

# Jason H. Ideker, Ph.D., FACI

Editor-in-Chief CEMENT

Co-Editor-in-Chief ASTM Advances in Civil Engineering Materials

(541) 737-9571

[jason.ideker@oregonstate.edu](mailto:jason.ideker@oregonstate.edu)

Oregon State University - School of Civil and Construction Engineering

101 Kearney Hall, Corvallis, Oregon 97331-3212

<http://web.engr.oregonstate.edu/~idekerj/>

<http://gbml.oregonstate.edu>

## Professional Experience

- 2025-2026 Provost Fellow, Oregon State University
- 2019-Present Professor, School of Civil and Construction Engineering, Oregon State University
- 2021-2024 Eric H.I. and Janice Hoffman Professor in Civil and Construction Engineering, School of Civil and Construction Engineering, Oregon State University
- 2016 Visiting Researcher, Kerneos Aluminate Technologies, Lyon, France.  
Sabbatical Focus on Durability of Ettringite Accelerated Cementitious Systems  
Host: Hervé Fryda and Stéphane Berger
- 2016 Visiting Professor, École Polytechnic Fédérale de Lausanne (EPFL), Lausanne, Switzerland.  
Sabbatical Focus on Scanning Electron Microscopy of ASR-affected Concrete and Mercury Intrusion Porosimetry of Calcium Aluminate Systems  
Host: Professor Karen L. Scrivener, Director of the Laboratory of Construction Materials
- 2014-2019 Associate Professor, School of Civil and Construction Engineering, Oregon State University
- 2010-2014 Assistant Professor and Kearney Faculty Scholar, School of Civil and Construction Engineering Oregon State University
- 2008-2010 Assistant Professor, School of Civil and Construction Engineering Oregon State University
- 2008 The University of Texas at Austin  
*May-Aug.* Post-Doctoral Fellow
- 2004-2008 Ph.D., The University of Texas at Austin  
*Early-Age Behavior of Calcium Aluminate Cement Systems*
- 2002-2004 M.S.E., The University of Texas at Austin  
Departmental Report: *Toward Accurate Test Methods to Assess Alkali-Silica Reaction in Concrete*
- 1998-2000 Engineering Aide, Cooperative Employment through the Georgia Institute of Technology  
*Willmer Engineering, Inc.* Atlanta, Georgia

## Education

- 2008 The University of Texas at Austin  
*May-Aug.* Post-Doctoral Fellow, Advisor: Kevin J. Folliard

- 2004-2008 The University of Texas at Austin  
Ph.D. Civil Engineering  
Advisors: Kevin J. Folliard & Michael D.A. Thomas (University of New Brunswick)
- 2006 École Polytechnic Fédérale de Lausanne (EPFL), Lausanne, Switzerland  
*Apr-Aug* Visiting Ph.D. Candidate  
Advisors: Kevin J. Folliard and Karen L. Scrivener (EPFL)
- 2002-2004 The University of Texas at Austin  
M.S.E., Advisors: Kevin J. Folliard & Maria C.G. Juenger
- 1997-2002 Georgia Institute of Technology  
B.S.C.E., High Honors, Advisor: Kimberly E. Kurtis

## Honors and Awards

- 2024 Elected Fellow of the American Concrete Institute
- 2023 Giatec Award for Best Paper: *Chopperla, K.S.T. and Ideker, J.H., "Electrical Resistivity Measurement to Assess the Efficiency of Supplementary Cementitious Materials to Prevent Alkali-silica Reaction in Accelerated Laboratory Conditions," Cement and Concrete Composites, V 125, January 2022, <https://doi.org/10.1016/j.cemconcomp.2021.104282>*
- 2023 Frank G. Erskine Award for Outstanding Contributions to the Use of Lightweight Aggregate, Expanded Shale, Clay and Slate Institute.
- 2020-2021 NSF CMMI Panel Fellow, CMMI Game Changer Academy
- 2020-2023 Eric H.I. and Janice Hoffman Professor in Civil and Construction Engineering, Oregon State University College of Engineering
- 2018 ASTM Award for Subcommittee Chair, Award of Appreciation for Chair of C09.50 (6-year tenure)
- 2018 American Society for Nondestructive Testing, Inc., 2018 ASNT Fellowship Award (\$20K), "Early-Detection of ASR deterioration in laboratory concrete specimens using full-waveform ultrasonic monitoring," Thomas Schumacher and Ali Hafiz (Portland State University), Jason H. Ideker (Oregon State University)
- 2016 Portland Cement Association Education Foundation Fellowship, (\$35K for 1 year), *A Performance Specification for Concrete: A Rapid Test That Uses Formation Factor As Determined From Electrical Resistivity*, Tyler Deboodt (GRA) and Samantha Whatley (GRA), Advisors: Jason H. Ideker. O. Burkan Isgor, W. Jason Weiss
- 2014 American Concrete Institute, ACI Young Member Award for Professional Achievement "for advancement of alkali-silica reaction test methods, for the commitment to sustainability education and technology, and for the mentoring of students"
- 2013 Englebrecht Young Faculty Award for Exceptional Scholarly and Teaching Accomplishments, Oregon State University College of Engineering
- 2011 Portland Cement Association Education Foundation Fellowship (\$20K for 1 year), *Development of Shrinkage Limits and Testing Protocols for High Performance Concrete*, Tengfei Fu and Jason H. Ideker
- 2010-2013 Kearney Faculty Scholar, Oregon State University
- 2007 Finalist for ACI Wason Medal for Materials Research Award for paper: Thomas, M.D.A., Fournier, B., Folliard, K.J., Shehata, M., Ideker, J.H., and Rogers, C., "Performance Limits for Evaluating Supplementary Cementing Materials Using the Accelerated Mortar Bar Test," *ACI Materials Journal*, 104 [2] March 2007, pp. 115-122.
- 2007 William S. Livingston Continuing Education Fellowship (\$20K for 9 months)
- 2004 PCI Engineering Design Competition - Big Beam Contest, Zone 2 First Place, Overall 2<sup>nd</sup> Place  
The University of Texas at Austin, *Team*: Justin Norvell, Vanna Oberholz, Andrew Maas, Nathan Dickerson, Brandon McBee, Peter Ruth, Jeff Carlson and Jason Ideker, *Advisor*: Dr.Oguzhan Bayrak, *PCI Producer*: Coreslab Structures (Texas), Inc., Cedar Park, Texas (Byron Freeby and Bill Doughty)

- 2003 Portland Cement Association Education Foundation Fellowship (\$20K for 1 year), *Examination of the Effects of Temperature on Progression of Alkali Silica Reaction Using an Accelerated Temperature ASTM C 1293 Test*, Jason H. Ideker and Kevin J. Folliard
- 2002 John A. Focht Endowed Presidential Graduate Scholarship in Civil Engineering (\$3K)

## Leadership

- 2020-Present Chair, RILEM Technical Committee 301, *Risk Assessment of Concrete Mixture Designs with Alkali-silica Reactive (ASR) Aggregates*
- 2017-2024 Secretary, Subcommittee C09.50 – Aggregate Reactions on Concrete
- 2019-2021 Chair, ENGINEERING+, College of Engineering  
*2021 ABET team specifically cited Engineering+ effort as an institutional strength.*
- 2016 – 2022 Member-At-Large, ASTM C09 Executive Committee
- 2011 – 2016 Chair, Subcommittee C9.50 - Risk Management for Alkali Aggregate Reactions, New Standard Developed Under Chaired Leadership: *ASTM C 1778-14 “Standard Guide For Reducing the Risk of Deleterious Alkali-Aggregate Reaction in Concrete”*
- 2011-Present Lead Organizer, The Corvallis Workshops, <https://thecorvallisworkshops.org/>

## Editorial Board for Technical Journals

- 2020-present Editor-in-Chief, CEMENT
- 2018-present Co-Editor-in-Chief, *Advances in Civil Engineering Materials*
- 2015-present Member Board of Editors, *Cement and Concrete Research*
- 2012-2018 Member Editorial Board, *Advances in Civil Engineering Materials*

## Teaching Experience

### ***Oregon State University***

- 2025-Present Professor, ENGR 110 Honors Transitions, Oregon State University
- 2025-Present Professor, ENGR 115 Honors, The Oregon State University Student, Oregon State University
- 2022-Present Professor, CCE 422/522: Green Building Materials
- 2019-Present Professor, CCE 621, Durability and Condition Assessment of Reinforced Concrete, Co-Professors O. Burkan Isgor and Jason H. Ideker (offered every other year)
- 2022-2024 Professor, ENGR 100 Honors: The Oregon State University Student, Oregon State University
- 2020-2021 Professor, CCE 422/522: ECampus Green Building Materials
- 2021 Professor, ENGR 100: ECampus The Oregon State University Student, Oregon State University
- 2020 Professor, ENGR 100: The Oregon State University Student, Oregon State University
- 2020 Professor, CCE 423/523: Concrete Fundamentals, Oregon State University
- 2020-2022 Professor, CCE 507: CE Graduate Seminar, Winter Term, Professional Presentations, Abstracts and Writing Introduction
- 2019 Professor, CCE 321: Civil and Construction Engineering Materials, Oregon State University
- 2018-2019 Associate Professor, CCE 520, Durability and Condition Assessment of Reinforced Concrete, Co-Professors O. Burkan Isgor and Jason H. Ideker
- 2017-2019 Associate Professor, CCE 520/(CE 499-F 2019): Concrete Fundamentals, Oregon State University
- 2017-2019 Associate Professor, CCE 422/522: ECampus Green Building Materials
- 2015-2019 Associate Professor, CCE 507: CE Graduate Seminar, Winter Term, Professional Presentations, Abstracts and Writing Introduction
- 2015-Present Associate Professor, CCE 422/522: Green Building Materials, Oregon State University
- 2014-2017 Associate Professor, CCE 523: Concrete Durability, Oregon State University
- 2014-2018 Associate Professor, CCE 321: Civil and Construction Engineering Materials, Oregon State University
- 2014 Assistant Professor, CCE 523: Concrete Durability
- 2014 Assistant Professor, CCE 421: Advanced Concrete Properties and Performance
- 2013- Assistant Professor, CCE 523: Concrete Durability
- 2012 Assistant Professor, CE 505: Experimental Methods in Cement Chemistry
- 2009-2011 Assistant Professor, CE 526: Advanced Concrete Materials, Oregon State University

2010-2014 Assistant Professor, CCE 422/522: Green Building Materials, Oregon State University  
 2009-2013 Assistant Professor, CCE 321: Civil and Construction Engineering Materials, Oregon State University  
 2008 Assistant Professor, CE 321: Civil Engineering Materials, Oregon State University

**Doctoral Shortcourses, Workshops, Trainings**

“Teaching Hardened Concrete Properties and Durability to Undergraduates,” ACI Professor’s Workshop, July, 2021

“Teaching Concrete Concepts in a Virtual Environment to Undergraduates,” ACI Professor’s Workshop, July, 2020

“Teaching Concrete to Undergraduates: Aggregates, Hardened Properties and Durability,” PCA Professors Workshop, July PCA Professors Workshop, July 2019

“Teaching Concrete to Undergraduates: Aggregates, Curing and Durability,” PCA Professors Workshop, July PCA Professors Workshop, July 2018

“Teaching Concrete to Undergraduates: Aggregates, Curing and Durability,” PCA Professors Workshop, July PCA Professors Workshop, July 2017

“Teaching Concrete to Undergraduates: Aggregates, Curing and Durability,” PCA Professors Workshop, July PCA Professors Workshop, July 2016

“High Performance Concrete,” SBT-SEU-RILEM, Doctoral Short Course, Invited Lecturer,  
 Presented three Lectures Concrete Durability, Concrete Maturity, Health Monitoring of Concrete, September 2015.

“Teaching Durability Concepts to Undergraduates,” PCA Professors Workshop, July 23, 2015

**The University of Texas at Austin**

2007 Teaching Assistant, Concrete Materials (Undergraduate Course), The University of Texas at Austin

2007 Undergraduate Mentor, ASCE Concrete Canoe Team, The University of Texas at Austin

2006 Teaching Assistant (Grader), Advanced Concrete Materials (Graduate Course), The University of Texas at Austin

2003-2005 Teaching Assistant, Concrete Materials (Undergraduate Course), The University of Texas at Austin

2003-2005 ACBM/PCA Faculty Workshop, Portland Cement Association (PCA), Skokie, IL  
 “How to Teach Basic Concrete Concepts to Undergraduates”

**Students Advised**

**Postdoctoral Scholars**

**Complete (3)**

2020-2023 Dr. Anuj Parashar, *Improving Guidance of AASHTO R 80/ASTM C 1778 for Alkali-Silica Reactivity (ASR) Potential and Mitigation; Rating Concrete Water Permeability Based on Resistivity Measurements; Mitigating Potential Alkali-Silica Reaction Expansion in Airfield Concrete Pavements*; Advisor Jason H. Ideker

2020-2021 Dr. Atolo Tuinukuafe, *High Early Strength Structural Overlays for Concrete Bridge Decks*, Advisor Jason H. Ideker

2013-2015 Dr. Tengfei Fu, Oregon BEST Postdoctoral Scholar, Green Building Materials Laboratory, Oregon State University, Co-Advisors, Fred Kamke (Wood Science and Engineering) and Jason H. Ideker (Civil and Construction Engineering)

**Doctoral Students**

**Current (2)**

- 2024-Present** Oluwaseun Jegede, “Identifying Premature Deterioration in Cementitious Materials Using Volatilomics”
- 2025-Present** Riffat Farjana, “Development of a New Approach to Prevent Alkali-Silica Reaction in Concrete”

**Graduated (9)**

- 2019-2023 Lamiya Noor, *Investigations of Hygrothermal Stability and Curing Efficiency of Ettringite Accelerated Binders*, Dr. Jason H. Ideker, Oregon State University
- 2016-2021 Krishna (Siva) Teja Chopperla, *Evaluation of The Efficiency of Supplementary Cementitious Materials to Prevent Alkali-silica Reaction in Concrete with Highly and Very Highly Reactive Aggregates*, Dr. Jason H. Ideker, Oregon State University
- 2014-2020 Feras Khlef, *Structural Response of High-Performance Fiber-Reinforced Cementitious Composites: Evaluation, Simulation, and Sensitivity Analysis*,” Co-Advisors Dr. Andre Barbosa and Dr. Jason H. Ideker, Oregon State University
- 2013-2018 Tyler Deboodt, *Use of X-ray Microtomography for Phase Quantification of Portland Cement Hydrates*, Co-Advisors: Dr. O. Burkan Isgor and Dr. Jason H. Ideker, Oregon State University
- 2011-2016 Chang Li, *Use of Fine Lightweight Aggregate (FLWA) to Mitigate Alkali-Silica Reaction and Experimental and Numerical Modeling Approach to Elucidating Damage Mechanisms in Cement-Well Casing-Host Rock Settings for Underground Storage of CO<sub>2</sub>*, Oregon State University, Research Scientist Vanke Materials Ltd., Beijing New Area, China
- 2012-2015 Matthew P. Adams, *Calcium Aluminate Cements and Alternative Cementitious Binders: Volume Stability and Durability*, Oregon State University, Now an Assistant Professor at the New Jersey Institute of Technology
- 2011-2013 Tengfei Fu, *Shrinkage Study of High Performance Concrete for Bridge Decks*, Oregon State University, Assistant Professor at Fujian Agriculture and Forestry University, Fuzhou City, Fujian, China
- 2010-2013 Circe Verba, *Potential Impacts of Formation Waters on the Integrity of Class H Cement and Reservoir Rock Under Carbon [Co-] Sequestration Settings*, Dr. Mark Reed (University of Oregon) and Dr. Jason H. Ideker (Oregon State University), Co-Advisors, Research Scientist NETL, Albany, Oregon
- 2009-2012 Anthony F. Bentivegna, *Multi-Scale Characterization, Implementation, and Monitoring of Calcium Aluminate Cement Based-Systems*, Kevin J. Folliard, (The University of Texas at Austin) and Jason H. Ideker, Co-Advisors, Senior Civil Engineer, Jensen Hughes, Chicago, Illinois

**Master’s of Science Students**

- Current (1)** Anna Falbo, Impact of Nanomaterials on Alkali-Silica Reaction Prevention

**Graduated (14) 4 MS Students have since earned a Ph.D., 3 at OSU and 1 at Univ. Delaware, 1 In Progress at Univ. of Tennessee**

- 2023-2025 Kevin Ero, *Enhancing Concrete Sustainability: Reducing Carbon Impact of UHPC and Investigating the use of Novel Aggregate Reactivity Testing to Prevent Deleterious ASR in New Structures*
- 2023-2025 Kristian Walker, *Development and Analytical Modeling of a Portland Limestone Cement Based Ultra High Performance Concrete*, Co-Advised with Dr. Andre Barbosa
- 2021-2023 Jeremy Smith, *High Early Strength Structural Overlays for Concrete Bridge Decks*
- 2017-2019 Anika Tabassum-Sarkar, *Stability of Ettringite Accelerated Systems Based on Calcium Aluminate Cements*, PhD Student at The University of Tennessee
- 2017-2018 Cameron Wilson, *Improving the Performance of High Early Strength Concrete by Controlling Self-Desiccation and Mitigating Shrinkage*, Co-major Professor with Prof. W. Jason Weiss,
- 2016-2018 Samantha Whatley, *Developing a Specification for the use of Formation Factor to Predict Concrete Performance*, Carlson Testing, Salem, Oregon
- 2015-2017 Silas Shields, *Strategies to Increase the Service Life of Concrete Bridge Decks and Investigations into the Durability of Ductile Iron Pipe*, Oregon State University, Co-Advisors: Jason H. Ideker and O. Burkan Isgor, City of Beaverton, Oregon, Site Development

- 2013-2015 David Rodriguez, *Strategies to Increase the Service Life of Concrete Bridge Decks*, Oregon State University, Co-Advisors: O. Burkan Isgor and Jason H. Ideker
- 2013-2015 Ben Sohn, *The Role of NaCl on Alkali-Silica Reaction*, Oregon State University, Co-Advisors: O. Burkan Isgor and Jason H. Ideker
- 2012-2014 Jose Banuelos, *Blended Fibers for High Performance Concrete*, Oregon State University
- 2010-2012 Skyler Warner, *The Role of Alumina in the Mitigation of Alkali-Silica Reaction*, Oregon State University, Project Engineer, Turner Construction Company
- 2010-2012 Matthew P. Adams, *Alkali-Silica Reaction in Concrete Containing Recycled Concrete Aggregates*, Oregon State University
- 2009-2011 Tyler Deboodt, *Internal Curing of High-Performance Concrete Bridge Decks*, Oregon State University, Oregon State University
- 2010-2011 Thanh Phan, *Climate Change Impact Assessment for Surface Transportation in the Pacific Northwest and Alaska and Proposed Standardized Testing of Calcium Aluminate Cement based Concrete: Phase I – Investigation of Materials Interaction and Strength Variability Issues*, Graduated June 2011, MS Project, Employed at Kiewit, Omaha, Nebraska
- 2009-2011 Tengfei Fu, Master's Thesis, *Autogenous Deformation and Chemical Shrinkage of High Performance Cementitious Systems*, Oregon State University, Assistant Professor at Fujian Agriculture and Forestry University, Fuzhou City, Fujian, China
- 2008-2010 Kelsea Schwing (m. Schumacher), *Use of Fly Ash in the Mitigation of Alkali-Silica Reaction in Concrete*, Oregon State University, Completed PhD at the University of Delaware, Newark, Delaware

#### **Master's of Engineering Students**

##### **Graduated (1)**

- 2010-2011 John Meissner, Structural Engineering, Oregon State University, Graduated June 2011, *Employed at Charles Engineering, San Diego, CA*

#### **Master's of Science Students (partial support or advising)**

##### **Graduated (4)**

- 2012 Michael Carrigg, "Use of Sustainable Cementitious Products in Building Components for the Oregon Sustainability Center," Oregon State University
- 2011 J.P. Kivlin, *Cellulose Fiber Technologies*, M.B.E., Oregon State University,
- 2009 Scott Ureel, *Internal Curing of High Performance Concrete Bridge Decks*, Oregon State University
- 2009 Arnaud Thibonnier, *Early-Age Volume Change in Calcium Aluminate Cement Concrete*, Co-advisor Kevin J. Folliard, The University of Texas at Austin

#### **Committees Served (13)**

##### **Doctoral Students**

- 2024 Ana Bergmann, "Framework for risk assessment of mixture designs incorporating alkali-silica reactive aggregates," External Examiner, Major Advisor: Leandro Sanchez, University of Ottawa
- 2022-2024 Alma-Dina Bašić, "Influence of Supplementary Cementitious Materials on Durability of Calcium Aluminate Cement under Different Curing Regimes," External Examiner, Major Advisor: Marjana Serdec, University of Zagreb, Zagreb, Croatia
- 2021 Diego Jesus De Souza, "Avoiding & Mitigating Alkali-Aggregate Reaction (AAR) in Concrete Structures," The University of Ottawa, External Committee Member, Major Advisor Dr. Leandro Sanchez
- 2018-2021 Shafayet Ahmed, "Evaluating the Feasibility of Mass Timber as a Mainstream Building Material in the US Construction Market: Industry Perception, Cost Competitiveness, and Environmental Performance Analysis," Dr. Ingrid Arocho, Oregon State University
- 2017-2020 Deborah Glosser, "Equilibrium and non-equilibrium thermodynamic modeling of cement pastes containing supplementary cementitious material," Co-Advisors, Dr. O. Burkan Isgor and Dr. W. Jason Weiss
- 2017-2019 Shashwath Sreedhar, "Developing Performance-Based Specifications to Improve the Fatigue Life of Asphalt Pavements in Oregon," Advisor Dr. Erdem Coleri

2017-2019	Hossein DorMohammadi, "Investigation of Iron Passivity and Chloride-induced Depassivation in Alkaline Electrolytes using Reactive Force Field Molecular Dynamics," Co-Advisors Dr. O. Burkan Isgor and Dr. Liney Arnadottir
2017-2020	Pavan Naga Vaddey, Corrosion of Reinforced Concrete Structures, Advisor – Dr. David Trejo
2017-2018	Ahmed Abdullaq Ahmed, Title TBD, Advisor – Dr. David Trejo
2013-2015	Frederick (Paul) Laleicke, "Accelerated Aging of Wood-Based Materials", Dr. Fred Kamke (Advisor)
2013-2015	Blake Boren, "Active Control of a Vertical Axis Pendulum Wave Energy Converter", Dr. Belinda Batten, Advisor
2011-2017	Changqing Pan, "Solution-based Chalcogenide Thin Film Deposition", Dr. Chih-Hung (Alex) Chang, Advisor
2011-2012	Mary Ann Triska, "Structural Design and Performance of Green Roofs," Dr. Chris Higgins (Advisor), left to pursue design career.

### **Master's of Science (27)**

2021-Present	Daniel McDermott, "Assigning Value to Sustainability Initiatives Using Greenhouse Gas Emissions at Memorial Sloan Kettering," Professional Science Master's Program, Major Advisor: Carolyn Fonyo Boggess
2020-2021	Dylan Thomas, Wood Science and Engineering, Frederick Kamke
2021	Austin Berrier, "Design Optimization of a Structurally Flexible Wave Energy Converter with a Direct Search Algorithm," Dr. Bryony DuPont – Advisor, Jason H. Ideker, GCR
2021	Hannah Mankle, "Advanced Computational Modeling and Design of Wave Energy and Floating Offshore Wind Energy Technologies," GCR
2021	Andrei Niga, Topic: Carbon Fiber Composites for Global Formula Racing Applications, Title TBD, GCR
2021	Amy Nye, "Composite design of a Formula Student Monocoque," GCR
2020-2021	Nathalene Then, "Chloride Binding of Portland Limestone Cement Containing Supplementary Cementitious Materials," Advisors: Dr. O. Burkan Isgor and Dr. W. Jason Weiss
2019-2020	Richard Villarreal, "Improving Long-Term Interlayer Bond Performance by Developing Quality Control Technologies and Certification Procedures for Tack Coats," Advisor Dr. Erdem Coleri
2018-2019	Zachary Banchowski, "Uniaxial Testing of Short Buckling Restrained Braces Subjected to Large Core Strains," Advisor Dr. Christopher Higgins
2018-2019	Morvarid Dhalmaghani, "Managing Data for Large Timber Construction," Mariapaolo Riggio – Advisor, GCR up to Program of Study
2018	Tim Fritz, "Performance Evaluation of Air Shocks Implemented in a Formula Student Vehicle," GCR, Advisor: Robert Paasch
2018	Megan Richardson, "Improving water, sanitation and biogas access in resource-stressed environments: Methodologies and case study analyses of the primary resources at Matema Beach High School," GCR, Advisor: Dr. Kendra Sharp
2017-present	Ryan Schwendeman, "Analytical Model to Represent the Hardpoint System and to Validate the Model with Physical Testing," GCR
2016-2017	Alex Coyle, "The Effects of Temperature on Electrical Resistivity Measurements of Concrete," Advisor: W. Jason Weiss
2015-2016	Maximo Argo, "Seismic Performance of Aging Prestressed Transmission Pole with Simulated Soil Foundation," Co-Advisors: Dr. Christopher Higgins and Dr. O. Burkan Isgor
2015	Jon Williamson, "Electronic Properties of Passive Films on Carbon Steel Rebar in Simulated Concrete Pore Solutions"
2015	Greg Hendrix, "Development of a New Mixture Proportioning Method and Assessing the Influence of Material Characteristics on Flowing Concrete Mixtures"
2014	Deanna Amneus, "Methods for Strengthening Flexural Steel Details in Reinforced Concrete Bridge Girders Using a Near-surface Mounted Retrofitting Technique," Committee Member Advisor: Dr. Christopher Higgins

- 2014 Laura Barker, "Flexural Anchorage Performance and Strengthening on Negative Moment Regions using Near-surface Mounted Retrofitting in Reinforced Concrete Bridge Girders," Committee Member Dr. Christopher Higgins
- 2014 Tasha Larson, M.S.I.E., "Defining and Comparing Risks and Success Measures of the Reference Design Process and Traditional New Product Development Processes," Industrial Engineering, GCR, Advisor: Dr. Chinweike Eseonu
- 2013 Blake Boren, M.S.M.E., Vertical Axis Pendulum Wave Energy Converters: Investigating Control Strategies and The Deployment of a Scaled Generic Prototype," Committee Member, Co-Advisors: Dr. Belinda Batten and Dr. Robert Paasch
- 2012 Landon Harman, M.S.C.E., Structural Engineering and Construction Engineering Management
- 2011 Jake Goebel, M.S.C.E., Structural Engineering, "Design and Environmental Performance of Near-Surface Mounted Carbon Fiber Reinforced Polymer Strips for Shear Strengthening Reinforced Concrete Bridge Girders," Committee Member, Advisor: Dr. Christopher Higgins
- 2011 Brandon Johnson, M.S.C.E., Structural Engineering, "Design and Fatigue Behavior of Near-Surface Mounted CFRP Bars for Shear Strengthening of RC Bridge Girders," Committee Member, Advisor: Dr. Christopher Higgins
- 2011 Josh Christiansen, M.S.C.E., Structural Engineering, "The Influence of Seismic Attack and Chloride-induced Corrosion on a Life Cycle Inventory Assessment of Different Concrete Mixtures"
- 2011 Jie Ding, M.S., Wood Science and Engineering, "A Methodology for Evaluating Multiple Mechanical Properties of Prototype Microfibrillated Cellulose/Poly(lactic acid) Film Composites"

#### **Master's of Engineering (10)**

- 2021-Present Su Thein, Construction Engineering Management
- 2015 Tyler McGill, Structural Engineering
- 2014 Dan Serra, Structural Engineering
- 2014 Alexandra Stroud, Structural Engineering
- 2014 Dan Serra, Structural Engineering
- 2013 Garlan Rahmadan, Structural Engineering
- 2012 Andrew Kelley, Structural/Materials Engineering
- 2012 Eric Goodall, Structural Engineering
- 2011 Kyle Mayfield, Structural Engineering
- 2009 Faisal Samoo, Geotechnical Engineering

#### **Undergraduate Honor's Thesis (8)**

- 2024-present Reuben Berg, "Durability of Steel Slag in Concrete", Advisor
- 2021 Hilary Chaimov, "Sustainable Concrete Mixtures in Seattle, Washington", Committee Member
- 2013 Stephanie Stache, "Finite Element Analysis of a Concrete Canoe," Committee Member
- 2013 Jordan Henderson, "*The Case for Wood in Non-Residential, Multi-Story Construction: LEED vs. Green Globes Certification,*" Committee Member
- 2011-2012 Hanna D'Acci, *Sustainability and Structural Building Codes in USA and Chile*, Advisor
- 2010 Phil Davis, *A Novel Testing Method Applied to Wood Members*, Committee Member
- 2009-2010 Jill Folkestad, *Carbonation of Mid-Twentieth Century Reinforced Concrete Bridges in Oregon*, Committee Member
- 2009-2010 Lina Chan, *Selection of Hotels: Is the Sustainability of a Building more Important than its Aesthetic Appearance?*, Committee Member
- 2009 Quinn Pullen, *Strength and Composition of Willamette Valley Cob: An Earthen Building Material*, Committee Member

#### **Undergraduate Research Students Oregon State University**

##### **Current (5)**

- 2025-present Maximillian Krause, *Mitigating Potential Alkali-Silica Reaction Expansion in Airfield Concrete Pavements*, ACPTP

2026-present Reuben Berg, *Pore Solution Analysis of Steel Slag Cementitious Binders*, USDOT Steel Slag  
 2026-present Camille Noriega, *Pore Solution Analysis of Steel Slag Cementitious Binders* STEM Leadership Undergraduate Research  
 2025-present Mark Percarpio, *Low Carbon UHPC*, Oregon Department of Transportation  
 2022-Present Wyatt Bermann, *Improving Guidance of AASHTO R 80/ASTM C 1778 for Alkali-Silica Reactivity (ASR) Potential and Mitigation and Alternative High Early Strength Concrete (HESC) Structural Overlays*

**Graduated or Prior (43)**

2023-2025 Anna Falboa, *Mitigating Potential Alkali-Silica Reaction Expansion in Airfield Concrete Pavements and Low Carbon Ultra High Performance Concrete*  
 2025 Alaina Keller, *Mitigating Potential Alkali-Silica Reaction Expansion in Airfield Concrete Pavements*, ACPTP  
 2024-2025 Yu Sentoku, *Mitigating Potential Alkali-Silica Reaction Expansion in Airfield Concrete Pavements*  
 2023-2024 Jasmine Luana Fenstemacher, *Mitigating Potential Alkali-Silica Reaction Expansion in Airfield Concrete Pavements*  
 2023-2024 Eric Chen, *Low-Carbon Ultra-High-Performance Concrete for Use in Highway Infrastructure*  
 2022-2023 Kristian Walker, *Low-Carbon Ultra-High-Performance Concrete for Use in Highway Infrastructure*  
 2021-2023 Ian Gilchrist, *Alternative High Early Strength Concrete (HESC) Structural Overlays, Improving Guidance of AASHTO R 80/ASTM C 1778 for Alkali-Silica Reactivity (ASR) Potential and Mitigation, and Mitigating Potential Alkali-Silica Reaction Expansion in Airfield Concrete Pavements*  
 2020-2023 Kevin Ero, *Low-Carbon Ultra-High-Performance Concrete for Use in Highway Infrastructure, Alternative High Early Strength Concrete Materials, Improving Guidance of AASHTO R 80/ASTM C 1778 for Alkali-Silica Reactivity (ASR) Potential and Mitigation, and Durability of Ettringite Accelerated Binders*, Rating Concrete Water Permeability Based on Resistivity Measurements  
 2018-2022 Gabriel Olson, *Alkali-Silica Reactivity and Mitigation in Portland Limestone Cements*, and ICAAR Website Database Updates  
 2020-2022 Oliver Opdhal, *Improving Guidance of AASHTO R 80/ASTM C 1778 for Alkali-Silica Reactivity (ASR) Potential and Mitigation and ICAAR Website Database Updates*, Rating Concrete Water Permeability Based on Resistivity Measurements  
 2021 Ryan Tanzer, *Improving Guidance of AASHTO R 80/ASTM C 1778 for Alkali-Silica Reactivity (ASR) Potential and Mitigation*, Rating Concrete Water Permeability Based on Resistivity Measurements  
 2019-2021 Jeremy Smith, *Off-Spec Fly Ash a Performance-Based Mixture Proportioning Approach, Alkali-Silica Reactivity and Mitigation in Portland Limestone Cements and Durability of Ettringite Accelerated Systems and Improving Guidance of AASHTO R 80/ASTM C 1778 for Alkali-Silica Reactivity (ASR) Potential and Mitigation*  
 2020 Rawan Al Naabi, *Alkali-Silica Reactivity and Mitigation in Portland Limestone Cements and Durability of Ettringite Accelerated Systems*  
 2018-2019 Matthew Miller, *Off-Spec Fly Ash a Performance-Based Mixture Proportioning Approach and Alkali-Silica Reactivity and Mitigation in Portland Limestone Cements*  
 2019 Joe Greenwood, *Alkali-Silica Reactivity and Mitigation in Portland Limestone Cements*  
 2018 Saul Lot Santana, *Durability of Concrete*  
 2018 Jarvis Chow, *Dissolution of Fly Ash from Off-Spec Sources*  
 2018 Johnny Ye, *A Performance Specification for Concrete: A Rapid Test That Uses Formation Factor As Determined From Electrical Resistivity*  
 2017 Andres Matos Ortiz, *Internal Curing and the Role of Relative Humidity Measurements for Quality Control*, SURF Program, Oregon State University, Jason H. Ideker and W. Jason Weiss, Co-advisors  
 2015-2016 Devan Darsow, *Use of Fine Lightweight Aggregate (FLWA) to Mitigate Alkali-Silica Reaction*  
 2014-2015 Christine Baker, *Strategies to Increase the Service Life of Concrete Bridge Decks*, co-advised with O. Burkan Isgor  
 2014-2015 Quentin Harris, *Shrinkage Assessment of Blended Polypropylene Fibers and Use of Fine Lightweight Aggregate (FLWA) to Mitigate Alkali-Silica Reaction*  
 2014-2015 Andrew Thomas, *The Role of NaCl on Alkali-Silica Reaction*

- 2014-2015 Aaron Strand, *Experimental and Numerical Modeling Approach to Elucidating Damage Mechanisms in Cement-Well Casing-Host Rock Settings for Underground Storage of CO<sub>2</sub>*
- 2013 Adalberto Guerra Cabrera, *Cracking Susceptibility of Concrete Made with Recycled Concrete Aggregates*, Currently graduate student at Monterrey Institute of Technology, Puebla, Mexico
- 2013-2014 Nicholas Breisach, *Conversion of Calcium Aluminate Cement Concrete*
- 2013-2014 Silas Shields, *Shrinkage and Cracking Susceptibility of Recycled Concrete Aggregates*
- 2012-2014 Kristina Milaj, *Cellulose Fiber Technologies for High Performance Concrete*
- 2012-2014 Andrew Wilson, *Technologies and Methodologies to Prevent Concrete Deterioration from Alkali-Silica Reaction – Phase V*
- 2010-2013 Monica Morales, *Cellulose Fiber Technologies for High Performance Concrete*, Graduate Student, Oregon State University
- 2012-2013 Sean Gertz, *Testing for Combined Forms of Premature Concrete Deterioration: ASR and Corrosion*, Independent Study
- 2011-2013 Travis Moore, *Use of Sustainable Cementitious Products in Building Components for the Oregon Sustainability Center*
- 2011-2012 Jose Banuelos, *Drying Shrinkage Limits of High Performance Concrete*, Current Graduate Student
- 2011-2013 David Rodriguez, *Internal Curing of Concrete Bridge Decks*, Current Graduate Student
- 2011-2013 Chad Anderson, *Technologies and Methodologies to Prevent Concrete Deterioration from Alkali-Silica Reaction – Phase III, IV, V*
- 2011-2012 Benjamin Sohn, *Durability Assessment of Recycled Concrete Aggregates for use in New Concrete*, Current Graduate Student
- 2009-2012 Brian Gray, *Durability Assessment of Recycled Concrete Aggregates for use in New Concrete*, Employed Lease Crutcher Lewis, Seattle, Washington
- 2011 Marlon Meija, General Research Support
- 2010-2011 Jorge Mirando, General Research Support
- 2010-2011 Deanna, Amneus, *Durability Assessment of Recycled Concrete Aggregates for use in New Concrete*, Graduate Student Oregon State University
- 2010-2011 Maxwell Cummings, *Technologies and Methodologies to Prevent Concrete Deterioration from Alkali-Silica Reaction – Phase II*, Graduated June 2011, Employed Lease Crutcher Lewis, Seattle, WA
- 2010 Daniel Alexandre Bleau, visiting Undergraduate Research Assistant, University of Sherbrooke, Canada, *Durability Assessment of Recycled Concrete Aggregates for use in New Concrete*
- 2009-2010 Bryce Wininger, visiting Undergraduate Research Assistant, Griffith University, Australia, *Technologies and Methodologies to Prevent Concrete Deterioration from Alkali-Silica Reaction – Phase II*
- 2009-2010 Sarah Routley, *Durability Assessment of Recycled Concrete Aggregates for use in New Concrete*
- 2009-2010 Chuck Williams, *Internal Curing of High Performance Concrete Bridge Decks*
- 2009-2011 Marc Putman, *Durability Assessment of Recycled Concrete Aggregates for use in New Concrete*, Graduated June 2011, Employed Kiewit, Portland, Oregon

#### **The University of Texas at Austin**

- 2007-2008 Evan R. Wehrle, The University of Texas at Austin, *Drying Shrinkage and Autogenous Deformation of Calcium Aluminate Cement Systems*
- 2006 Racheal D. Lute, The University of Texas at Austin, *Chemical and Autogenous Shrinkage of Calcium Aluminate Cement Concrete*, Current Graduate Student (PhD) at The University of Texas at Austin, Formerly SK&A Consultants (5 years), Washington, D.C.
- 2004 Alda P. Villanueva, The University of Texas at Austin, *Methods to Assess the Impact Resistance of ASR Affected Concrete*

#### **Research Projects**

##### **Oregon State University (~\$6.2 million-Ideker, ~\$17.3 million total)**

- 2026-Present National Cooperative Highway Research Program (NCHRP), “Concrete Shrinkage Measurement and Cracking Mitigation,” Jason H. Ideker (PI) and W. Jason Weiss (Co-PI), Oregon State University, Anthony F. Bentivegna and Stephen Stacey, Durability Engineers, \$750,000

- 2025-Present U.S. Department of Transportation, “Sustainable Use of Steel Slag in Concrete and Cement for Transportation Infrastructure,” Robert Miskewitz (PI) Rutgers University CAIT; Matthew P. Adams (Academic Lead) New Jersey Institute of Technology; Jason H. Ideker (Academic Lead) Oregon State University; and Chris Ferraro (Academic Lead) University of Florida, \$5,000,000, \$1,000,000 (Ideker Share)
- 2025-Present Federal Aviation Administration (FAA) Airport Concrete Pavement Technology Program (ACPTP), Mitigating Potential Alkali-Silica Reaction Expansion in Airfield Concrete Pavements Phase II, Jason H. Ideker (PI) Oregon State University; Thanos Drimalas (Co-PI) and Kevin Folliard (Co-PI) The University of Texas at Austin; Ashlee Hossack (Co-PI) University of New Brunswick; Farshad Rajabipour, Pennsylvania State University; and April Snyder (Consultant) ECS Limited; \$1,000,000 (\$250,000 Ideker share)
- 2024-Present National Science Foundation IUCRC: Concrete Advancement Network, Use of Nanomaterials to Improve Alkali-Silica Reaction Prevention, \$125,000
- 2024-Present National Science Foundation IUCRC: Concrete Advancement Network, W. Jason Weiss (Co-PI), Jason H. Ideker and O. Burkan Isgor, \$575,000 NSF plus Industry Contribution anticipated \$575,000, Oregon State University, Part of NSF IUCRC Grant Konstantin Sobolev (PI), University of Wisconsin Milwaukee.
- 2023-Present National Science Foundation, “BRITE Pivot: Identifying Premature Deterioration in Cementitious Materials Using Volatilomics,” Jason H. Ideker (PI), Heather D. Bean (Senior Personnel), \$599,000
- 2022-Present Oregon Department of Transportation, “Low-Carbon Ultra-High-Performance Concrete for Use in Highway Infrastructure,” Andre Barbosa (PI), Jason H. Ideker (Co-PI), \$385,000
- 2025-Present Federal Aviation Administration (FAA) Airport Concrete Pavement Technology Program (ACPTP), Mitigating Potential Alkali-Silica Reaction Expansion in Airfield Concrete Pavements Phase I, Jason H. Ideker (PI) Oregon State University; Thanos Drimalas (Co-PI) and Kevin Folliard (Co-PI) The University of Texas at Austin; Michael D.A. Thomas (Co-PI) and Ashlee Hossack (Co-PI) University of New Brunswick; and April Snyder (Consultant) RJ Lee Group, \$750,000 (\$350,000 Ideker share)
- 2020-2025 Oregon Department of Transportation, Alternative High Early Strength Concrete (HESC) Structural Overlays, Jason H. Ideker (PI), W. Jason Weiss, O. Burkan Isgor and David Trejo, \$319,000
- 2022-2024 CalTrans, “Implementation of Advanced Technology and Materials Recycling Techniques for use of Alternative Materials in Concrete as Plain or Reinforced Material,” W. Jason Weiss (PI), O. Burkan Isgor and Jason H. Ideker, \$350,000
- 2021-2022 NSF IUCRC Planning Grant: Concrete Advancement Network, W. Jason Weiss (Co-PI), Jason H. Ideker and O. Burkan Isgor, \$20,000 Oregon State University, Part of NSF IUCRC Planning Grant Lead by Konstantin Sobolev, University of Wisconsin Milwaukee.
- 2019-2022 ARPA-E, Development of Thermodynamic and Kinetic Simulation Tools and Testing Procedures For Enhanced Durability of Concrete Containing Industrial By-Products, W. Jason Weiss (PI), O. Burkan Isgor, Jason H. Ideker, Farshad Rajabipour, Maria C.G. Juenger, \$1,300,000. (OSU Portion TBD, Ideker portion \$6,000)
- 2019-2023 National Cooperative Highway Research Program, Rating Concrete Water Permeability Based on Resistivity Measurements, Christopher Ferraro (PI) and Kyle Riding (University of Florida); Jason H. Ideker (OSU PI), O. Burkan Isgor and W. Jason Weiss (Oregon State University), \$600,000 (\$294,000 OSU Portion)
- 2019-2023 National Cooperative Highway Research Program, Improving Guidance of AASHTO R 80/ASTM C 1778 for Alkali-Silica Reactivity (ASR) Potential and Mitigation, Thanos Drimalas (PI) and Kevin Folliard (University of Texas at Austin); Michael D.A. Thomas (University of New Brunswick PI) and Jason H. Ideker (Oregon State University PI), \$650,000 (\$215,000 OSU Portion)
- 2019-2022 Imerys, Durability of Ettringite Accelerated Systems, Jason H. Ideker (PI), \$130,000
- 2015-2022 Pacific General Electric (PGE), Investigations into the Durability of Ductile Iron Pipe, Dr. O. Burkan Isgor and Dr. Jason H. Ideker (Co-PIs), \$80,000 (\$40,000 Ideker portion)
- 2018-2021 CalTrans, “Impact of Use of Portland-limestone Cement on Concrete Performance as Plain or Reinforced Material,” W. Jason Weiss, O. Burkan Isgor, Jason H. Ideker, David Trejo, \$281,000 (~65,000 Ideker portion)

2018-2020 Electrical Power Research Institute (EPRI), "Development of a Performance-based Mixture Proportioning Procedure for Concrete Incorporating Off-spec Fly Ash," O. Burkan Isgor (PI), Jason H. Ideker, David Trejo, W. Jason Weiss, \$314,141

2017-2019 Accelerated ASR Test Method Verification, Turner Fairbanks Highway Research Center – Jussara Tanesi and Ahmed Ardani, The University of Texas at Austin – Thano Drimalas, Oregon State University - Jason H. Ideker, unfunded research

2017-2018 Siam Cement Group, "The Influence of Expansive Additives on Early Age Shrinkage and Stress Development," W. Jason Weiss and Jason H. Ideker, \$125,000

2017-2018 NSF Graduate Student Workshop on Service Life Prediction of Concrete, CMMI 1740540, Jason H. Ideker (PI), O. Burkan Isgor, Co-PI, \$17,126

2016-2018 ACI Concrete Research Council, "Unified Guidance on Producing Durable Concrete", Jason H. Ideker (PI), Kimberley E. Kurtis (Co-PI), Michael D.A. Thomas (Co-PI), Thano Drimalas (Co-PI) and Anthony F. Bentivegna, \$50,000, (\$21,000 Ideker portion)

2016-2018 Portland Cement Association Education Foundation Fellowship, "A Performance Specification for Concrete: A Rapid Test That Uses Formation Factor As Determined From Electrical Resistivity," Tyler Deboodt (GRA) and Samantha Whatley (GRA), Advisors: Jason H. Ideker, O. Burkan Isgor, W. Jason Weiss, \$35,000

2015-2018 Oregon DOT, Construction of Efficient, Cost-Effective and Sustainable Maintenance Facilities, SPR 792, PI – Jason H. Ideker (PI), Karl Haapala (Co-PI), \$145,000

2014-2017 Oregon DOT, "Strategies to Increase the Service Life of Concrete Bridge Decks - SPR 780", PI – Dr. O. Burkan Isgor, Co-PIs, Dr. Jason H. Ideker and Dr. David Trejo, \$239,000

2013-2017 Cascadia Lifelines Program (CLiP), "Seismic Performance of Deteriorated Reinforced Concrete Structures," O. Burkan Isgor (PI), Jason H. Ideker (Co-PI), Christopher Higgins (Co-PI), \$310,130

2013-2015 Oregon BEST Post-Doctoral Scholar, Dr. Tengfei Fu, Fred Kamke, (PI), Jason Ideker (Co-PI), \$75,000

2011-2015 Kerneos Aluminate Technologies, "Investigations into Calcium Aluminate Cement Binders," Jason H. Ideker (PI), \$198,500

2013-2014 National Energy Technology Laboratory (NETL-Albany), "Experimental and Numerical Modeling Approach to Elucidating Damage Mechanisms in Cement-Well Casing-Host Rock Settings for Underground Storage of CO<sub>2</sub>," Jason H. Ideker (PI), O. Burkan Isgor (Co-PI), \$168,000

2011-2013 Portland Cement Association Education Foundation Fellowship (\$20K for 1 year), *Development of Shrinkage Limits and Testing Protocols for High Performance Concrete*, Tengfei Fu and Jason H. Ideker

2011-2014 Weyerhaeuser, Cellulose Fiber Technologies, \$125,000

2012-2014 ESCSI-Expanded Shale, Clay and Slate Institute, "Investigations into ASR Mitigation by Fine Lightweight Aggregate," Jason H. Ideker (PI, Oregon State University, Michael D.A. Thomas, (Co-PI, The University of New Brunswick), \$36,150

2008-2013 NAVFAC EXWC, "Technologies and Methodologies to Prevent Concrete Deterioration from Alkali-Silica Reaction – Phases I-V," Jason H. Ideker (PI, Oregon State University), \$475,985

2012-2013 PacTrans Northwest and Oregon Department of Transportation (ODOT), "Use of Blended Synthetic Fibers to Reduce Cracking Risk in High Performance Concrete", \$69,947

2010-2013 Oregon Department of Transportation (ODOT), "Development of Shrinkage Limits and Testing Protocols for ODOT High Performance Concrete," Jason H. Ideker (PI, Oregon State University), \$229,089

2011 Oregon BEST Research Consortium, "Use of Sustainable Cementitious Products in Building Components for the Oregon Sustainability Center," Jason H. Ideker (PI), David Trejo (Co-PI), \$22,000

2010-2012 OTREC, "Part II: Durability Assessment of Recycled Concrete Aggregates for Use in New Concrete," Jason H. Ideker (PI, Oregon State University), Jennifer E. Tanner (Co-PI, The University of Wyoming), \$209,465

2009-2012 Oregon Department of Transportation (ODOT), "Internal Curing of Concrete Bridge Decks," Jason H. Ideker (PI, Oregon State University), \$214,825

2009-2012 Northwest Transportation Consortium (NWTC), "Climate Change Impact Assessment for Surface Transportation in the Pacific Northwest and Alaska," John MacArthur (PI, Portland State University), Research Team: Philip Mote (Oregon Climate Change Research Institute, Oregon

- University System), Ming Lee (University of Alaska Fairbanks), Miguel Figliozzi, (Portland State University), Jason H. Ideker (Oregon State University), \$200,000, (\$45,000 Ideker portion)
- 2009-2010 OTREC, “Durability Assessment of Recycled Concrete Aggregates for use in New Concrete,” Jason H. Ideker (PI, Oregon State University), Jennifer E. Tanner (Co-PI, The University of Wyoming), \$157,279
- 2009-2011 Kerneos Aluminate Technologies, “Early-Age Volume Change in Calcium Aluminate Cement Concrete,” Kevin J. Folliard (PI, The University of Texas at Austin), Jason H. Ideker Consultant, unfunded research

#### **Contract Testing (\$135,000)**

- 2014-present Services and Contract Testing, Various Sources

#### **Funded Equipment Grants (\$1.11 Million)**

- 2022 Oregon State University Research Equipment Reserve Fund (RERF), Burker D2 Phaser X-ray diffractometer (XRD), \$100,000,
- 2014 DOE Autoclave Installation on Long-Term Loan from NETL Albany, Jason H. Ideker and O. Burkan Isgor, \$23,000
- 2012-2014 M.J. Murdock Major Equipment Grant, “Multi-Chamber Modular Environmental Conditioning System,” \$858,000, Jason H. Ideker, PI, Fred Kamke and David Trejo, Co-PIs, Oregon State University
- 2010 Oregon State University Research Equipment Reserve Fund (RERF), “Cyclic Environmental Performance Testing Equipment for Concrete,” \$78,880 (plus \$20,000 match from start-up funding), Jason H. Ideker and David Trejo, Co-PIs, Oregon State University
- 2009-2010 Oregon BEST, Green Building Materials Laboratory, Scott A. Ashford, (PI, Oregon State University), Jason H. Ideker and Fred Kamke, (Co-PIs, Oregon State University), \$400,000 total project, \$150,000 (Ideker portion)

#### **The University of Texas at Austin (Graduate Studies)**

- 2006-2008 FHWA, “Alkali-Silica Reactivity (ASR) Development and Deployment Program,” Kevin J. Folliard (Co-PI, The University of Texas at Austin) Michael D.A. Thomas (Co-PI, University of New Brunswick), Benoit Fournier (Co-PI, CANMET)
- 2004-2008 FHWA, “Lithium Implementation Project for ASR Affected Concrete,” Michael D.A. Thomas (PI, University of New Brunswick)
- 2004-2008 Kerneos Aluminate Technologies (formerly Lafarge Calcium Aluminates), “Early Age Properties of Calcium Aluminate Cement Concrete,” Kevin J. Folliard (PI, The University of Texas at Austin)
- 2003-2008 PCA Education Fellowship, “Examination of the Effects of Temperature on Progression of Alkali Silica Reaction Using an Accelerated Temperature ASTM C 1293 Test,” Kevin J. Folliard (Advisor, The University of Texas at Austin)
- 2006-2007 “DMJM Aviation Denver Airport ASR Phase II,” Kevin J. Folliard (Co-PI, The University of Texas at Austin) Michael D.A. Thomas (Co-PI, University of New Brunswick)
- 2005-2006 “DMJM Aviation Denver Airport ASR Best Practices,” Kevin J. Folliard (Co-PI, The University of Texas at Austin) Michael D.A. Thomas (Co-PI, University of New Brunswick)
- 2003-2004 Unfunded Research, “The Role of Silica Fume Agglomerates in ASR,” Maria C.G. Juenger (Advisor, The University of Texas at Austin)
- 2002-2005 International Center for Aggregate Research (ICAR), “Verification and Implementation of Improved ASR Test and Mitigation Methods,” ICAR 302, Kevin J. Folliard (PI, The University of Texas at Austin)
- 2002-2005 Texas Department of Transportation, “Preventing Premature Concrete Deterioration due to ASR/DEF in New Concrete,” TxDOT 0-4085, Kevin J. Folliard (PI, The University of Texas at Austin)

#### **Georgia Institute of Technology (Undergraduate Studies)**

- 2001-2002 NSF POWRE Award CMS-0074874, “Examination of the Mechanisms of Alkali-Silica Reaction Gel Expansion Control by Lithium Additives in Concrete,” Kimberly E. Kurtis (PI, Georgia Institute of Technology)

## Other Funded Research

2005-2006 Investigation into Lithium Nitrate Dosage in Fresh Concrete used at the Atlanta Hartsfield-Jackson International Airport, Kevin J. Folliard (PI, The University of Texas at Austin)

## Publications

### Peer-Reviewed Journal Articles (51)

Styer, J., Lucena, J., Tunstall, L., Reddy, E., and Ideker, J.H., "Community-Based Participatory Workshop on Recycling Construction and Demolition Waste for the Empowerment of Women and Low-Income Communities in Colombia," *International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship*, V 19 [1], pp. 41-69, May 2024, <https://doi.org/10.24908/ijsle.v19i1.17176>

Noor, L., Rost, P., Kirchberger, I., Goetz-Neunhoeffler, F., and Ideker, J.H., "Hygrothermal Stability of Ettringite in Blended Systems with CAC-OPC-C $\text{\$}$ ," *Cement and Concrete Research*, V 184, July 2024, <https://doi.org/10.1016/j.cemconres.2024.107590>.

Ideker, J.H., Drimalas, T., Folliard, K.J., Ghanizadeh, A., Parashar, A., Chopperla, K.S.T., Snyder, A., and Thomas, M.D.A., Preventing Alkali-Silica Reaction in Concrete, Proceedings in Civil Engineering, ce/papers, 6: 1101-1109, December 2023, <https://doi.org/10.1002/cepa.2935>

Noor, L., Tuinukuafe, A., and Ideker, J.H., "A Critical Review of the Role of Ettringite in Binders Composed of CAC-PC-C $\text{\$}$  and CSA-PC-C $\text{\$}$ ," *Journal of the American Ceramic Society*, February 2023, <https://doi.org/10.1111/jace.19014>

Tuinukuafe, A., Chopperla, K.S.T., Weiss, W.J., Isgor, O.B. and Ideker, J.H., "Estimating Alkali Concentrations of the Pore Solution Based on Ex-situ Leaching Tests and Thermodynamic Modeling," *RILEM Technical Letters*, V7, 2022, pp. 88-97, <https://doi.org/10.21809/rilemtechlett.2022.164>

Wang, Y., Ramanathan, S., Chopperla, K.S.T., Ideker, J.H., Suraneni, P., "Estimation of Non-traditional Supplementary Cementitious Materials Potential to Prevent Alkali-silica Reaction Using Pozzolanic Reactivity and Bulk Resistivity," *Cement and Concrete Composites*, V 133, October 2022, <https://doi.org/10.1016/j.cemconcomp.2022.104723>

Mehdinia, S., Chopperla, K.S.T., Hafiz, A., Schumacher, T. and Ideker, J.H., "Ultrasonic Coda Wave Monitoring of Alkali-Silica Reactivity in Concrete Laboratory Prisms," ASNT Fellowship Paper, Materials Evaluation, *Materials Evaluation*, V80 [10], October 1, 2022, DOI: <https://doi.org/10.32548/2022.me-04248>.

Khlef, F., Ideker, J.H. and Barbosa, A.R. "Validated Uniaxial Stress-Strain Model for Cyclic Analysis of High-Performance Fiber-Reinforced Cementitious Composites," *ASCE Journal of Structural Engineering*, V 148, [9], September 2022, doi:10.1061/(ASCE)ST.1943-541X.0003402, pp. 04022127-1-18.

Custodio, J., Lingard, J., Fournier, B., Santos Silva, A., Thomas, M.D.A., Drimalas, T., Ideker, J.H., Martin, R.P., Borchers, I., Wigum, B., Ronning, T., "Correlating field and laboratory investigations for preventing ASR in concrete – the LNEC cube study," *Construction and Building Materials*, V 343 [8], August, 2022, <https://doi.org/10.1016/j.conbuildmat.2022.128131>.

Chopperla, K.S.T., Smith, J.A. and Ideker, J.H., "The Efficacy of Portland-limestone Cements with Supplementary Cementitious Materials to Prevent Alkali-silica Reaction," *CEMENT*, V8, April 2022. <https://doi.org/10.1016/j.cement.2022.100031>.

Chopperla, K.S.T., Smith, S., Drimalas, T., Vaddey, P.N., Bentivegna, A., Kurtis, K.E., Thomas, M.D.A. and Ideker, J.H., Unified Durability Guidance in ACI Committee Documents, *ACI Materials Journal*, V119 [2], March 2022, doi: 10.14359/51734352.

Chopperla, K.S.T., Drimalas, T. Beyene, M., Tanesi, J., Folliard, J.H., Ardani, A. and Ideker, J.H., "Combining Reliable Performance Testing and Binder Properties to Determine Preventive Measures for Alkali-Silica Reaction," *Cement and Concrete Research*, V 151, January 2022, <https://doi.org/10.1016/j.cemconres.2021.106641>

Bharadwaj, K., Isgor, O.B.\*, Weiss, W.J., Chopperla, K.S.T., Choudhary, A., Vasudevan, G., Glosser, D., Ideker, J.H. and Trejo, D.T., "A New Mixture Proportioning Method for Performance-Based Concrete," *ACI Materials Journal*, V 119, January 2022, DOI: 10.14359/51734301

Chopperla, K.S.T. and Ideker, J.H., "Electrical Resistivity Measurement to Assess the Efficiency of Supplementary Cementitious Materials to Prevent Alkali-silica Reaction in Accelerated Laboratory Conditions," *Cement and Concrete Composites*, V 125, January 2022, <https://doi.org/10.1016/j.cemconcomp.2021.104282>

Li, C., Thomas, M.D.A. and Ideker, J.H., "Evaluation of Current ASTM Standards for ASR Prevention When Fine Lightweight Aggregates are Used," *Advances in Civil Engineering Materials*, October 2021, V 10 [1], 16 pp. <https://doi.org/10.1520/ACEM20200076>

Yamada, K., Kawabata, Y., De Rooij, M.R., Pedersen, B.M., Brueckner, R. and Ideker, J.H., "Recommendation of RILEM TC 258-AAA: RILEM AAR-13: Application of Alkali-Wrapping for Concrete Prism Testing to Assess the Expansion Potential of Alkali-Silica Reaction," *Materials and Structures*, V54 [201], October 2021, <https://doi.org/10.1617/s11527-021-01684-z>

Deboodt, T., Wildenschild, D., Ideker, J.H. and Isgor, O.B., "Comparison of Segmentation Algorithms for Quantifying Portland Cement Hydrates Using Synchrotron Microtomography," *Construction and Building Materials*, V 266, Part B, 10 January 2021, <https://doi.org/10.1016/j.conbuildmat.2020.121109>

Clark, J.V., Deboodt, T., Lange, D., Ideker, J.H. and Isgor, O.B., "Advances in X-ray Computed Tomography for the Characterization of Cementitious Materials," *Concrete International*, V42 [9], pp. 30-36, September 2020

Adams, M.P. and Ideker, J.H., "Using Supplementary Cementitious Materials to Mitigate Alkali-Silica Reaction in Concrete with Recycled Concrete Aggregate," *ASCE Journal of Materials in Civil Engineering*, V32 [8], May 26, 2020, [https://10.1061/\(ASCE\)MT.1943-5533.0003277](https://10.1061/(ASCE)MT.1943-5533.0003277).

*\*Featured as Issue 8 Editor's Choice section of the Journal of Materials in Civil Engineering*

Tanesi, J., Drimalas, T., Chopperla, K.S.T., Beyene, M., Ideker, J.H., Kim, H., Montanari, L. and Ardani, A., "Divergence between Performance in the Field and Laboratory Test Results for Alkali-Silica Reaction," *Transportation Research Record*, April 16, 2020, <https://doi.org/10.1177/0361198120913288>.

Khlef, F.L., Barbosa, A.R. and Ideker, J.H., "Tension and Cyclic Behavior of High-Performance Fiber-Reinforced Cementitious Composites," *ASCE Journal of Materials in Civil Engineering*, V31 [10], October, 2019, [https://doi.org/10.1061/\(ASCE\)MT.1943-5533.0002844](https://doi.org/10.1061/(ASCE)MT.1943-5533.0002844).

Deboodt, T., Isgor, O.B., Wildenschild, D. and Ideker, J.H., "Use of Iodine for Improving Phase Quantification Using X-ray Tomography", *Cement and Concrete Research*, V 116, February 2019, pp. 102-111, <https://doi.org/10.1016/j.cemconres.2018.11.004>.

Li, C., Thomas, M.D.A. and Ideker, J.H., "A Mechanistic Study on Mitigation of Alkali-silica Reaction by Fine Lightweight Aggregates," *Cement and Concrete Research*, V104, February 2018, pp. 13-24, <https://doi.org/10.1016/j.cemconres.2017.10.006>.

Deboodt, T., Ideker, J.H., Isgor, O.B. and Wildenschild, D., "Quantification of Synthesized Hydration Products using Synchrotron Microtomography and Spectral Analysis," *Construction and Building Materials*, V157 [30], December 2017, pp. 476-488, <https://doi.org/10.1016/j.conbuildmat.2017.09.031>.

Mazarei, V., Trejo, D., Ideker, J.H. and Isgor, B., "Synergistic Effects of ASR and Fly Ash on the Corrosion Characteristics of Reinforced Concrete Systems," *Construction and Building Materials*, V153, October 2017, pp. 647-655, <https://doi.org/10.1016/j.conbuildmat.2017.07.097>.

Adams, M.P. and Ideker J.H., "Influence of Aggregate Type on Conversion and Strength in Calcium Aluminate Cement Concrete," *Cement and Concrete Research*, V100, October 2017, pp. 284-296, <https://doi.org/10.1016/j.cemconres.2017.07.007>.

Adams, M.P., Lute, R., Moffat, E.G., Ideker, J.H., "A New Procedure for Determining the Converted Strength of Calcium Aluminate Cement Concrete," *ASTM Journal of Testing and Evaluation*, V46 [4], March 2018, pp. 1659-1672, <https://doi.org/10.1520/JTE20160277>.

Trejo, D., Mazarei, V., Ideker, J.H. and Isgor, B., "The Influence of ASR Reactivity on Corrosion in Reinforced Concrete," *ACI Materials Journal*, V114 [5], September 2017, pp. 723-731, [10.14359/51689895](https://doi.org/10.14359/51689895).

Fu, T., Deboodt, T. and Ideker, J.H., "Development of Shrinkage Limit Specification for High Performance Concrete used in Bridge Decks," *Cement and Concrete Composites*, V72, September 2016, pp. 17-26, <https://doi.org/10.1016/j.cemconcomp.2016.05.015>.

Deboodt, T., Fu, T. and Ideker, J.H., "Evaluation of FLWA and SRAs on Autogenous Deformation and Long-Term Drying Shrinkage of High Performance Concrete," *Construction & Building Materials*, V119 [30], August 2016, pp. 53-60, [10.1016/j.conbuildmat.2016.05.068](https://doi.org/10.1016/j.conbuildmat.2016.05.068).

Andiç-Çakır, Ö, Poole, A. B. and Ideker, J.H., "ICAAR 1974-2016: Conferences Investigating AAR in Concrete," ICE Construction Materials, Publication Issue CM3, June, 2016. <https://doi.org/10.1680/jcoma.15.00074>.

Azad, V.J., Li, C., Verba, C., Ideker, J.H. and Isgor, O.B., "A COMSOL-GEMS PSI Interface for Modeling Coupled Reactive-transport Geochemical Processes," *Computers and Geosciences*, V92, July, 2016, pp. 79-89. <https://doi.org/10.1016/j.cageo.2016.04.002>.

Adams, M., Fu, T., Cabrera, A.G., Morales, M., Ideker J.H. and Isgor, O.B., "Cracking Susceptibility of Concrete Made with Recycled Concrete Aggregates," *Construction and Building Materials*, V102 Part 1, January 2016, pp. 802-810, <https://doi.org/10.1016/j.conbuildmat.2015.11.022>.

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Drimalas, T., Ideker, J.H., Folliard, K.J., Thomas, M.D.A. and Fournier, B., "The Long-Term Monitoring of Large-Scale Concrete Specimens Containing Lithium Salts to Mitigate Alkali-Silica Reaction," *ACI-CANMET Conference*, Prague, Czechoslovakia, October, 2012.

Bentivegna, A.F., Ideker, J.H., Hayman, S. and Drimalas, T., "Mitigation of ASR Affected Concrete in Boston, MA, USA: A Case Study," 3<sup>rd</sup> International Conference on Concrete Repair, Rehabilitation, and Retrofitting (ICRRR), Cape Town, South Africa, September 2012.

Ideker, J.H., Drimalas, T., Bentivegna, A.F., Folliard, K.J., Fournier, B., Thomas, M.D.A., Hooton, R.D. and Rogers, C.A., "The Importance of Outdoor Exposure Site Testing," In *Proceedings of the 12th International Conference on Alkali-Aggregate Reactivity in Concrete*, Drimalas, T., Ideker J.H. and Fournier, B. Eds., Austin, Texas, USA, 2012, 10 pp.

Drimalas, T., Ideker, J.H., Arrieta, G., Folliard, K.J., Fournier, B.F. and Thomas M.D.A., "Evaluating Combination of Aggregates in the Accelerated Mortar Bar Test," In *Proceedings of the 12th International Conference on Alkali-Aggregate Reactivity in Concrete*, Drimalas, T., Ideker J.H. and Fournier, B. Eds., Austin, Texas, USA, 2012, 10 pp.

Warner, S., Ideker, J.H., and Schumacher, K., "Alkali-Silica Reactivity and the Role of Alumina," In *Proceedings of the 12th International Conference on Alkali-Aggregate Reactivity in Concrete*, Drimalas, T., Ideker J.H. and Fournier, B. Eds., Austin, Texas, USA, 2012, 10 pp.

Adams, M.P., Gray, B., Ideker, J.H., Tanner, J.E., Jones, A., Fournier, B., Beauchemin, S., Shehata, M., and Johnson, R., "Applicability of Standard Alkali-Silica Reactivity Testing Methods for Recycled Concrete Aggregate," In *Proceedings of the 12th International Conference on Alkali-Aggregate Reactivity in Concrete*, Drimalas, T., Ideker J.H. and Fournier, B. Eds., Austin, Texas, USA, 2012, 10 pp.

Folliard, K.J., Thomas, M.D.A., Ideker, J.H., East, B.L and Fournier, B., "Case Studies of Treating ASR-Affected Structures with Lithium Nitrate," *Proceedings of the 88<sup>th</sup> Annual Transportation Research Board Meeting*, Washington D.C., USA, January 2009.

Ideker, J.H., Folliard, K.J., and Thomas, M.D.A., "Evaluating Early-Age Properties of Calcium Aluminate Cement Concrete with Rigid Cracking and Free Shrinkage Frames: Isothermal Testing," *Calcium Aluminate Cements 2008: The Centenary Conference*, Avignon, France, June 30 – July 2, 2008, pp. 141-157.

Ideker, J.H., East, B.L., Folliard, K.J., Thomas, M.D.A and Fournier, B., "The Current State of the Accelerated Concrete Prism Test," In: Broekmans, M.A.T.M. and Wigum, B.J. (eds): *Proceedings of the 13<sup>th</sup> International Conference on Alkali-Aggregate Reaction*, Trondheim, Norway, June 16-19, 2008, pp. 140-150.

Folliard, K.J., Thomas, M.D.A., Ideker, J.H., East, B.L., and Fournier, B., "Case Studies of ASR-Affected Structures with Lithium Nitrate," In: Broekmans, M.A.T.M. and Wigum, B.J. (eds): *Proceedings of the 13<sup>th</sup> International Conference on Alkali-Aggregate Reaction*, Trondheim, Norway, June 16-19, 2008, pp. 90-99.

Fournier, B., Ideker, J.H., Folliard, K.J., and Thomas, M.D.A., "Effect of Environmental Conditions on Expansion in Concrete Due to Alkali-Silica Reaction (ASR)," In: Broekmans, M.A.T.M. and Wigum, B.J. (eds): *Proceedings of the 13<sup>th</sup> International Conference on Alkali-Aggregate Reaction*, Trondheim, Norway, June 16-19, 2008, pp. 658-667.

Folliard, K.J., Ideker, J.H., Barborak, R.C., Fournier, B., and Thomas, M.D.A., "Laboratory Test Methods for Determining Dosage of Lithium Nitrate Required to Control Alkali-Silica Reaction Induced Expansion," *Proceedings of the 86<sup>th</sup> Annual Transportation Research Board Meeting*, Washington D.C., USA, January 2007.

Juenger, M.C.G., Maas, A.M., Ideker, J.H., "Effect of Silica Fume Agglomerates on Expansion due to ASR," *Proceedings of the International Conference on Advances in Concrete Composites and Structures*, Chennai, India, January 2005, pp. 43-50.

Ideker, J.H., Folliard, K.J., Juenger, M.G., Thomas, M.D.A., "Laboratory and Field Testing Experience with ASR in Texas, USA," *Proceedings of the 12<sup>th</sup> International Conference on Alkali-Aggregate Reaction in Concrete*, Beijing, China, October 2004, pp.1062-1069.

Fournier, B., Chevrier, R., De Grosbois, M., Lisella, R., Folliard, K., Ideker, J., Shehata, M., Thomas, M., Baxter, S., "The Accelerated Concrete Prism Test (60°C): Variability of the Test Method and Proposed Expansion Limits," *Proceedings of the 12<sup>th</sup> International Conference on Alkali-Aggregate Reaction in Concrete*, Beijing, China, October 2004, pp. 314-337.

Ideker, J.H., Juenger, M.C.G., Ostertag, C.P., "The Participation of Silica Fume Agglomerates in ASR Expansion," *Proceedings of Advances in Cement and Concrete IX: Volume Changes, Cracking, and Durability*, Copper Mountain, Colorado, August 2003, pp. 377-382.

### ***Referred Conference Proceedings for Poster Sessions (where a paper and a poster were submitted) (3)***

Li, C., Ideker, J.H., Drimalas, T., "Calcined Clays for ASR Mitigation: Mechanisms and Long-term Performance," *Proceedings of the 14th International Congress on the Chemistry of Cement*, Oct 2015, Received 1 of 3 Best Poster Awards out of 200 posters at the Congress.

Li, C., Jafari Azad, V., Rodriguez, D.E., Isgor, O.B., Verba, C., Ideker, J.H., Elucidating Damage Mechanisms in Class H Cement from CO<sub>2</sub> Sequestration, *Proceedings of the 14th International Congress on the Chemistry of Cement*, Oct 2015.

Jafari Azad, V., Li, C., Rodriguez, D.E., Ideker, J.H., Verba, C., Isgor, O.B., Numerical modeling of class H cement under CO<sub>2</sub> sequestration in down-hole conditions, *Proceedings of the 14th International Congress on the Chemistry of Cement*, Oct 2015.

### ***Non-Refereed Conference Proceedings (6)***

Fu, T. Deboodt, T., and Ideker J., "A Review of Drying Shrinkage and Cracking in Concrete Bridge Decks," MS#: AD-32, *accepted to ACI-CANMET Conference, Supplementary Proceedings*, Prague, Czechoslovakia, October, 2012.

Ideker, J.H., Folliard, K.J., Fournier, B. and Thomas, M.D.A., "The Role of "Non-reactive" Aggregates in the Accelerated (60 C) Concrete Prism Test," *Proceedings of the Marc-Andre Berube Symposium on Alkali-Aggregate Reactivity in Concrete at the Eight CANMET/ACI International Conference on Recent Advances in Concrete Technology*, Montreal, Canada, June 2006, pp. 45-70.

Fournier, B., Nkinamubanzi, P.C., Lu, D, Thomas, M.D.A., Folliard, K.J. and Ideker, J.H., "Evaluating Potential Alkali-reactivity of Concrete Aggregates, How Reliable are the Current and New Test Methods?," *Proceedings of the Marc-Andre Berube Symposium on Alkali-Aggregate Reactivity in Concrete at the Eighth CANMET/ACI International Conference on Recent Advances in Concrete Technology*, Montreal, Canada, June 2006, pp. 21-43.

Folliard, K.J., Barborak, R.C., Ideker, J.H., Fournier, B., Thomas, M.D.A., "Laboratory Test Methods for Determining the Dosage of Lithium Nitrate Required to Control ASR-Induced Expansion," *Proceedings of the Marc-Andre Berube Symposium on Alkali-Aggregate Reactivity in Concrete at the Eighth CANMET/ACI International Conference on Recent Advances in Concrete Technology*, Montreal, Canada, June 2006, pp. 153-169.

Juenger, M.C.G, Ideker, J.H., Ostertag, C.P. "Do Silica Fume Agglomerates Cause ASR-Related Expansion?," *Supplementary papers of the Eighth CANMET/ACI International Conference on Fly Ash, Silica Fume, and Natural Pozzolans in Concrete*, Las Vegas, Nevada, May 2004, pp. 317-325.

Folliard, K.J., Ideker, J., Thomas, M.D.A, Fournier, B., "Assessing Aggregate Reactivity Using the Accelerated Concrete Prism Test," *Supplementary Papers of the Seventh CANMET/ACI International Conference on Recent Advances in Concrete Technology*, Las Vegas, Nevada, May 2004, pp. 269-284.

### **Other Publications (1)**

Ideker, J., "New Fly Ash Regulations Threaten Sustainable Concrete," August, 2, 2010, Sustainable Business Oregon, [http://www.sustainablebusinessoregon.com/columns/2010/08/new\\_fly\\_ash\\_regulations\\_threaten\\_sustainable\\_concrete.html](http://www.sustainablebusinessoregon.com/columns/2010/08/new_fly_ash_regulations_threaten_sustainable_concrete.html)

### **Presentations**

#### **Invited Conference Presentations with No Paper (\*indicates presenter if multiple authors)**

Noor, L. and Ideker, J.H., "Developing a New Decision-Making Tool for Selecting Rapid Repair Cementitious Material (RRCM) for Concrete Airfield Pavement," *approved for presentation at Transportation Review Board Annual Meeting (January 2022), September 2021.*

"How Do We Specify Concrete that is Resistant to ASR?," Minnesota Concrete Council, May 9, 2021, Zoom Talk, ~150 attendees

"Alkali-Silica Reaction: Research Needs and the Link to Practice," RILEM Roc&Tok, RILEM Education Series, June 3, 2021, Zoom Talk, ~140 attendees

"Alkali-Silica Reaction, Basics, Test Methods and Recent Research," SEAU Annual Conference, February 20-21, 2018, Layton, Utah

"Final Results from Investigations into the use of FLWA to Mitigate ASR", EPFL Seminar, Gstaad, Switzerland, January 6-8, 2016

"The Use of Calcined Clays to Mitigate ASR: Lab and Field Results," ACI Session on the "Use of Natural Pozzolans in Concrete", Denver, Colorado, November, 2015

"Preliminary Results from Investigations into the use of FLWA to Mitigate ASR", EPFL Seminar, Gstaad, Switzerland, January, 2015

"Class H Cement Degradation under CO<sub>2</sub> and CO<sub>2</sub>-O<sub>2</sub> Sequestration Conditions," Li, C., Jafari Azad, V., Rodriguez, D.E., Ideker, J.H., Isgor, O.B., Verba, C., 2014 AGU Fall Meeting, San Francisco CA, Dec, 2014.

"Experimental and thermodynamic Modeling Approach to Elucidating Damage Mechanisms in Cement-Well Casing-Host Rock Settings for underground Storage of CO<sub>2</sub>," Li, C.\*, Jafari Azad, V., Rodriguez, D.E., Ideker, J.H., Isgor, O.B., Verba, C., 5th Advances in Cement-based Materials: Characterization, Processing, Modeling and

Sensing, July, 2014.

“Modeling carbonation of class H cement in high temperature and high pressure down-well conditions,” Jafari Azad, V.\*, Li, C., Rodriguez, D.E., Ideker, J.H., Isgor, O.B., Verba, C., 5th Advances in Cement-based Materials: Characterization, Processing, Modeling and Sensing, July 2014.

“Experimental and Numerical Modeling Approach to Elucidating Damage Mechanisms in Cement-Well Casing-Host Rock Settings for Underground Storage of CO<sub>2</sub>,” Li, C.\*, Jafari Azad, V., Rodriguez, D.E., Ideker, J.H., Isgor, O.B., Verba, C., ACI 2014 Fall Convention, Research in Progress, Oct, 2014.

“Closing Remarks and Perspectives on the Future of Calcium Aluminate Cements,” Calcium Aluminates Cement Conference, *invited May 13, 2014, May 18-21, 2014, Avignon, France.*

“Mechanism(s) investigation on Using Fine Lightweight Aggregates to Mitigate Alkali-Silica Reaction in Concrete”, Li, Chang\*, Ideker, J.H., Thomas, M.D.A., Presentation to ACI Committee 213, Lightweight Aggregates, ACI Fall Session, Phoenix, Arizona, Fall 2013

“Using Fine Lightweight Aggregates to Mitigate Alkali-Silica Reaction in Concrete”, Li, Chang\*, Ideker, J.H., Thomas, M.D.A., Research in Progress, ACI Fall Session, Phoenix, Arizona, Fall 2013

“Cracking Risk with RCA”, Adams, M.P., Fu, T., Isgor, O.B. and Ideker, J.H., ACI Fall Session, Phoenix, Arizona, Fall 2013

“How Reliable are Current Testing Methods for Assessing Alkali-Silica Reactivity?”, American Concrete Institute (ACI) Fall Convention 2012, in 123 Forum: Do We Know Enough to Manage and mitigate ASR Deteriorations in New and Existing Concrete Structures?, October 21-25, 2012, Toronto, Ontario, Canada.

“Building a Student’s Critical Reasoning Skills to Evaluate Green Building Materials,” American Concrete Institute (ACI) Fall Convention 2012, in Teaching Sustainability to Current and Future Engineers, October 21-25, 2012, Toronto, Ontario, Canada.

“Prediction of Drying Shrinkage for Internally Cured HPC”, Fu, T\*, Ideker J.H. and Deboodt, T., American Concrete Institute (ACI) Fall Convention 2012, in The Economics, Performance, and Sustainability of Internally Cured Concrete, Part 1 of 3, October 21-25, 2012, Toronto, Ontario, Canada.

“Alkali-Silica Reaction in Concrete Made with Recycled Concrete Aggregates,” Adams, M.P.\* and Ideker, J.H., NRMCA International Concrete Sustainability Conference, May 7-10, 2012, Seattle, Washington

“Shrinkage Reduction Techniques for High-Performance Concrete for Bridge Decks,” EPFL LMC Seminar, Leysin, Switzerland, January 17-20, 2012.

“Potential Geologic Co-Sequestration of CO<sub>2</sub>-O<sub>2</sub>: Alteration in Class H Portland Cement,” Verba, C.A.\*, O’Connor, W., Rush, G.E. and Ideker, J.H., ACERS – Cements Division, Advances in Cement-Based Materials: Characterization, Processing, Modeling & Sensing, July 23-26, 2011, Vanderbilt University.

“Expansion in Alternative Cements,” Expansive Reactions in Cement-Based Materials Workshop, Corvallis, OR, July 27-29, 2011.

“Alkali-Silica Reactivity of Recycled Concrete Aggregates – Research in Progress,” Adams, M.P.\* and Ideker, J.H., American Concrete Institute (ACI) Spring Convention 2011, Committee Meeting: Committee 555: Recycled Materials in Concrete, April 3-7, 2011, Tampa, Florida

“Alkali-Silica Reaction, Fly Ash and the Role of Alumina,” EPFL Seminar, Leysin, Switzerland, January 25-28, 2011

Schwing, K.A.\*, Ideker, J.H. and Folliard, K.J., "Influence of alkalis from fly ash to concrete pore solution: ASR considerations" Ideker, J.H.\*, Schumacher, K.A., Spring ACI Convention, Chicago, Illinois, 2011.

"Using Chemical Shrinkage to Predict Conversion in CAC Systems," ACERS – Cements Division, Advances in Cement-Based Materials: Characterization, Processing, Modeling & Sensing, July 11-13, 2010, Purdue University, West Lafayette, IN.

"Evaluation of Concrete Structures Suffering from Alkali-Silica Reaction (ASR)," Ideker, J.H.\*, Lynch, M.M. and Bentivegna, A.F., EPFL Seminar, Leysin, Switzerland, January 2010

"Alkali-Silica Reactivity and the Effect of Alkalies Contributed from Fly Ash," Schwing [Schumacher], K.A.\*, Ideker, J.H. Ecole Polytechnique Federale de Lausanne (EPFL) Seminar, Leysin, Switzerland, January 25-28, 2010.

"Temperature Dependence on Conversion Reactions and Subsequent Volume Change in Calcium Aluminate Cement Systems," *American Concrete Institute (ACI) Fall Convention 2009*, Session: Temperature Effect on Concrete Performance, November 8-12, 2009.

"Evaluation of Historic Structures Suffering from Alkali-Silica Reaction (ASR)," Jason H. Ideker\*, Marjorie M. Lynch\* – SGH and Anthony F. Bentivegna – UT Austin: Co Presenters, *Association of Preservation Technology International (APT)*, 2009 Annual Conference – Preservation in the City Without Limits, November 2-6, 2009

"Measuring Autogenous Deformation of Innovative Cementitious Materials," *American Concrete Institute (ACI) Spring Convention 2008*, Session: Early-Age Test Methods for Performance Specifications, San Antonio, Texas, April 2009

"Early-Age Characterization of Calcium Aluminate Cement Systems," EPFL LMC Seminar, Leysin, Switzerland, January 13-16, 2009.

"Calcium Aluminate Cement Systems: Durability Aspects," EPFL LMC Seminar, Leysin, Switzerland, January 13-16, 2009.

"Evaluating Early-Age Properties of Calcium Aluminate Cement Concrete with Rigid Cracking and Free Shrinkage Frames: Isothermal Testing," *Calcium Aluminate Cements 2008: The Centenary Conference*, Avignon, France, June 30 – July 2, 2008.

"The Current State of the Accelerated Concrete Prism Test," *13<sup>th</sup> International Conference on Alkali-Aggregate Reaction*, Trondheim, Norway, June 16-19, 2008.

"Linking Microstructural Development to Early-Age Volume Change in Calcium Aluminate Cement Concrete," *American Concrete Institute (ACI) Spring Convention 2008*, Session: Multi-Scale Descriptions of Concrete Performance, March 29-April 3, 2008.

"Early-Age Deformation in Calcium Aluminate Cement Concrete," EPFL LMC Seminar, Crans-Montana, Switzerland, January 8, 2008

"CAC Basics and Early-Age Volume Change," *American Concrete Institute (ACI) Fall Convention 2007*, Session: Open Paper, Puerto Rico, October 14-18, 2007.

"Classroom and Laboratory Demonstrations for Undergraduate Civil Engineering Courses," *American Concrete Institute (ACI) Spring Convention 2007*, Session: Toys for Teaching, Atlanta, Georgia, March 21-25, 2007.

"Test Methods to Assess the Ability of Supplementary Cementing Materials to Mitigate ASR Induced Expansion," *Advances in Cement and Concrete X: Sustainability*, Davos, Switzerland, July 2-7, 2006.

“The Role of “Non-reactive” Aggregates in the Accelerated (60 C) Concrete Prism Test,” *Marc-Andre Berube Symposium on Alkali-Aggregate Reactivity in Concrete at the Eight CANMET/ACI International Conference on Recent Advances in Concrete Technology*, Montreal, Canada, 2006.

“ICAR Project 302 Update,” *International Center for Aggregate Research (ICAR) Symposium*, Austin, Texas, April 2005.

“ASR in Texas, USA Laboratory and Field Experience,” *12<sup>th</sup> International Conference on Alkali-Aggregate Reaction in Concrete*, Beijing, China, October 2004.

### **Invited Presentations**

ASCE Arizona June 2025

ACPA November 2024

Chicago Mar 2025

Aggregate Folks at NSSGA headquarters December 2024

Ideker, J.H., Parashar, A., Folliard, K.J., Drimalas, T., Hossack, A., Thomas, M.D.A., Ghanizadeh, A., and Snyder, A., “Presentation to NSSGA and FAA Tech Center Representatives Research Project: Mitigating Potential Alkali-Silica Reaction Expansion in Airfield Concrete Pavements,” February 23<sup>rd</sup> 2023, FAA Tech Center, Egg Harbor, New Jersey.

“Oregon State University Ecampus Lunch Series – Creative Assessments,” The Oregon State Engineering Student, Team Project-Based Asynchronous Assessment, October 27, 2021, (~30 attendees).

“Alkali-Silica Reaction: Research Needs and the Link to Practice,” Rok&Tok, Webinar, June 3, 2021.

“How Do We Specify Concrete that is Resistant to ASR?,” RILEM, Minnesota Concrete Council, 250 person webinar, May 11, 2021

“Experimental and Numerical Modeling Approach to Elucidating Damage Mechanisms in Cement-Well Casing-Host Rock Settings for Underground Storage of CO<sub>2</sub>,” Ideker, J.H.\*, Isgor, O.B., Li, C.\*, Jafari Azad, V., and Rodriguez, D.E., Final Project Presentation, NETL-Albany, November 2014.

Alkali-Silica Reactivity of Recycled Concrete Aggregates, Ideker, J.H.\*, Tanner-Eisenhauer, J.E., Adams, M.P. and Joes A., National Concrete Consortium Fall Meeting, September 18, 2012, Seattle, Washington

“Correlation of Accelerated Laboratory Test Methods to Field Performance: Aggregate Reactivity and Mitigation Measures,” *Alkali-Aggregate Reaction: Testing, Prognosis, Modelling, Avoidance*, EPFL AAR Lecture Series, 14 September 2011.

“Overview of Research Areas, Results and Potential Collaboration,” Presentation to Saint Gobain Central Research, September 2011, Paris, France

Sustainability of Concrete for Infrastructure,” Portland State University Transportation Seminar, Friday, November 19, 2010.

“Concrete Durability: From Microstructure to Full-Scale Performance,” *Structure+Architecture Symposium*, AIA Portland, Friday Seminar Series, Friday, October 1, 2010.

“Concrete Durability: From Microstructure to Full-Scale Performance,” National Energy and Technology Laboratory, Invited Speaker Series, Albany, Oregon, September 23, 2010.

Oregon Sustainability Center Materials Event, July 27, 2010, Portland Oregon, Portland Development Commission, Member - Cementitious Materials Panel.

“Oregon Sustainability Center – Research Agenda Panel Presentation,” Oregon BEST FEST 2010, Oregon Convention Center, Portland, Oregon, September 13, 2010.

“Oregon State University-Green Building Materials Lab,” BEST FEST 2009, Portland State University, Portland, Oregon, September 14, 2009

“Workshop: The Nuts and Bolts of Green Infrastructure,” OTREC Summit, Portland State University, Portland, Oregon, September 11, 2009

“Test Methods to Detect Alkali-Silica Reaction and Determine Efficacy of Mitigation Methods,” ACI Alkali-Aggregate Reaction Seminar, ACI Colombia Chapter, Bogota, Colombia, April 2009.

“Examination of the Effects of Temperature on Progression of Alkali Silica Reaction Using an Accelerated Temperature ASTM C 1293 Test,” *PCA Fall Meeting – Education Foundation Fellowship Presentation*, Chicago, Illinois, 2005.

“Laboratory and Field Experience with ASR in Texas, USA,” *Structures Seminar – The University of Texas at Austin*, Austin, Texas, November 2004.

“Alkali Silica Reaction Research at UT Austin”, *ACI Central Texas Chapter Monthly Meeting*, Austin , Texas, August, 2004.

#### **Course Guest Lectures**

“Durability of Concrete Materials”, ENGR 407H, Fall 2013-2015, Oregon State University, Dr. Belinda Batten Instructor of Record

“Introduction to Cement and Concrete”, CCE 101, Fall 2010-2013, 2015 Oregon State University, Various Instructors of Record (Dr. Scott Ashford, Dr. David Trejo, Ms. Tracy Arras)

“Experimental Methods for Cement Concrete Investigations”, ENGR 418H, Fall 2011 and Fall 2012, Oregon State University, Dr. Belinda Batten Instructor of Record

“Durability of Innovative Cementitious Systems”, *The Ecology of Building Materials – Arch 4/507*, Erin Moore (Professor of Record), The University of Oregon

#### **Poster Presentations**

Noor, L., Ghantous, R.M., Tuinukuafe, A., Ideker, J.H., and Weiss, W.J., “Evaluating the Curing Efficiency of High Early Strength Concrete Using Neutron Radiography,” ACI 123 Concrete Research Poster Session, Spring 2023, San Francisco, CA. S

Ero, K., Parashar, A., and Ideker, J.H., “Improving Guidance of AASHTO R 80/ASTM C1778 for Alkali-Silica Reactivity (ASR) Potential and Mitigation”, Undergraduate Research Symposium, May 30, 2023, Oregon State University

Deboodt, T., Wilson, A., Ideker, J.H.\* and Adams, M.P.\*, “Re-evaluation of Testing Parameters in the Accelerated Mortar Bar Test,” 15<sup>th</sup> International Conference on Alkali Aggregate Reaction in Concrete, Editors Hasparyk and Sanchez, Sao Paulo, Brazil, July, 4-7 2016, 10 pp.

Banuelos, J. and Ideker, J.H., “Use of Blended Fibers to Control Shrinkage Related Cracking in HPC,” PacTrans Regional Conference, Fall 2013, Seattle, Washington

Deboodt, T., Fu, T. and Ideker J.H., "Elevated Temperature and Decreased Relative Humidity Effects on Drying Shrinkage of Concrete Prisms", *The 12th International Conference on Recent Advances in Concrete Technology and Sustainability Issues*, Prague, Czech Republic, October 31<sup>st</sup> - November 2<sup>nd</sup>, 2012

Warner, S., Ideker, J.H., Schumacher K.A., "The Influence of Alumina on Alkali-Silica Reaction, *The 12th International Conference on Recent Advances in Concrete Technology and Sustainability Issues*, Prague, Czech Republic, October 31<sup>st</sup> - November 2<sup>nd</sup>, 2012

Adams, M.P., Gray, B., Ideker, J.H., Fournier, B., Tanner, J.E., Shehata, M., "Applicability of Standard Alkali-Silica Reactivity Testing Methods for Recycled Concrete Aggregate," *The 12th International Conference on Recent Advances in Concrete Technology and Sustainability Issues*, Prague, Czech Republic, October 30<sup>th</sup> – November 1<sup>st</sup>, 2012.

Gray, Brian J., Adams, M. P., Ideker, J.H., Fournier, B., "Variation in Alkali-Silica Reaction Within Recycled Concrete Aggregate Based on Initial and Secondary Crushing," *The 12th International Conference on Recent Advances in Concrete Technology and Sustainability Issues*, Prague, Czech Republic, October 30<sup>th</sup> – November 1<sup>st</sup>, 2012.

Fu, T., Deboodt, T. and Ideker, J.H., "Drying Shrinkage of High Performance Concrete," Oregon Built Environment & Sustainable Technologies Center (BEST) FEST, Portland, Oregon, September 12, 2012.

Kamke, F.A, Ideker, J.H. and Rochefort, W.E., "Green Building Materials Laboratory-A Signature Research Facility of Oregon BEST," Oregon Built Environment & Sustainable Technologies Center (BEST) FEST, Portland, Oregon, September 12, 2012.

Adams, M.A., Moore, T. and Ideker, J.H., " Performance of Lower CO<sub>2</sub> Binders for Concrete Construction," Oregon Built Environment & Sustainable Technologies Center (BEST) FEST, Portland, Oregon, September 12, 2012. Winner: People's Choice Best Poster

Adams, M.P., Ideker, J.H., "Variations in Expansion of Concrete Containing Recycled Concrete Aggregate due to Alkali-Silica Reaction," Expansive Reactions in Cement-Based Materials Workshop, Corvallis, OR, July 27-29, 2011.

Adams, M.P., Ideker, J.H., Gray, B., "Durability of Concrete Containing Recycled Concrete Aggregate," Oregon University System Sustainability Conference, Corvallis, Oregon, February 28, 2011.

Kamke, F.A, Ideker, J.H. and Rochefort, W.E., "Green Building Materials Laboratory-A Signature Research Facility of Oregon BEST," Oregon Built Environment & Sustainable Technologies Center (BEST) FEST, Portland, Oregon, September 13, 2010.

Schwing [Schumacher], K.A. and Ideker, J.H., "Use of Fly Ash in the Mitigation of Alkali-Silica Reaction in Concrete," Oregon Built Environment & Sustainable Technologies Center (BEST) FEST, Portland, Oregon, September 13, 2010.

Verba, Circe, O'Connor, William, Ideker, J.H., "Cement Seal Integrity: Microstructural Characterization of CO<sub>2</sub> Alteration Zones in Class H Portland Cement," ACERS – Cements Division, Advances in Cement-Based Materials: Characterization, Processing, Modeling & Sensing, July 11-13, 2010, Purdue University, West Lafayette, IN, *Recipient of Best Poster Award (6 of 27 given)*.

Bentivegna, A.F., Folliard, K.J. and Ideker, J.H., "Evaluation of Calcium Aluminate Cement Based Systems Hydration using Isothermal Calorimetry," ACERS – Cements Division, Advances in Cement-Based Materials: Characterization, Processing, Modeling & Sensing, July 11-13, 2010, Purdue University, West Lafayette, IN.

Schwing [Schumacher], K., Ideker, J.H., "Oregon State University Green Building Materials Laboratory," Oregon Built Environment & Sustainable Technologies Center (BEST), Portland, Oregon, September 2009.

Folliard K.J., Barborak, R.C., Ideker, J.H., Fournier, B., Thomas, M.D.A., and Tremblay, C., "Laboratory Test Methods for Determining the Dosage of Lithium Nitrate Required to Control Alkali-Silica Reaction Induced Expansion," *Proceedings of the 86<sup>th</sup> Annual Transportation Research Board Meeting*, Washington D.C., USA, January 2007.

Ideker, J.H., Juenger, M.C.G. and Ostertag, C.P., "The Participation of Silica Fume Agglomerates in ASR Expansion," *Advances in Cement and Concrete IX: Volume Changes, Cracking, and Durability*, Copper Mountain, Colorado, August 2003.

## Websites Designed

Green Building Materials Laboratory, <http://gbml.oregonstate.edu>, Oregon State University, Template Courtesy Oregon State University Marketing.

Infrastructure Materials Laboratory and Research Website, <http://web.engr.oregonstate.edu/~idekerj/index.php>, Oregon State University, Template Courtesy Oregon State University Marketing.

## Service

### Professional Organizations

2020-present Chair, RILEM TC-301 ASR, Risk Assessment of Concrete Mixture Designs with Alkali-silica Reactive (ASR) Aggregates

2020-2021 NSF CMMI Game Changers Academy

2018-present Member, Committee on Publications (COP), ASTM International

2017-2022 Member, C09 Executive Committee, Member-at-Large

2014-2019 Member, RILEM TC-258  
Task Group on Alkali Aggregate Reactivity Performance-Based Approach

2009 – present Member, ASTM International  
Secretary, Subcommittee C09.50 – Aggregate Reactions in Concrete, 2018-2024  
Chair, Subcommittee C09.50 - Risk Management for Alkali Aggregate Reactions, 2011-2017  
New Standard Developed Under Chaired Leadership: *ASTM C 1778-14 "Standard Guide For Reducing the Risk of Deleterious Alkali-Aggregate Reaction in Concrete"*  
Voting Member, Committee C09 – Concrete and Concrete Aggregates, 2009-present  
Voting Member, Committee C01 – Cement, 2009-present  
Voting Member, Subcommittee: C01.1300 – Special Cements, since 2010

2003-present Member, American Concrete Institute  
TAC Awards Group Subcommittee (ACI CAP SC2) – ACI Wason Medal Award, 2015  
Voting Member Committee on Early-Age Properties of Concrete (ACI 231), 2013-present  
Voting Member Committee on Durability of Concrete (ACI 201), 2013-present  
Voting Member Committee on Material Science of Concrete (ACI 236), 2008-present  
Voting Member SC2 - Evaluate 2018 published papers for the Wason Medal for Materials Research  
Associate Member Committee on Durability of Concrete (ACI 201), 2003-2013  
TAC Awards Group Subcommittee I (SC1) - ACI Construction Award, 2009-2010

2000-2013 Member, American Society of Civil Engineers

2010-present Member, American Concrete Institute, Oregon Chapter

### Proposal Reviews

NSF Panel Review – FY24  
NSF SBIR/STTR Program Reviewer – FY20  
NSF SBIR/STTR Program Reviewer – FY19  
NSF SAEM Program Reviewer – FY18  
NSF Panel Review – FY17  
CRC – Concrete Research Council  
University of Missouri-Kansas City, Internal Research Funding Reviewer  
University Transportation Center, Northeast Region

### **Journal Reviewer**

ICAAR 2012 (International Conference on Alkali-Aggregate Reactivity), Austin, Texas, USA  
Member of the International Board of Reviewers (2011-2012)  
Journal of ASTM International (2010-2011)  
NIST (WERB) – Invited Reviewer  
Journal of Bridge Engineering (2008-Present)  
Journal of Material Science (2008-Present)  
ICAAR 2008 (International Conference on Alkali-Aggregate Reactivity), Trondheim, Norway  
Member of the International Board of Reviewers (2007-2008)  
Cement and Concrete Research (2006-Present)  
ASCE Journal of Materials in Civil Engineering (2006-Present)  
Materials and Structures (2007-Present)  
ACI Materials Journal (2005-Present)

### **Conference Scientific Panels**

2028 ICAAR, Bahía Blanca, Argentina, May 2028  
2027 ICCI, Delhi, India, 2027  
2026 Calcium Aluminate Cements, Lausanne, Switzerland, June 2026  
2020 ICAAR, Lisbon, Portugal, June 2020  
2020 Calcium Aluminate Cements, Edinburgh, UK, June 2020  
2014 Calcium Aluminate Cements, Avignon, France, June 2014.  
2014 Concrete Durability Conference, Purdue University, June 2014

### **Textbook Reviewer**

PCA Design and Control 14<sup>th</sup> Edition  
PCA Design and Control 15<sup>th</sup> Edition

### **Conference/Meeting Organization**

2026 Calcium Aluminates, EPFL Lausanne, Switzerland, Co-Chairs: Jason H. Ideker, Matthew P. Adams, Karen L. Scrivener, Co-Editors of the Conference Proceedings: Jason H. Ideker, Matthew P. Adams, and Elsa Qoku

2020 Gordon Conference “Cutting-Edge Developments and Characterization of Cement-Based Materials”  
Gordon Research Conference (GRC Power Hour™) Addresses challenges women face in science and issues of diversity and inclusion. The program supports the professional growth of all members of our communities by providing an open forum for discussion and mentoring.  
Organizers: Kimberly Kurtis (Georgia Institute of Technology, USA) and Jason Ideker (Oregon State University, USA)

2019-2021 The Corvallis Workshops, 4<sup>th</sup> – *Concrete Fit for Purpose*, June 22-24, 2022  
Workshop Organizers: Jason H. Ideker, Karen L. Scrivener and Anthony F. Bentivegna  
Oregon State University, Corvallis, USA

2019-2021 Doctoral Short Course – *Concrete Fit for Purpose*, June 20-21, 2022  
Workshop Organizers: Jason H. Ideker, Karen L. Scrivener, O. Burkan Isgor, David Trejo and W. Jason Weiss, Oregon State University, Corvallis, USA

2016-2017 Doctoral Short Course - *Service-Life Prediction of Concrete*, July 9-14, 2017  
Short Course Organizers: Jason H. Ideker (Chair), O. Burkan Isgor, David Trejo and W. Jason Weiss

- 2016-2017 The Corvallis Workshops, 3<sup>rd</sup> – *Service-Life Prediction of Concrete*, July 16-19, 2017  
Workshop Organizers: Jason H. Ideker, Karen L. Scrivener and Anthony F. Bentivegna  
Oregon State University, Corvallis, USA
- 2014-2015 American Concrete Institute Fall Convention Denver 2015  
Co-Session Moderator “Methods for Measurement and Mitigation of Early-Age Deformations”
- 2013-2014 Member of the Organizing Committee for the “ 4th International Conference on Durability of Concrete Structures at Purdue University, West Lafayette, Indiana, July 24-26, 2014
- 2012-2014 The Corvallis Workshops, 2<sup>nd</sup> - *Characterization Tools to Assess Performance of Cement-Based Materials*, June 22-25, 2014, Conference Organizers: Jason H. Ideker, Karen L. Scrivener and Anthony F. Bentivegna  
Oregon State University, Corvallis, USA
- 2011-2012 American Concrete Institute Spring Convention 2012, Dallas, Texas, USA  
Co-Session Moderator “Recent Advances in understanding the Mechanisms of ASR, Mitigation Methods and Testing Procedures”
- 2008-2012 International Conference on Alkali-Aggregate Reactivity (ICAAR 2012), Austin, Texas, USA  
Member of the Organizing Committee
- 2010-2011 The Corvallis Workshops, *Inaugural- Expansive Reactions in Cement Based Materials*, July 2011  
Conference Organizers: Jason H. Ideker and Karen L. Scrivener  
Oregon State University, Corvallis, USA
- 2009-2010 American Concrete Institute Spring Convention 2010, Chicago, Illinois  
Full Day Session on: “Advances in the Material Science of Concrete”  
Organizing Co-Chair and Co-Editor of Special Proceedings (SP 270)  
Co-Chair and Co-Editor: Aleksandra Radlinska, Assistant Professor, Villanova University
- 2009 American Concrete Institute (ACI) Fall Convention 2009, New Orleans, Louisiana  
Session Moderator: Materials Science Modeling as a Solution to Concrete Problems Part 2

### **OSU Service**

- 2024-2025 Lead Instructor ENGR 100
- 2024-Present Member, ENGINEERING+ Standing Committee
- 2024-Present Member, CCE Graduate Committee
- 2022 Lead Instructor ENGR 100
- 2022 OSU Faculty Senate, College of Engineering Representative
- 2022 Chair, Ad-Hoc Committee for Promotion and Tenure Case of Assistant Professor Joseph Louis
- 2020-2022 Chair, ENGINEERING+, College of Engineering  
*2021 ABET team specifically cited Engineering+ effort as an institutional strength.*
- 2019-2020 Chair, First Year Engineering Experience Committee, College of Engineering
- 2019 Ad-Hoc Tenure Committee Member, Erdem Coleri
- 2019 Ad-Hoc Mid-Tenure Committee Member, Yelda Turkan
- 2019 Faculty Senate, Elected Member from COE
- 2019 COE Strategic Plan Revision, Research Committee Member
- 2018-2019 COE Interdisciplinary Committee
- 2018-2019 COE Associate Dean for Research, Search Committee, Member
- 2018-2019 COE First Year Experience Committee
- 2017-2019 CCE Undergraduate Committee, Chair
- 2015-2016 CCE Architectural Engineering Degree Task Group, Member
- 2014-2015 CCE Head Search, Committee Member

2014-2015 Chair, CCE Scholarship Committee  
 2014 P&T Ad-Hoc Committee Member, Michael Olsen, School of CCE  
 2014-2015 Mid-Tenure Ad-Hoc Committee Member, Ari Sinha, Dept. of WSE  
 2013-2014 CCE – Excellence Ad-Hoc Committee, Chair  
 2012-2013 CCE – Internal Awards Committee, Member  
 2012-2013 CCE - Open Access Laboratories Committee, Member  
 2011-2012 CCE – Infrastructure Materials – Focus Area Coordinator  
 2011 CCE - Construction Engineering Management – Focus Area Coordinator  
 2011 College of Engineering New Website Development Committee  
 2011 Member, CCE Graduate Committee Oregon State University  
 2010 Successful Joint Proposal “Faculty Positions Advancing Signature Areas,” Sustainability, Resilience and Rehabilitation of the Built Environment, 1.0 FTE in School of CCE  
 2010 Member, Ad-Hoc Committee on Academic Integrity, Oregon State University  
 2010-2012 Lead, Oregon State University for Development of the Oregon Sustainability Center  
 2010-2012 Materials Group Lead, Oregon Sustainability Center  
 2010-2013 Crescent Valley High School, Corvallis, Oregon “Classroom and Laboratory: Basic Concrete Concepts to High School Juniors”, Ryan Kanter – Instructor of Record  
 2009-2011 Chair, CCE Graduate Committee, Oregon State University  
 UGLBG Program – Obtained over \$180,000 in funding for growing the Diversity and Academic Strength of the CCE Graduate Program  
 2008-2009 CCE Marketing Committee, Oregon State University  
 2008-2015 Advisor, ASCE Concrete Canoe Team, Oregon State University