conditions on shear transfer behavior of recycled aggregate concrete," *Construction and Building Materials* 105 pp 343355, 2016.
2. Y Qian, H. Wolf, J.R. Edwards, M. Dersch, D.A. Lange, "Temperature-Induced Curl of Prestressed Concrete Monoblock Railroad Crossties," *Construction and Building Materials*, *Construction and Building Materials*, 115, pp 319326, 2016.
3. I. You, J. Choi, G. Zi, D.A. Lange, "Pozzolanic reaction of waste glass sludge incorporating precipitation additives," *Computers and Concrete*, Vol. 17, No. 2, (DOI: 10.12989.cac.2016.17.2.000), 2016.
4. N.J. Gardner; Keller, L.; Khayat, K.H.; Lange, D.A.; and Ahmed R. Omran, Field Measurements of SCC Lateral Pressure Toronto 2014, *Concrete International*, Vol 38, No. 6. Pp 42-50, 2016.
5. S. Zhao, E. Van Dam, D.A. Lange, W. Sun, "Abrasion resistance and nano-scratch behavior of an ultra-high performance concrete," *ASCE J. Mat. Civil Eng.*, [DOI: 10.1061/(ASCE)MT.1943-5533.0001744] 29(2): 04016212, 2017.
6. Y. Song, R. Zou, D. Castaneda, K.A. Riding, and D.A. Lange, "Advances in Measuring Air-Void Parameters in Hardened Concrete Using a Flatbed Scanner," *ASTM J. Testing and Evaluation*, Vol. 45, No. 5, 2017, pp. 17131725, <http://dx.doi.org/10.1520/JTE20150424>. ISSN 0090-3973.
7. J. Kim, G. Zi, D.A. Lange, "Measurement of Water Absorption of Very Fine Particles using Electrical Resistivity," *ACI Mat. J.*, DOI: 10.14359/51700994, Vol 114, 6, 2017.
8. A. Shurpali, J.R. Edwards, R. Kernes, D.A. Lange, C. Barkan, "Improving the Abrasion Resistance of Concrete to Mitigate Concrete Crosstie Rail Seat Deterioration (RSD)," *J. Materials Performance and Characterization (ASTM)*, doi:10.1520/MPC20170051, Vol. 6, No. 1, 2017.
9. C. Sun, D.A. Lange, J. Xiao, and T. Ding, "Contact behavior between cracked surfaces of recycled aggregate concrete," *J. Construction and Building Materials*, accepted 2017. (CONBUILDMAT-D-17-01764R1)
10. D. Castaneda, K. Riding, D.A. Lange, "Measurement and Validation of Freezing Internal Temperature of Concrete Crossties at the Rail Seat," *J. Mat. Civil Eng. (ASCE)*, accepted 2017.