

Professor Javed Bari, PhD, PE, FIEB, M.ASCE, joined North South University in 2013. Later, he joined as the Chair of the Department of Civil and Environmental Engineering on March 2, 2015, and as the Dean of the School of Engineering and Physical Sciences (SEPS) on March 5, 2019. He is currently serving his second term in the NSU Syndicate. Dr. Bari has more than thirty years of teaching, research, and industrial experience in various fields of Civil Engineering. He obtained his B.Sc. in Civil Engineering from BUET in 1993 with a major in Structural Engineering. Later, he received M.S. and Ph.D. degrees in Civil Engineering from Arizona State University, Tempe, Arizona, USA, specializing in Transportation Engineering. Dr. Bari is one of the few Professional Engineers (PE) of the USA working in Bangladesh. He is also a Life fellow of IEB. Dr. Javed Bari is considered a USA South-Western specialist in transportation and materials. He was one of the key researchers who developed the globally known new AASHTO Mechanistic-Empirical Pavement Design Guide (MEPDG). He taught Civil Engineering courses at Arizona State University for a long time. Dr. Bari also worked in the Arizona Department of Transportation (ADOT) as a team leader and Sr. Pavement Design Engineer from 2005 to 2010. He managed numerous research and highway construction projects totaling over 800 million dollars. Between 1994 and 1999, Dr. Bari worked in the Bangladesh Government's all three major Civil Engineering departments, namely, RHD (Roads and Highways Department), PWD (Public Works Department), and LGED (Local Government Engineering Department). After returning from the USA in 2011, he briefly worked at the IUBAT University in Dhaka as a Professor of Civil Engineering and the Director of the South Asian Disaster Management Center (SADMC). He has been involved with the World Bank and USAID in their Transport portfolio in Bangladesh. Dr. Bari attended numerous professional training sessions such as Strategic Plan and Management, iRAP and

ViDA, Incident Command System (ICS), Successful Management of Project Development Process, Carbon Footprint of Pavements, Rural Infrastructure Maintenance, Pavement Preservation for High-Traffic-Volume Roadways, Asphalt Emulsions, Strategic Planning, Performance Measures, Operational Management, Budgeting Process, etc. Dr. Bari has numerous publications in many international peer-reviewed journals and conference proceedings, such as the journals and proceedings of ASCE, TRB, AAPT, ITE, ASC, etc.

## **Scholarly Works**

### **Publications:**

- **Javed Bari (Primary Author),** Mehedi Hasan, Estiak Ahmed, Faria Tabassum (Presenter), Arifuzzaman, Kazi Newaz. 2023. "Evaluation of the Bus Management System of Route A-317 (Diabari to Saydabad via Badda) of Dhaka City". Journal of International Road Federation (IRF). Paper presented by Faria Tabassum and Dr. Javed Bari at the IRF Global R2T Conference, Phoenix, Arizona, USA, November 14-17, 2023.
- Javed Bari (Primary Author), Mehedi Hasan, Estiak Ahmed, Faria Tabassum (Presenter), Asifuzzaman, Kazi Newaz. 2023. "A comprehensive evaluation of road safety status of the major intersections of Azimpur to Gabtoli corridor on Mirpur Road using the iRAP road infrastructure analysis protocol". Journal of International Road Federation (IRF). Paper presented by Faria Tabassum and Dr. Javed Bari at the IRF Global R2T Conference, Phoenix, Arizona, USA, November 14-17, 2023.
- **Javed Bari (Primary Author),** Mohammad Ashiqur Rahman, Minhaj Uddin Mahmood Siddique, Md. Jannatul Nayem, Faria Tabassum (Presenter). 2023. "An evaluation of traffic sign perception among different types of road drivers in Bangladesh". Journal of International Road Federation (IRF). Paper presented by Faria Tabassum and Dr. Javed Bari at the IRF Global R2T Conference, Phoenix, Arizona, USA, November 14-17, 2023.
- Mahinur Maisha, Marium Mou, **Javed Bari (Primary Author & Presenter)**, Kazi Newaz. 2023. "Analysis of Roadway Infrastructure Management Using iRAP Protocols to Ensure Road Safety of Critical Intersections between Kuril Bishwa Road and Mouchak Bus Stoppages of Dhaka City". Journal of American Society of Civil Engineers (ASCE). Transportation & Development Institute (T&DI) Paper. Presented by Dr. Javed Bari at the ASCE International Conference on Transportation and Development 2023, June 14 17, 2023. Austin, Texas, USA. DOI: 10.1061/9780784484876.015. pp. 161–170. USA. June 2023.
- Muneem Shahabuddin, Md. Ashraful Alam, Jannatul Ferdous Sweety, Kazi Newaz, **Javed Bari (Primary Author & Presenter)**. 2023. "Identification and Evaluation of Past and Present Black Spots on the Dhaka-Sylhet National Highway of Bangladesh". Journal of American Society of Civil Engineers (ASCE). Transportation & Development Institute (T&DI) Paper. Presented by Dr. Javed Bari at the ASCE International Conference on Transportation and Development 2023, June 14 17, 2023. Austin, Texas, USA. DOI: 10.1061/9780784484876.014. pp. 148–160. USA. June 2023.
- Md. Abtahi Rabby, Mahin Alam, Tamal Ray, **Javed Bari (Primary Author & Presenter)**. 2023. "Reusing Waste Plastic in Aggregates for Road Construction". Journal of American Society of Civil Engineers (ASCE). Transportation & Development Institute (T&DI) Paper. Presented by Dr. Javed

Bari at the ASCE International Conference on Airfield and Highway Pavements 2023, June 14 – 17, 2023. Austin, Texas, USA. DOI: 10.1061/9780784484906.012. pp. 125–134. USA. June 2023.

- Aseer Masnoon, Imtiaz Mehmood, **Javed Bari (Primary Author & Presenter)**. 2023. "Advanced Characterization of Common 60/70 Penetration Grade Asphalt Binders Used in Bangladesh". Journal of American Society of Civil Engineers (ASCE). Transportation & Development Institute (T&DI) Paper. Presented by Dr. Javed Bari at the ASCE International Conference on Airfield and Highway Pavements 2023, June 14 17, 2023. Austin, Texas, USA. **Javed Bari**, M.M.I. Sadi , M.H. Islam, M.A. Iqbal, F. Tabassum. "A Comprehensive Evaluation of the Hatirjheel Water Taxi Service of Dhaka City the Capital of Bangladesh". International Journal of Advanced and Multidisciplinary Engineering Science (IJAMES), January 2020, 3(1): 1-7, USA. January 2020. DOI: 10.5923/j.james.20200301.01.
- **Javed Bari**, Kazi Md Shifun Newaz, Quazi Rokaiya Haque, Md. Nawfal Ahmed, Faria Tabassum. "Development of a School Zone Road Safety Risk Rating System for Dhaka the Capital City of Bangladesh". International Journal of Traffic and Transportation Engineering (IJTTE), 2019, 8(3): 72-79. USA. December 2019. DOI: 10.5923/j.ijtte.20190803.03.
- **Javed Bari**, S.N. Siddiquey, M. A. Hossain, K. M. S. Newaz, and M. Noshin. "Identification of Black Spots on the first 100 kilometers of the Dhaka-Sylhet Highway (National Highway #2, i.e. N2) of Bangladesh". Proceedings of the 5th International Conference on Engineering Research, Innovation and Education (ICERIE 2019). Shahjalal University of Science and Technology, Sylhet, Bangladesh, January 2019.
- **Javed Bari**, Morshedul Haque Sunny, Sattyjit Kumar Nag, Shakhawat Hossain Tushar, Md. Touhidul Haque. "Development of Sidewalk Condition Index (SCI) of Dhanmondi R/A, Gulshan & Bashundhara R/A of Dhaka City". International Journal of Traffic and Transportation Engineering. (IJTTE), 2018, 7(3): 53-62. USA, July 2018. DOI: 10.5923/j.ijtte.20180703.02.
- Syed Waqar Haider, M. Waseem Mirza, Ashvini K. Thottempudi, **Javed Bari**, and Gilbert Y. Baladi. "Characterizing Temperature Susceptibility of Asphalt Binders Using Activation Energy for Flow". Journal of American Society of Civil Engineers (ASCE). Transportation & Development Institute (T&DI) Paper No. 10.1061/41167(398)48, ISBN 978-0-7844-1167-4, USA, March 2011.
- Syed Waqar Haider, M. Waseem Mirza, Ashvini K. Thottempudi, **Javed Bari**, and Gilbert Y. Baladi. "Effect of Test Methods on Viscosity Temperature Susceptibility Characterization of Asphalt Binders for the Mechanistic-Empirical Pavement Design Guide". Journal of American Society of Civil Engineers (ASCE). Transportation & Development Institute (T&DI) Paper No. 10.1061/41167(398)47, ISBN 978-0-7844-1167-4, USA, March 2011.
- **Javed Bari**. "Inputs and Models for Asphalt Rubber Mixes and Binders in MEPDG". South-West MEPDG (Mechanistic-Empirical Pavement Design Guide) User Group Conference (comprised of ten U.S. State DOTs and AASHTO), Las Vegas, Nevada, USA. March 23-24, 2009.
- **Javed Bari**. "ADOT's Mechanistic-Empirical Pavement Design Guide Implementation". Arizona Pavement, Materials & Transportation Conference, Tempe, Arizona, USA. February 3, 2009.
- **Javed Bari**. "ADOT's Mechanistic-Empirical Pavement Design Guide Implementation". Proceedings of the Arizona Pavement, Materials & Transportation Conference, Tempe, Arizona, USA. February 3, 2009.
- **Javed Bari** and M.W. Witczak. "New Predictive Models for the Viscosity and Complex Shear Modulus of Asphalt Binders for Use with the Mechanistic-Empirical Pavement Design Guide". Transportation Research Record No. 2001, pp. 9-19. Transportation Research Board, National Research Council, Washington, DC, USA, 2007.

- **Javed Bari** and M.W. Witczak. "Development of a New Revised Version of the Witczak E\* Predictive Model for Hot Mix Asphalt Mixtures." Journal of the Association of Asphalt Paving Technologists (AAPT), Vol. No. 75, pp. 381-423. White Bear Lake, MN, USA, 2006.
- **Javed Bari** and M.W. Witczak. "Evaluation of the Effect of Lime Modification on the Dynamic Modulus Stiffness of Hot-Mix Asphalt: Use with the New Mechanistic-Empirical Pavement Design Guide." Transportation Research Record No. 1929, pp. 10-19. Transportation Research Board, National Research Council, Washington, DC, USA, 2005.
- **Javed Bari**. "Effect of Lime Modification on Dynamic Modulus Stiffness of HMA for Use with the New NCHRP 1-37A M-E Pavement Design Guide Procedures". Arizona Institute of Transportation Engineers Annual Conference, Tempe, Arizona, USA. April 27, 2005.
- **Javed Bari**. "Effect of Lime Modification on Dynamic Modulus Stiffness of HMA for Use with the New NCHRP 1-37A M-E Pavement Design Guide Procedures". Proceedings of the Arizona Institute of Transportation Engineers (AZITE), March 2005. Won the Best AZITE Graduate Transportation Paper Award in 2005.
- Dean T. Kashiwagi, **Javed Bari**, and Bevan Sullivan. "Application of Performance Based System in the Pavement Contracting". Associated Schools of Construction (ASC), Proceedings of the 39<sup>th</sup> Annual Conference, pp. 303-314, Clemson, South Carolina, April 8-12, 2003. Nominated as ASC 2003 best paper.

### **Research / Project Reports:**

- John Willsie, **Javed Bari** and Rafiq Sarkar. "Evaluation Report: Final Performance Evaluation of the Bangladesh Agricultural Infrastructure Development Program (BAIDP)". USAID. June 2019.
- **Javed Bari** and Md. Sayeedur Rahman. "Impact Evaluation Study for the Iswardi Export Processing Zone, Phase-2". Project Final Report submitted to Implementation Monitoring and Evaluation Division, Sher-e-Bangla Nagar, Dhaka-1207, Ministry of Planning, Government of the People's Republic of Bangladesh. May 2018.
- Kamil E. Kaloush, Aleksander Zborowski, **Javed Bari**, Krishna P. Biligiri, and Maria C. Rodezno. "Performance Evaluation of Asphalt Rubber Mixtures in Arizona Two Guns and Jackrabbit Projects". Arizona Department of Transportation Research Report. Arizona State University, Tempe, AZ, USA, March 2006.
- M.W. Witczak and **Javed Bari**. "Flow Number (Fn) and Flow Time (Ft) Test Database". Research Report. Task C (Field Validation of the Simple Performance Test), NCHRP 9-19 Project (Superpave Support and Performance Models Management), National Cooperative Highway Research Program. Arizona State University, Tempe, Arizona, USA, December 2004.
- M.W. Witczak and **Javed Bari**. "Development of a Master Curve (E\*) Database for Lime Modified Asphaltic Mixtures". National Lime Association (NLA) Research Report. Arizona State University, Tempe, AZ, USA, July 2004.
- M.W. Witczak, **Javed Ba**ri, and Andres Sotil. "Dynamic Modulus (E\*) Test and Master Curve Database of HMA Mixtures". Research Report. Task C (Field Validation of the Simple Performance Test), NCHRP 9-19 Project (Superpave Support and Performance Models Management), National Cooperative Highway Research Program. Arizona State University, Tempe, Arizona, USA, June 2004.
- M.W. Witczak, **Javed Bari**, and Andres Sotil. "Dynamic Modulus (E\*) Test and Master Curve Database of Arizona HMA Mixtures". Research Report. Project 3 (ADOT AC Mix Stiffness

- Characterization Database), Arizona Department of Transportation (ADOT) Project No. SPR-402 (Development of Performance Related Specifications for Asphalt Pavements in the State of Arizona). Arizona State University, Tempe, Arizona, USA, June 2004.
- Kamil E. Kaloush, A.J. Zborowski, A. Sotil, **Javed Bari**, M.C. Rodezno, K.P. Biligiri. "Performance evaluation of asphalt rubber mixtures in Alberta". Arizona State University, Tempe, Arizona, USA. 2004.
- M.W. Witczak and **Javed Bari**. "An Evaluation of the Probable Aging Effects of Plant Mixtures Used in the NCHRP 9-19 Project". Research Report. NCHRP 9-19 Project (Superpave Support and Performance Models Management), National Cooperative Highway Research Program. Arizona State University, Tempe, Arizona, USA, February 2004.
- M.W. Witczak and **Javed Bari**. "Standard Procedure for Achieving Target Air Void Content of Gyratory HMA Specimens (Provisional Protocol)". Research Report. Subtasks C4 through C6 (Field Validation of the Simple Performance Test), NCHRP 9-19 Project (Superpave Support and Performance Models Management), National Cooperative Highway Research Program. Arizona State University, Tempe, Arizona, USA, September 2002.
- M.W. Witczak and **Javed Bari**. "Validation Analysis: MnRoad Plant Mixtures Dynamic Modulus (E\*) Test Data". Subtask C5 Report, NCHRP 9-19 Project (Superpave Support and Performance Models Management), National Cooperative Highway Research Program. Arizona State University, Tempe, Arizona, USA, May 2002.
- **Javed Bari**. "Comparison of APADS versus MnPave Mechanistic-Empirical Design Procedures". Independent Research Report. Arizona State University, Tempe, Arizona, USA, April 2002.
- M.W. Witczak, **Javed Bari**, and M. M. Quayum. "Sensitivity of Simple Performance Test: Dynamic Modulus (E\*)". Subtask C4b Report, NCHRP 9-19 Project (Superpave Support and Performance Models Management), National Cooperative Highway Research Program. Arizona State University, Tempe, Arizona, USA, December 2001.
- M.W. Witczak, **Javed Bari**, and M. M. Quayum. "Utilization of Full Gyratory Samples: Dynamic Modulus (E\*)". Subtask C4c Report, NCHRP 9-19 Project (Superpave Support and Performance Models Management), National Cooperative Highway Research Program. Arizona State University, Tempe, Arizona, USA, December 2001.
- M.W. Witczak, **Javed Bari**, Felix Doucet, and M. M. Quayum. "Comparison of Dynamic Complex Modulus Tests in Repeated Load Beam Flexure and Uniaxial Compression Modes". Subtask C4e Report, NCHRP 9-19 Project (Superpave Support and Performance Models Management), National Cooperative Highway Research Program. Arizona State University, Tempe, Arizona, USA, October 2001.
- M. W. Witczak and **Javed Bari**. "ADOT Asphalt Cement Binder Characterization Database Volume II". Supplementary to Task 2 Report, Arizona Department of Transportation Project No. SPR-402 (Development of Performance Related Specifications for Asphalt Pavements in the State of Arizona). Arizona State University, Tempe, Arizona, USA, March 2001.
- M. W. Witczak, **Javed Bari**, Kamil E. Kaloush, and Terhi K. Pellinen. "ADOT Asphalt Cement Binder Characterization Database". Task 2 Report, Arizona Department of Transportation Project No. SPR-402 (Development of Performance Related Specifications for Asphalt Pavements in the State of Arizona). Arizona State University, Tempe, Arizona, USA, December 2000.
- **Javed Bari**. "Investigation of the rheological properties of typical asphalt binders used in Arizona". Arizona State University, Tempe, Arizona, USA, December 2000.

### **Recent Research Grants**

 "Characterization of Common Asphalt Binders Used by the Roads and Highways Department of Bangladesh Government to Develop a Strategy to Implement the Performance Grade (PG) Specifications in Bangladesh"

Principal Investigator: Javed Bari

Collaboration Partner: Bangladesh Road Research Lab (BRRL).

Fund Type: NSU Research Fund

Fund Amount: BDT 2,50,000.00 (Taka Two lakh fifty thousand only)

**Duration:** July 2019 – September 2023

2. "Characterization of Recycled Plastic-Modified Asphalt Binders for Using in Flexible Pavements

of Bangladesh"

Principal Investigator: Javed Bari

Collaboration Partner: Bangladesh Road Research Lab (BRRL).

Fund Type: NSU Research Fund

Fund Amount: BDT 2,50,000.00 (Taka Two lakh fifty thousand only)

**Duration:** July 2019 – September 2023

### **Review of Peer-reviewed Journal Papers:**

- Reviewed paper: "Innovative Data Collection and Processing Methods for Mapping Liberian Roads", paper submitted for publication in Transportation Research Record (TRR), Transportation Research Board (TRB), 2019. TRR is a SCOPUS-indexed journal.
- 2. Reviewed paper: "Insights and Findings Following 11 Years of Test Road Exploitation", paper submitted for publication in Sustainability, 2019. Sustainability is a SCOPUS-indexed journal.
- 3. Reviewed paper: "A-VTS Model of Bitumen Viscosity Transformed and Made Continuous Across Families of Grades", paper submitted for publication in International Journal of Pavement Engineering (IJPE), 2018. IJPE is a SCOPUS-indexed journal.

## **Ongoing Research Projects:**

- Identification and Traffic Condition Analysis of the Most Hazardous Intersections of All Major Types of Intersection of Dhaka City.
- Evaluation of Pedestrian Safety in Dhaka City.
- Analysis of Roadway Infrastructure Management Using iRAP Protocols to Ensure Road Safety of Critical Intersections of the Major Road Corridors of Dhaka City.
- Railway Level Crossing Safety Status in Dhaka.
- Analysis of bus management system of Dhaka City.
- Develop a strategy to implement Performance Grade Specifications of asphalt in Bangladesh.

## **University Responsibilities:**

March 2019 - Present: Dean, School of Engineering and Physical Sciences

March 2019 - Present: Member of the NSU Syndicate

July 2019 - Present: Convener, NSU Code of Conduct Review Committee

March 2014 - June 2017: Chair of the Dept. of Civil and Environmental Engineering

March 2014 - June 2017: Member of the NSU Syndicate

January 2014 - Present: SEPS Strategic Planning Committee - Member Secretary

January 2014 - Present: SEPS Curriculum Committee - Member Secretary

January 2014 - Present: CEED Lab Development Committee - Member

December 2014 - Present: CEED Departmental Promotion Committee - Member

October 2013 - Present: NSU ABET Accreditation Committee - Member (resource person for Task 2)

October 2013 - Present: NSU Strategic Planning Committee - Member

June 2012 - August 31, 2013: Director, South Asian Disaster Management Center (SADMC),

IUBAT-International University of Business Agriculture and Technology, Dhaka

June 2012 - August 31, 2013: Convenor, Committee to Improve the English Language Competency of Civil Engineering Students, IUBAT, Dhaka

January 2012 - August 31, 2013: Convenor, Task Force on Establishing a Graduate Program (MS and PhD) in Engineering (Civil, Mechanical, CSE and EEE), IUBAT, Dhaka

January 2012 - August 31, 2013: Convenor, Annual Faculty Activity Report (AFAR) Committee, IUBAT, Dhaka

December 2011 - August 31, 2013: Chair, Publication Reward System Committee (PRSC), IUBAT, Dhaka

August 2011 - December 2011: Chair, Convocation Publication Committee, IUBAT, Dhaka January 2011 - August 31, 2013: Member (IUBAT representative) of Bangladesh Government's Disaster Management Training and Awareness Task Force (DMTATF) formed by the Department of Disaster Management.

## **Community Responsibilities:**

2005-2010: Co-Founder, Director and Teacher of "Shikor Bangla Language and Culture School", Arizona State University, Arizona, USA

2000-2010: Co-Founder, two-term President and Executive Member of "Bangladesh Theatre of Arizona" (BTA), Arizona, USA

1987-Present: Co-Founder and Member of "Forum-86" of BUET'sH.S.C. Batch of 1986.

1988-1990: Member of "Young Writers' Forum", Dhaka

1985-1990: Vice-President and Executive Member of Onirban Youth Forum, Dhaka

1985-1987: President of "Dhaka Science Club", Dhaka Consultancy

## **Selected Experiences as Consultant:**

February 16, 2023 to June 14, 2023

## In-depth Monitoring Study of a road project of the Roads and Highway Department (RHD) on behalf of the Implementation, Monitoring & Evaluation Division (IMED) of the Bangladesh Government

Project Description:

Name - Kishoreganj-Karimganj-Chamraghat District Highway Construction with Proper Levelling of Chaikna-Yashodal-Chauddshat Bazar Link Road Project;

Project Budget – BDT 73,100 Million;

Components – Reconstruction, Widening, Rehabilitation and Maintenance of infrastructures (roads, bridges and culverts) to support the smooth connectivity of road network.

Responsibilities:

- Worked as the Team Leader of the Monitoring team, for the evaluation of IMED.
- As the Team Leader, led the team of consultants comprising engineers, statisticians, sociologists, environmentalists and other technical and non-technical members of the team.
- Ensured timely completion of the deliverables.

#### August 16, 2022 to January 15, 2023

## Performance Audit Consultant, The World Bank and Local Government Engineering Department (LGED)

Project Description:

Name - RTIP-II AF (Second Rural Transport Improvement Project- Additional Financing);

Area - 18 districts;

Project Budget - US\$ 240 Million;

Components - Rehabilitation and maintenance of rural infrastructures (roads and bridges) to support the smooth connectivity of road network in rural areas.

Responsibilities:

- Worked as the Team Leader of the Performance Audit Consultants, for the final evaluation of the World Bank financed RTIP-II AF project implemented by the LGED.
- As the Team Leader, led the team of consultants comprising auditors, engineers, sociologists, environmentalists and other technical and non-technical members of the team.
- Ensured timely completion of the deliverables.

## March 1, 2019 to June 30, 2019

Consultant, USAID

Project Description:

Area- Greater Jashore and Barisal area;

Budget- US\$50 Million;

Components- 100km Roads, 10 Market Centers, 10 Collection Centers, & 1,000 ha irrigation/drainage-improved land.

Responsibilities: Worked as a lead Civil Engineer for the final evaluation of the BAIDP (Bangladesh Agricultural Infrastructure Development Program) of USAID, US Government.

### July 23, 2014 to October 31, 2017

### Short-term Consultant (STC), The World Bank

Project Description:

Name- RTIP-II (Second Rural Transport Improvement Project);

Area- 26 districts:

#### Project Budget- US\$417 Million;

Components- Construction of 820km roads (149 contracts), Maintenance of 4,428km roads (464 contracts), Construction of total 3,413m length of bridges (34 contracts), Construction of 33 Growth Center Markets, Dredging of 3 (44km) Waterways, 3 Road Safety components and 27 institutional capacity building components.

### Responsibilities:

- Worked as a key World Bank Task Team member (Transportation Engineering) of the RTIP-II and closely worked with LGED and project consultants regarding timely accomplishment of all those components.
- Worked closely with BUET on developing and finalizing the new Rural Road Safety Manual, Rural Road Safety Audit Manual and Road Design Manual of LGED, on behalf of the World Bank.
- Worked as a key World Bank Task Team member for preparing the new IDA-funded PforR program titled "Support for Rural Bridges" (SupRB) now being implemented by LGED.

# June 16, 2008 to June 30, 2011 Co-Principal Investigator (Consultant), Michigan State University, USA Project Description:

"Implementation of Superpave Binder and Asphalt Mix Specifications to Improve Pavement performance in Pakistan Project" under the Joint USA - Pakistan Science and Technology Cooperative Program conducted jointly by the Michigan State University, USA and the University of Engineering and Technology, Lahore, Pakistan. Budget: US\$ 600,000. www.msu.edu Responsibilities:

- Developed detailed training program on advanced asphalt binder and mix testing, and pavement materials characterizations, and provided technical advice.
- Worked on data analysis and technology transfer.