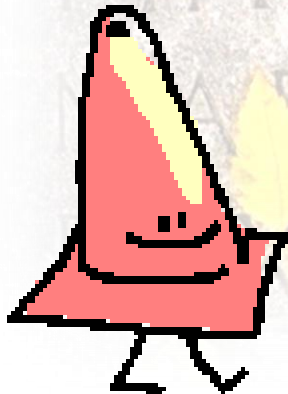




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Transportation Research at the University of Arkansas



Kevin D. Hall, Ph.D., P.E.
Head, Department of Civil Engineering
21st Century Leadership Chair in Civil Engineering
April 24, 2012



Outline

- The People
- The Projects
- The Products





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People



Andrew
Braham



Stacy
Williams



Kevin
Hall

**Pavements: Materials, Construction,
Design, Rehabilitation, Sustainability**



James
Gattis

**Roadway Design:
Geometrics, Traffic**



Findlay
Edwards

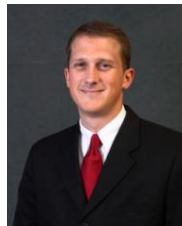
**Environmental:
Drainage,
Storm Water Runoff**



Brady
Cox



Norm
Dennis



Rick
Coffman

**Geotechnical: Foundations, Soils,
Slope Stability, Seismic, Geotextiles**



Micah
Hale



Kirk
Grimmelsman



Ernie
Heymsfield



Panneer
Selvam

**Structural: Bridges, Materials,
Maintenance, Health Monitoring**

TRANSPORTATION RESEARCH



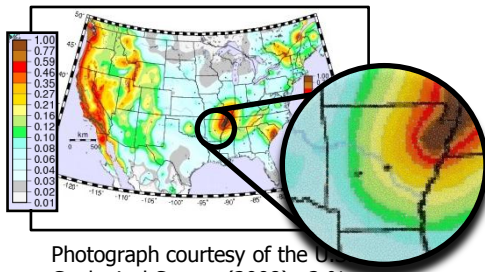
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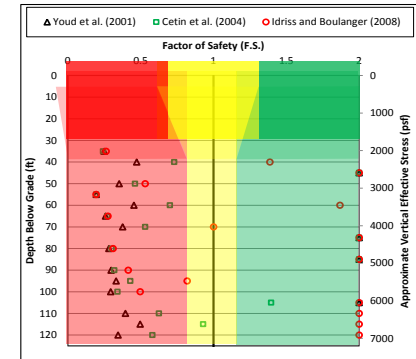
Projects

Practical Recommendations for Evaluation and Mitigation Of Soil Liquefaction in Arkansas

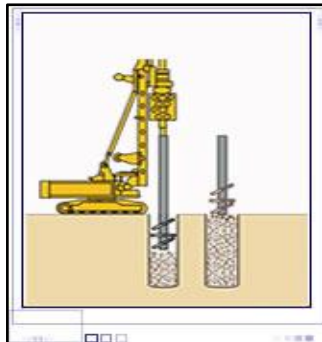
Brady Cox, Ph.D., P.E.



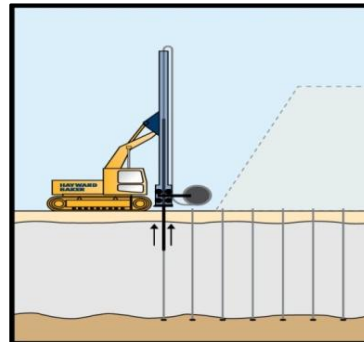
Photograph courtesy of the U.S. Geological Survey (2008), 2 % probability of being exceeded in 50 years



Possible Mitigation Techniques



Deep Soil Mixing



Prefabricated Vertical
Drains



Liquefaction Susceptibility





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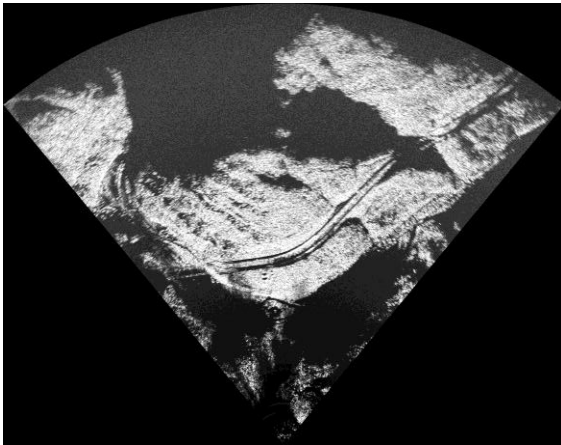
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Projects

Characterization of Ground Deformations Using Satellite And Ground Based Radar

Rick Coffman, Ph.D., P.E.

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Projects

Pavement Design, Maintenance, and Rehabilitation in the Fayetteville Shale Play

Stacy Williams, Ph.D., P.E.; Andrew Braham, Ph.D., P.E., Kevin Hall, Ph.D., P.E.



- Roller-compacted concrete (RCC)
- Full-depth reclamation (FDR)
- Deep-strength design using DARWin-ME





Projects

Structural Health Monitoring

Kirk Grimmelsman, Ph.D., P.E.



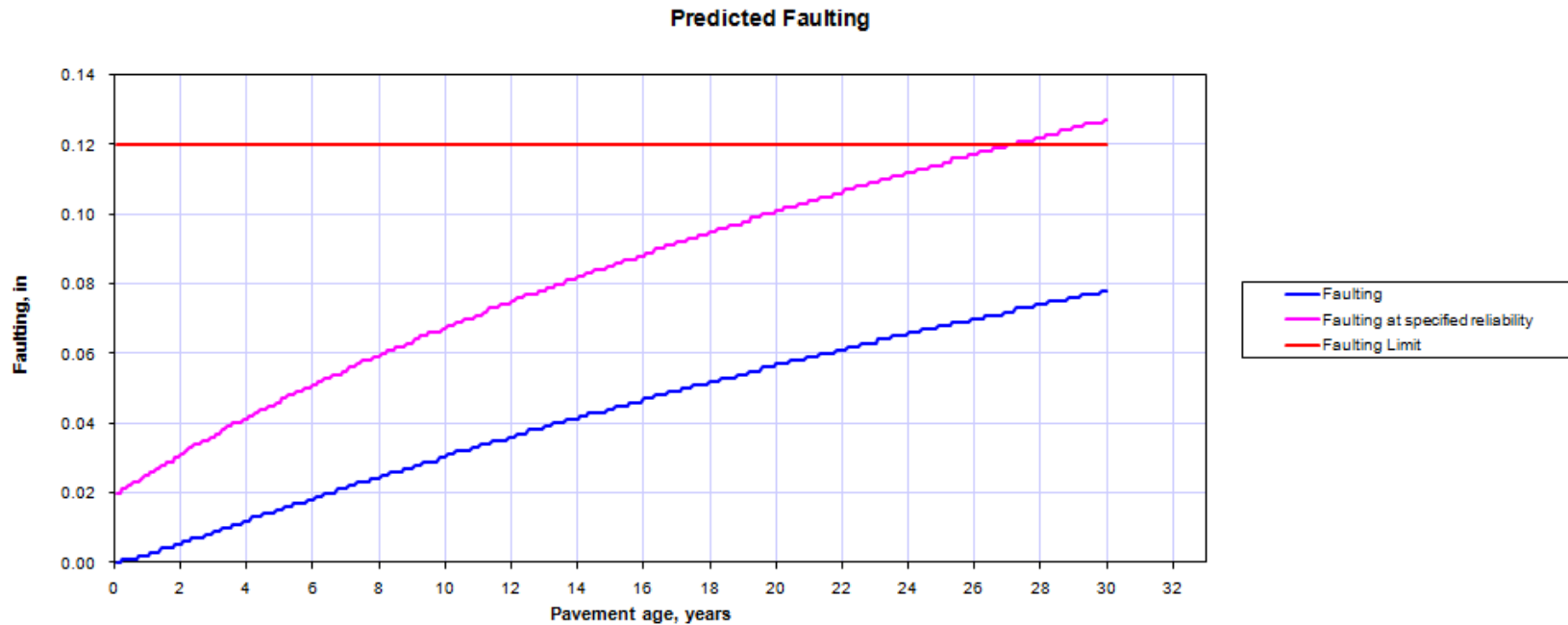
- Vibrational characteristics for structures
- Non-destructive; monitored remotely
- Detect problems + check safety post-event





Products

The first new pavement design procedure since the early 1960's...





Products

A Best Practices Guide for constructing long-lasting longitudinal joints in asphalt pavements...





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