

CURRICULUM VITAE

Laith Tashman, Ph.D., PMP

Address

Department of Civil Engineering
University of Jordan
University District, Amman
Tel: +962-799045101, Email: LTASHMAN@hotmail.com

EDUCATION

- Ph.D. Civil Engineering (December 2003), (GPA: 4.0), Texas A&M University, College Station, Texas, U.S.A.
- M. S. Civil Engineering (December 2000), (GPA: 4.0), Washington State University, Pullman, Washington, U.S.A.
- B. S. Civil Engineering (February 1999), (GPA: 3.6), First Class Honor, University of Jordan, Amman, Jordan.

PROFESSIONAL EXPERIENCE

- Associate Professor, Department of Civil & Environmental Engineering, University of Jordan, Amman, Jordan (10/11 – Present).
- Visiting Scholar, Department of Civil & Environmental Engineering, University of Wisconsin, Madison, USA (1/11 – 12/11).
- Assistant Professor, Department of Civil & Environmental Engineering, University of Jordan, Amman, Jordan (09/07 – 9/11).
- Assistant Professor, Department of Civil & Environmental Engineering, Washington State University, Pullman, Washington, U.S.A., (01/04 – 08/07).
- Associate Director and Co-Founder of Washington Center for X-Ray Tomography and Imaging Technology, Pullman, Washington, U.S.A., (06/04-08/07).
- Associate Director, Washington Center for Asphalt Technology, Pullman, WA, USA, (01/04-08/07).
- Graduate Research Assistant, Department of Civil Engineering and Texas Transportation Institute, Texas A&M University, College Station, Texas, U.S.A., (01/03–12/03).
- Graduate Research Assistant, Department of Civil & Environmental Engineering, Washington State University, Pullman, Washington, U.S.A., (6/99 – 12/02).
- Mixture Laboratory Supervisor, Washington Center for Asphalt Technology, Washington State University, Pullman, Washington, U.S.A., (2/00 – 05/02).
- Site Engineer and Quality Control Manager, TAC Group, Amman, Jordan (1999).
- Structural Engineer Trainee, Byrom Clark Roberts, Manchester, United Kingdom (6/98 - 9/98).

HONORS AND AWARDS

- Marquis Who's Who in the World, 24th and 27th Edition, (2007 & 2010).
- Marquis Who's Who in America (2007 & 2010).
- Marquis Who's Who of Emerging Leaders, 1st Edition, (2007).
- Marquis Who's Who in Science and Engineering, 8th and 9th Edition, (2006 & 2007).
- Marquis Who's Who in American Education, 7th and 8th Edition, (2007 & 2008).
- Association of Asphalt Paving Technologists Scholarship, Lexington, Kentucky, U.S.A., (2003).
- Senator of the year, Graduate and Professional Student Association, Washington State University, Pullman, Washington, U.S.A., (April, 2002).
- Walter J. Emmons Award for the best journal paper on asphalt paving technology, Association of Asphalt Paving Technologists in Clear Water, Florida, U.S.A., (March, 2002).
- NAPA Research Education Foundation Scholarship, Moscow, Idaho, U.S.A., (March, 2002).
- John Orsborn Outstanding Graduate Student Award, Department of Civil & Environmental Engineering, Washington State University, Pullman, Washington, U.S.A., (May, 2001).
- Morris K. Snyder Award, Department of Civil & Environmental Engineering, Washington State University, Pullman, Washington, U.S.A., (January, 2001).
- First Class Honors in the Civil Engineering Class of 1999, ranking first among 153 students, University of Jordan, Amman, Jordan (June, 1999).

AFFILIATIONS

- Jordan Green Building Council (5/10-Present)
- United States Green Building Council (3/10-Present)
- The Association of Asphalt Paving Technologists (04/04 – present).
- Washington Asphalt Paving Association (01/04 – 12/08).
- The Honor Society of Phi Kappa Phi (01/04 – Present).
- American Society of Civil Engineers (ASCE), Associate Member (11/99 – Present).
- Jordan Engineering Association (2/99 - Present)

SIGNIFICANT PROJECTS

Sponsor/Owner	Role/ Responsibilities	Project Title	Status	Amount (USD)	Dates
FHWA	Research Associate through MARC	E1c-1: Warm Mixes	Complete	1 million	01/11-03/12
	Research Associate through MARC	E1b-1: Rutting of Asphalt Binders	Complete		01/11-12/11
	Research Associate through MARC	E1c-2: Improvement of Emulsions' Characterization and Mixture Design for Cold Bitumen Applications	Complete		01/11-03/12
	Research Associate through MARC	VP2a: Mixture Design to Enhance Safety and Reduce Noise of HMA	Complete		01/11-12/11
MPHW	Primary Investigator	Application of New and Green Technologies in Highway Construction/Jordan	Complete	Est. 550,000	1/10-12/11
WSDOT	Primary Investigator	Development of a Tack Coat Protocol	Complete	32,000	09/05 - 08/06
FHWA	CO-PI	Effect of Superpave Gyratory Compactor and Specimen Geometry on the Air Void Distribution and the Mechanical Response of HMA	Complete	36,000	01/05 - 01/07
FHWA	Primary Investigator	Dynamic Modulus Test – Laboratory Evaluation and Future Implementation in the State of Washington	Complete	200,000	01/05-1/09
WSU	Primary Investigator	Improving the Homogeneity of Air Void Distribution in SGC HMA Specimens	Complete	20,000	08/04 - 08/05

MARC: Modified Asphalt Research center, University of Wisconsin-Madison, USA.

MPWH: Ministry of Public Works and Housing, Jordan

WSDOT: Washington State Department of Transportation, U.S.A.

FHWA: Federal Highway Administration, U.S.A.

WSU: Washington State University, U.S.A.

SERVICE

Consulting

- Ministry of Public Works and Housing, Jordan
- Greater Amman Municipality, Jordan
- Washington State Department of Transportation, WA, U.S.A.
- CH2MHILL, U.S.A.
- Inland Asphalt Co, WA, U.S.A.
- Department of Civil Engineering, Louisiana State University, U.S.A.

National and International Committees

- Co-Founder and member of the “Improving the Use of Asphalt Technology in Jordan” committee/MPHW (2010-Present).
- Member of the MPWH subcommittee for the SuperPave Technology in Jordan (2010-Present).
- Member of the MPWH subcommittee for the use of Warm Mix Asphalt in Jordan (2010-Present).
- Member of the Technical Committee for the Middle East Society of Asphalt Technologists (2009-Present).
- Member of the MPWH committee for Bridges and Highways (2009-Present).
- Member of the TRB Committee AFK50 - Characteristics of Bituminous Paving Mixture to Meet Structural Requirement, (2006-2009).
- Member of the AAPT Emmons award committee (2005-2008).
- Member of TRB Committee AFS50 (Modeling Techniques in Geomechanics), (2005-2008).
- Member of the ASCE Geo-Institute Pavement Committee (2004-Present).
- Member of the Technical Committee on Constitutive Modeling of Asphaltic Materials, International Society for Asphalt Pavement (2004-Present).
- Member of the ASCE Highway Pavement Committee (T&DI) (2004-Present).
- Member of the Advanced Models Committee AFK50(1)-Subcommittee of the TRB Characteristics of Bituminous Paving Mixture to Meet Structural Requirement AFK50 (2004-Present).

Session and Symposium Organizer and Co-organizer

- Session organizer of the 1st Meeting and Technical Conference of the Middle East Society of Asphalt Technologists in Beirut, Lebanon (2010).
- Session organizer of the International Conference on Advanced Characterization of Pavement and Soil Engineering Materials in Athens, Greece (2007).
- Session organizer of the GeoDenver2007 ASCE conference and editor of the GSP 169 (2007). Soil and Material Inputs for Mechanistic-Empirical Pavement Design. Proceedings of the GeoDenver 2007 Conference held in Denver, Colorado, February 18-21, 2007. ASCE

Geotechnical Special Publication No. 169. Editors: Erol Tutumluer, **Laith Tashman**, and Halil Ceylan.

- Session organizer of GeoFrontier2005 and editor of the GSP 130 (2005). Advances in Pavement Engineering, proceedings of the Pavement Symposium at Geo-Frontiers Conference, held in Austin on January 25, 2005, ASCE Geotechnical Special Publication Number 130. Editors: Charles Schwartz, Erol Tutumluer, and **Laith Tashman**.
- Session Chair, Mechanics of Flexible Pavements Symposium, sponsored by Inelastic Committee of the Engineering Mechanics Division, and the Pavement Committee of the Geo-Institute, *Engineering Mechanics Conference, EM2004*, University of Delaware, DE (2004).
- Manager of PAV_NET server, an international email list-server for pavement engineering (2004-2007).

Journal Reviewer

- International Journal of Pavement Engineering
- International Journal of Geomechanics
- Journal of Road Materials and Pavement Design
- National Science Foundation
- Journal of Zhejiang University
- ASCE Journal of Materials in Civil Engineering.
- Mechanics of Materials.
- Journal of the Transportation Research Board.
- ASCE Journal of Performance of Constructed Facilities.
- ASTM Journal of Testing and Evaluation.
- International Journal of Plasticity.
- Jordan Journal of Civil Engineering.

Computer Skills

- Excel, Word, PowerPoint; Microsoft Office
- Primavera; Project Management
- MathCad; Mathematical Software
- AutoCad; Engineering Drawing
- Visual Basic; Programming Language
- 2002 Design Guide; New Pavement Design Guide
- EverStress 5.0; Pavement Stress Program,
- Image Pro-Plus 5.0; Image Analysis/Processing
- Minitab; Statistical Software

TEACHING

University Courses Taught by Laith Tashman

- Methods of Construction and Maintenance for Highways (University of Jordan)
- Pavement Design and Analysis (University of Jordan)
- Pavement Design and Analysis for Graduate Students (University of Jordan)
- Pavement Laboratory (University of Jordan)
- Highway Design for Graduates (University of Jordan)
- Highway Engineering (Washington State University)
- Highway Materials Engineering (Washington State University)
- Highway Materials Laboratory (Washington State University)
- Advanced Characterization of Highway Materials (Washington State University)

Short Courses and Workshops Offered by Laith Tashman

- Superpave Training Workshop: a training course on the Superpave technology- testing, specifications, and implementations. Offered for the Ministry of Public Works and Housing/Jordan (2010).
- Superpave Training Workshop: a training course on the Superpave technology- testing, specifications, and implementations. Washington Center for Asphalt Technology, Washington State University, Pullman, WA. Taught annually in February/March jointly with Dr. Papagiannakis.
- Instructor for laboratory testing, Washington Center for Asphalt Technology annual workshop, Washington State University, Pullman, Washington (February, 2002).

Short Courses and Workshops Attended by Laith Tashman

- LEED 300, focused on Green Technologies, (March 2010).
- Project Management Professional (PMP), (June 2009)
- Lloyd's Register Quality Assurance, ISO9000 Series, Lead Auditor Training (Nov 2006).
- NCAT Professor Training Workshop, Auburn, AL, (June 2005).

Graduate Students Advised/Co-advised

- *Nima Roohi, M.S. (Co-Advisor)
- Pouya Teymourpour, M.S. (Co-Advisor)
- Pertina Johannes, Ph.D. (Co-Advisor)
- Andrew Hanz, Ph.D. (Co-Advisor)
- Tim Miller, Ph.D. (Co-Advisor)
- *Aaron Coenen, Ph.D. (Co-Advisor)
- *Omar Jabari, M.S. (Major Advisor)

- *Taher Mahmoud, M.S. (Committee Member).
- *Ibraheem Awad, M.S. (Committee Member).
- *Brian Pearson, M.S. (Major Advisor)
- *Senthilmurugan Thyagarajan, Ph.D. (Major Advisor)
- *Muthukumaran, M.S. (Major Advisor)
- Ahmad Abu Abdo, Ph.D. (Committee Member)
- *Mutasem Shehadeh, Ph.D (Committee Member)
- *Sreekanth Akarapu, M.S. (Committee Member)
- *Alok Anand, M.S. (Committee Member)
- *Jingjuan Li, M.S. (Committee Member)
- *Michael Bracher, M.S. (Committee Member)
- * Graduated

PUBLICATIONS

Refereed Journal Papers

1. Miller, T., Swiertz, D., **Tashman, L.**, Tabatabaee, N., Bahia, H. (2012). "Characterization of Asphalt Pavement Surface Texture". *Journal of the Transportation Research Board 91st Annual Meeting*, DC. (**Accepted for Publication**).
2. **Tashman, L.** and Elangovan, M. (2012). "Dynamic Modulus of HMA and its Relationship to Actual and Predicted Field Performance using MEPDG". *ASCE Journal of Performance of Constructed Facilities*, (**In Print, Available online**).
3. Roohi, N., **Tashman, L.**, Bahia, H. (2012). "Internal Structure Characterization of Asphalt Mixture's for Rutting Performance Using Imaging Analysis". *Journal of Road Materials and Pavement Design*, (**In Print, Available online**).
4. Swiertz, D., Johannes, P., **Tashman, L.**, Bahia, H. (2012). "Evaluation of Laboratory Coating and Compaction Procedures for Cold Mix Asphalt". *Submitted for publication at the Journal of the Association of Asphalt Paving Technologists*, (**In Print**).
5. Tashman, L., and Pearson, B. (2011). "Characterization of Stone matrix Asphalt Mixtures". *Submitted for publication at the International Journal of Pavement Engineering* (**In Print, Available online**).
6. Thyagarajan, S., **Tashman, L.**, Masad, E., Bayomy, F. (2010). "The Heterogeneity and Mechanical Response of HMA Laboratory Specimens." *International Journal of Pavement Engineering*, Vol. 11, No. 2, 107-121.
7. **Tashman, L.**, Nam, K., Papagiannakis, T., Willoughby, K., Pierce, L., Baker, T. (2008). "Evaluation of Construction Practices that Influence the Bond Strength at the Interface between Pavement Layers." *ASCE Journal of Performance of Constructed Facilities*, Vol. 22, No. 3, 154-161.
8. **Tashman, L.**, Wang, L., Thyagarajan, S. (2007). "Microstructure Characterization for Modeling HMA Behavior using Imaging Technology." *International Journal of Road Materials and Pavement Design*, Vol. 8, No. 2, 207-238.
9. Masad, E., **Tashman, L.**, Little, D., and Zbib, H. (2005). "Viscoplastic Modeling of Asphalt Mixes with the Effects of Anisotropy, Damage and Aggregate Characteristics." *Journal of Mechanics of Materials*, Vol. 37, issue 12, 1242-1256.
10. **Tashman, L.**, Masad, E., Zbib, H., Little, D., and Kaloush, K. (2005). "Microstructural Viscoplastic Continuum Model for Permanent Deformation in Asphalt Pavements." *Journal of Engineering Mechanics*, ASCE, Vol. 131, No. 1, 48-57.
11. **Tashman, L.**, Masad, E., Little, D., and Zbib, H. (2005). "A Microstructure-Based Viscoplastic Model for Asphalt Concrete." *International Journal of Plasticity*, Vol. 21, No. 9, 1659-1685.
12. **Tashman, L.**, Masad, E., Little, D., Lytton, R. (2004). "Damage Evolution in Triaxial Compression Tests of HMA at High Temperatures," *Journal of the Association of Asphalt Paving Technologists*, Vol. 73, 53 - 87.
13. Peterson, R., Mahboub, K., Anderson, M., Masad, E., and **Tashman, L.** (2004). "Comparing Superpave Gyratory Compactor Data to Field Cores." *Journal of Materials in Civil Engineering*, ASCE, Vol. 16, No. 1, 78-83.
14. **Tashman, L.**, Masad, E., Crowe, C., Muhunthan, B. (2003). "Simulation of Fluid Flow in Granular Microstructure Using a Non-Staggered Grid Scheme." *International Journal of Computers and Fluids* , Vol. 32, 1299-1323.

15. Peterson, B., Mahboub, K., Anderson, M., Masad, E., and **Tashman, L.** (2003). "Superpave Laboratory Compaction versus Field Compaction." *Transportation Research Record 1832, Journal of the Transportation Research Board*, D.C., 201-208.
16. Saadeh, S., **Tashman, L.**, Masad, E., and Mogawer, W. (2002). "Spatial and Directional Distributions of Aggregates in Asphalt Mixes." *Journal of Testing and Evaluation, American Society for Testing and Materials, ASTM*, Vol. 30, No. 6, 483-491.
17. Al-Omari, A., **Tashman, L.**, Masad, E., Cooley, A., and Harman, T. (2002). "Proposed Methodology for Predicting HMA Permeability." *Journal of the Association of Asphalt Paving Technologists*, Vol. 71, 30-58.
18. **Tashman, L.**, Masad, E., D'Angelo, J., Bukowski, J., and Harman, T. (2002). "X-ray Tomography to Characterize Air Void Distribution in Superpave Gyratory Compacted Specimens." *International Journal of Pavement Engineering*, Vol. 3, No. 1, 19 – 28.
19. Masad, E., **Tashman, L.**, Niranjana, S., and Little, D. (2002). "Micromechanics-Based Analysis of Stiffness Anisotropy in Asphalt Mixtures." *Journal of Materials in Civil Engineering*, ASCE, Vol. 14, No. 5, 374 - 383.
20. **Tashman, L.**, Masad, E., Peterson, B., and Saleh, H. (2001). "Internal Structure Analysis of Asphalt Mixes to Improve the Simulation of Superpave Gyratory Compaction to Field Conditions." *Journal of the Association of Asphalt Paving Technologists*, Vol. 70, 605-645.
21. Masad, E., Olcott, D., White, T., and **Tashman, L.** (2001). "Correlation of Imaging Shape Indices of Fine Aggregate with Asphalt Mixture Performance." *Transportation Research Record 1757, Journal of the Transportation Research Board*, D.C., 148 – 156.

Conference Refereed Papers

1. Teymourpour, P., Bahia, H., **Tashman, L.** (2012). "Critical Considerations in Mixture Design of Warm Mix Asphalt". *Presented at the Transportation Research Board 91st Annual Meeting. (Accepted for Poster Presentation)*.
2. Thyagarajan, S., **Tashman, L.**, Nam, K. (2007). "The Heterogeneity of Air Void Distribution in HMA Superpave Gyratory Specimens." *International Conference on Advanced Characterization of Pavement and Soil Engineering Materials*, Athens, Greece.
3. **Tashman, L.**, Masad, E., Saadeh S., Little, D. (2004). "The Influence of Aggregate Shape Properties on the Parameters of A Viscoplastic Model for HMA." *Proceedings of the 17th Engineering Mechanics Conference*, ASCE, University of Delaware, Newark, DE.
4. **Tashman, L.**, Masad, E., Zbib, H., and Little, D., Kaloush, K. (2002). "Anisotropic Viscoplastic Continuum Damage Model for Asphalt Mixes," *Proceedings of the 15th Engineering Mechanics Conference*, ASCE, Columbia University, NY. Published in the *ASCE Geotechnical Special Publication No. 123, Recent Advances in Materials Characterization and Modeling of Pavement Systems*, Editors, Tutumluer, E., Najjar, Y., Masad, E.
5. Masad, E., **Tashman, L.**, and Little, D. (2002). "A Continuum Damage Framework To Validate A Unified Method Of Aggregate Classification Based On Image Analysis," *Proceedings of the 10th Symposium of the International Center for Aggregate Research*, Baltimore, MD. (CD Publications).

Conference Papers and Professional Presentations

1. Smadi, M., Hyari, I., **Tashman, L.** (2010). "Feasibility of Using SuperPave Mix Design in Jordan". Presented at the Jordan Highway Committee Workshop, held in Amman (April, 2010).
2. Pearson, B., **Tashman, L.** (2010). "Characterization of Stone Matrix Asphalt Mixtures and Comparisons to Hot Mix Asphalt". Presented at the 1st Meeting and Technical Conference of the Middle East Society of Asphalt Technologists in Beirut, Lebanon (2010).
3. **Tashman, L.**, Masad, E., Little, D., and Zbib, H. (2006). "A Microstructure-Based Continuum Viscoplastic Model for HMA." *International Conference of Plasticity, Halifax, Canada.*
4. **Tashman, L.**, Masad, E., and Little, D. (2005). "Characterizing Air Void Evolution in Asphalt Concrete using X-Ray Tomography." First Middle East International Conference on Advances in Civil, Mechanical and Material Engineering, University of Jordan, Amman, Jordan.
5. **Tashman, L.**, Masad, E., Little, D., Lytton, R. (2004). "Damage Evolution in Triaxial Compression Tests of HMA at High Temperatures." Presented at the *Association of Asphalt Paving Technologists Annual Meeting*, Baton Rouge, LA.
6. **Tashman, L.**, Masad, E., Little, D., and Zbib, H. (2004). "Identification of Hot Mix Asphalt Permanent Deformation Parameters Using Triaxial Strength Tests and a Microstructure-Based Viscoplastic Continuum Model." *The 83th Annual Meeting of the Transportation Research Board*, Washington, DC.
7. **Tashman, L.**, Masad, E., Zbib, H., and Little, D., (2003). "A Constitutive Model for Permanent Deformation of Asphalt Mixes." *16th Engineering Mechanics Conference*, University of Washington, Seattle, WA.
8. **Tashman, L.**, Masad, E., Zbib, H., and Little, D., (2002). "Continuum Damage Model for Permanent Deformation of Asphalt Mixes," *Engineering Mechanics Conference*, Columbia University, NY.
9. Masad, E., **Tashman, L.**, Zbib, H., and Little, D. (2002). "Anisotropic Viscoplastic Model for Asphalt Mixes with Microstructure Parameters," *Plasticity 2002*, January 3-9, ARUBA.
10. Masad, E., **Tashman, L.**, Saleh, H. (2001). "Evaluation of Air Void Structure in Asphalt Mixes Under Different Compaction Techniques," *The 10th Annual Research Symposium of the American Society for Nondestructive Testing*, Denver, CO.
11. Masad, E., **Tashman, L.**, and Little, D. (2001). "Quantifying Anisotropy in Asphalt Mixtures Using Micromechanics Analysis." *Proceeding of the 2001 ASCE-ASME-SES Joint Applied Mechanics and Materials Summer Conference*, University of California, San Diego, LaJolla, CA, June 27-29, 2001.
12. Masad, E., Olcott, D., White, T., and **Tashman, L.** (2001). "Correlation of Imaging Shape Indices of Fine Aggregate with Asphalt Mixture Performance," *The 80th Annual Meeting of the Transportation Research Board*, Washington, DC.
13. Masad, E., **Tashman, L.**, Peterson, B. Anderson, M., Harman, T., D'Angelo, J., and Bukowski, J. (2000), "Analysis of Asphalt Mixes and Aggregates Using Imaging Technology," *The TRB-FHWA Mixture Expert Task Group Meeting*, September 11 - 13, Indianapolis, IN.

14. Masad, E., **Tashman, L.**, Peterson, B., Harman, T., D'Angelo, J., and Bukowski, J. (2000). "Advances in the Internal Structure Analysis of Asphalt Mixes," *Peterson Asphalt Research Conference, 37th Annual meeting*, Laramie, WY.
15. Masad, E., **Tashman, L.**, Somadevan, N., James, L., and Olcott, D. (2000). "Applications of Imaging Technology to Asphalt Mixes." *6th Annual Oregon Asphalt Conference*, March 10th, Salem, OR.

Technical Reports

1. **Tashman, L.**, Clopotel, C., and Bahia, H. (2011). Ministry of Public Works & Housing Trial Sections Results- Airport Highway. Report submitted for the Jordanian government, Jordan
2. Smadi, M., Hyari, I., **Tashman, L.** (2010). SuperPave HMA Design-19 mm Wearing Course Basalt Mix for Queen Alia International Airport Road. Report submitted for the Ministry of Public Works and Housing/Jordan and Dar Al -Handaseh.
3. Smadi, M., Hyari, I., **Tashman, L.** (2009). Feasibility of Using SuperPave Mix Design in Jordan. Report submitted for the Ministry of Public Works and Housing/Jordan.
4. **Tashman, L.**, Elangovan, M. (2008). Dynamic Modulus Test- Laboratory Investigation and Future Implementation in the State of Washington. Report No. WCAT 07-002, submitted for Washington State Department of Transportation, WA.
5. **Tashman, L.**, Nam, K., Papagiannakis, T. (2007). Evaluation of the Influence of Tack Coat Construction Factors on the Bond Strength between Pavement Layers. WCAT Report No. WCAT 07-001, submitted for Washington State Department of Transportation (WA-RD 645.1), WA.
6. Thyagarajan, S., **Tashman, L.** (2006). Effect of Superpave Gyratory Compactor and Specimen Geometry on the Air Void Distribution and Mechanical Response of HMA. WCAT Report Number WCAT 06-003, prepared for Texas Transportation Institute, TX.
7. Nam, K., Thyagarajan, S., and **Tashman, L.** (2005). Evaluation of HMA Field Cores- City of Tualatin, Oregon. WCAT Report number WCAT 05-01, prepared for CH2MHILL.
8. Masad, E., Little, D., **Tashman, L.**, Saadeh, S., Al-Rousan, T., Sukhwani, R. (2003). *Evaluation of Aggregate Characteristics Affecting HMA Concrete Performance*. Report No. ICAR-203-1, Texas Transportation Institute, Texas A&M University, College Station, TX.
9. Masad, E., and **Tashman, L.** (2001). *Internal Structure Analysis of Asphalt Mixes to Improve the Simulation of Superpave Gyratory Compaction to Field Conditions*. Final Report Submitted to the Federal Highway Administration and the Asphalt Institute, Washington Center for Asphalt Technology, Pullman, WA (WSU/WCAT 01-2), 187 pp.
10. Masad, E., Olcott, D., and **Tashman, L.** (2001). *Correlation of Imaging Shape Indices of Fine Aggregate with Asphalt Mix Performance*. Final Report Submitted to the Federal Highway Administration and the Asphalt Institute, Washington Center for Asphalt Technology, Pullman, WA (WSU/WCAT 01-3), 187 pp.