

Dr. Uddin's Research Projects (updated January 2013)

External research grants awarded at the University of Mississippi: (Uddin as PI except where noted.)

17 Major external research grants received including 10 CAIT projects, totaling over 12 million dollars from: National Academy of Sciences, US Agency for International Development (USAID), US Department of Transportation (DOT), Federal Highway Administration (FHWA), Mississippi DOT/FHWA, NASA-MSCI/MDOT, USDOT – ITS grant appropriated by Congress, and IBSi, five years CAIT transportation related air quality contract to Mississippi State University led consortium funded by the US DOT- Research and Special Programs Administration (RSPA, now RITA); and four years USDOT-RITA funded UTC grant to Mississippi State University led university consortium.

Additionally, worked with University Foundation to secure \$4.6 million 3D geospatial software university wide industry gift from IAVO, August 2009.

1. The National Center for Intermodal Transportation for Economic Competitiveness (NCITEC) award of \$3.5 million from DOT-RITA to Mississippi State University led consortium: secured 600,00 dollars funds for University of Mississippi proposed projects, 2012-2013; additional \$3.5 million dollars, Jan 2012-Jan 2016. *CAIT project*
2. Mississippi DOT, \$71,500: State Study 255 " A Synthesis Study of Noncontact Nondestructive Evaluation of Top-down Cracking in Asphalt Pavements," 2011-2013. *CAIT project*
3. Mississippi DOT State Study 213, \$70,920: "Performance evaluation of roundabouts for traffic delay and crash reduction in Oxford, MS," 2008-2011. *CAIT project*
4. National Academy of Science/Federal Aviation Administration, \$ 350,000: "Light Detection and Ranging (LIDAR) Deployment for Airport Obstruction Surveys," 2007-09. *CAIT project*
5. National Academy of Science/U.S. Agency for International Development, \$94,000: "Development of an ITS-based Traffic Management Model for Metropolitan Areas of Pakistan with Karachi as a Case Study," 2007-2010. *CAIT project*
6. Mississippi DOT State Study 182, \$65,240: "Ground Penetrating Radar Study - Phase I," 2005-2006. *CAIT project*
7. USDOT, FHWA, \$6,500: Eisenhower Graduate Fellowship to Bikila Wodajo, 2005-2006
8. US DOT- US Department of Transportation (DOT)-RSPA \$ 3,000,000 to Mississippi State University Led Consortium: "Applications of Remote Sensing and Related Spatial Technologies to Environmental Assessments in Transportation; Air Quality Project, \$243,930, University of Mississippi subcontract, 2000-2005. *CAIT project*
9. IBSi Corporation, \$ 20,000: "Implementation of Portable Bridge Cathodic Protection Technology," 2001-2002. *CAIT project*
10. US DOT- Federal Highway Administration (FHWA), \$1,500,000: "ITS Deployment and Integration, Oxford, Mississippi," assisted the City of Oxford to develop and get USDOT approval of the workplan for real-time traffic surveillance, advanced transportation modeling; and installed high accuracy benchmark monuments in Oxford to conduct aerial photo and LIDAR terrain mapping survey, 2000-2001. *CAIT project*

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11. NASA/MSCI, \$102,875: "Transportation Industry Applications Utilizing Laser Terrain Mapping Technology," 1999-2002. *CAIT project*
12. Mississippi DOT, \$125,000: "Implementation of Superpave Equipment in Materials Curriculum and Asphalt Pavement Research," 2000-2001.
13. Mississippi Department of Transportation, \$ 244,340 plus \$ 14,952 extension "Subgrade Characterization For Highway Pavement Design," 1999-2000 (with Co-PI – K.P. George)
14. US DOT- FHWA, \$110,000: "Development of Advanced Modeling and Analysis Technologies for Asphalt Pavements," congressionally supported project, 1999-2002. (Through the efforts of Mississippi Senator Trent Lott and U.S. Secretary of Transportation – Rodney Slatter)
15. Mississippi DOT State Study 122, \$117,320: "Improved Asphalt Thickness Design Procedures for New and Reconstructed Highway Pavements," 1996-1999.
16. US DOT- FHWA, \$37,277: "Finite Element Models of Roadside Safety Structures," 1994-1998 (with PI—R.M. Hackett)
17. Mississippi DOT State Study 110, \$74,964: "Diagnostic Evaluation and Performance Study of Portland Cement Concrete Pavements in Mississippi," 1993- 1995 (with Co-PI – K.P. George)

External travel grants awarded: Over \$ 40,000 full or partial support to attend conferences and present keynote and invited lectures/short courses from — National Science Foundation, Transportation Research Board (TRB), US DOT Federal Highway Administration, Tulane University (New Orleans, USA), USDOT & Mississippi State University, Dubai Municipality (UAE), Roads Department—Government of Brunei, ITESM (Monterrey, Mexico), Mackenzie University (São Paulo, Brazil), Ulster University (Northern Ireland), University of Minho (Guimarães, Portugal), University of Pisa (Italy), Government of Abu Dhabi (UAE), Griffith University (Australia), and 7th Malaysian Road Conference (Malaysia), Bituminous Materials and Pavements Conference (Thessaloniki, Greece), Asian Institute of Technology (AIT) for post flood assessment and flood protection advice (Bangkok, Thailand).

The University of Mississippi equipment and research grants awarded: Total \$ 42,000