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Register online at UWalum.com/engineering or by calling (206) 543-0540

THE 2013 ENGINEERING LECTURE SERIES

Engineering Infrastructure:
From Failing Grades to Future Systems

October 23
October 30
November 14
7 P.M., KANE HALL, UW SEATTLE
All Lectures are Free
THE 2013 ENGINEERING LECTURE SERIES examines our national and regional infrastructure up close. From road and rail networks to water and sewer conduits to national power and natural gas grids, life is dependent upon systems. It’s no secret that America’s infrastructure is aging and failing, recently receiving a D+ rating from the American Society of Civil Engineers. Engineers face formidable challenges – growing populations, natural disasters, accidents, and design for sustainability as they address the need to modernize and ensure the safety of our systems. Join us as we examine the future of the transportation system in our region, the role of bridges in our state and explore the engineering of the two mile long Highway 99 tunnel project under downtown Seattle.

All lectures will be held at: 7pm, Kane Hall, UW Seattle

Lectures are free but seating is limited. REGISTRATION REQUIRED

Failing Grades to Future Systems
Wednesday, October 23, 2013
7pm Kane Hall Room 120
Paula Hammond
Senior Vice President and National Transportation Market Leader, Parsons Brinckerhoff

Greg Miller, Chair & Professor, Civil & Environmental Engineering

A region’s infrastructure is often invisible to us when it’s working as it should. But in Washington state, 366 of our bridges have been identified as structurally deficient, 10% of our roads are rated “poor” with many others in decline, and the state received a C-rating overall from the American Society of Civil Engineers. Restoring and improving infrastructure will take more than just money. Hear how the infrastructure of today was conceived and built, and examine needed policy, funding and innovation to move us into the future. Join us to learn more about this grand challenge.

Spanning the Gap: Lessons in Bridge Engineering
Wednesday, October 30, 2013
7pm Kane Hall Room 120
John Stanton
Professor, Civil & Environmental Engineering

Perhaps more than any other area in the country, Washington state has a history of collapsing bridges. From the infamous Galloping Gertie and the old I-90 bridge to the most recent Skagit bridge collapse, these “unintended field tests” have provided useful lessons for designers, contractors and engineers. Over 21% of Washington bridges are considered functionally obsolete and the average age of our nation’s bridges is 42 years. As we look to the bridges of the future, what are the major technological breakthroughs that have led to dramatic shifts in design and construction? Join us and learn more about engineering the bridges of tomorrow.

Tunneling Toward a New State Route 99 Corridor
Thursday, November 14, 2013
7pm Kane Hall Room 130
Matthew Preedy, PE (BSCE ’92)
Deputy Program Administrator, Alaskan Way Viaduct Replacement Program, Washington State Department of Transportation

In summer 2013, Bertha, the world’s largest-diameter tunneling machine began a historic journey beneath downtown Seattle. Its purpose: dig a tunnel to replace the SR 99 Alaskan Way Viaduct, a double-deck highway that has spanned the downtown waterfront for more than half a century. The machine’s task sounds straightforward enough, but the story behind it is complicated. It begins with an earthquake in 2001 that damaged the viaduct and led to a decade of public debate about how to replace the vulnerable structure. More than 90 alternatives were studied, several votes were held and the story’s conclusion is unfolding now, as the Washington State Department of Transportation builds a new SR 99 corridor through Seattle.

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Tunnel photos courtesy of WSDOT