

Iliya Yut
Assistant Professor in Residence
Department of Civil and Environmental Engineering
University of Connecticut
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EDUCATION

University of Connecticut, Storrs, CT

Ph.D. in Civil Engineering, concentration in Transportation and Urban Engineering (May2012)

University of Minnesota, Minneapolis, MN

M.S in Civil Engineering, concentration in Pavement Materials (June2006)

Saint-Petersburg State University of Architecture and Civil Engineering, Leningrad, USSR

B.S. in Industrial and Civil Engineering, concentration in Steel Design (June 1983)

RESEARCH INTERESTS

Civil infrastructure preservation and rehabilitation, transportation sustainability, advanced construction technologies, alternative cementitious materials, non-destructive spectroscopic testing of construction materials, advanced statistical analysis, numerical modeling

TEACHING INTERESTS

Civil engineering materials, engineering mechanics, surveying, site design, statistics and numerical methods, pavement design, pavement management and rehabilitation, conventional and alternative cementitious materials, transportation sustainability, sustainable infrastructure management

ACADEMIC RESEARCH EXPERIENCE

Assistant Professor in Residence, university of Connecticut

Aug 2012 - Present

Graduate Research Assistant, University of Connecticut

Jan 2009 – Aug 2012

Rheological and Spectroscopic Evaluation of Aged Polymer-Modified Asphalts

Mechanistic-Empirical Pavement Design Guide Implementation Plan, sponsored by Connecticut Department of Transportation

Forensic Testing and Evaluation of the Long Term Pavement Performance (LTPP) Specific Pavement Studies (SPS-9A) Experiment in Connecticut, sponsored by Connecticut Department of Transportation.

Evaluating Applications of Field Spectroscopy Devices to Fingerprint Commonly Used Construction Materials, sponsored by the Second Strategic Highway Research Program (SHRP 2) of National Academy of Science

Establishing Default Dynamic Modulus Values for New England, sponsored by New England Transportation Consortium

Recycling Asphalt Pavements Containing Modified Binders, sponsored by New England Transportation Consortium

Investigation of Pavement Preservation Strategies in Connecticut, independent research

Graduate Research Assistant, University of Minnesota

Aug 2004 – Jul 2006

Implementation of the MEPDG for New and Rehabilitated Pavement Structures for Design of Concrete and Asphalt Pavements in Minnesota, sponsored by Minnesota Department of Transportation

Adaptation of the 2002 Guide for the Design of Minnesota Low-Volume Portland Cement Concrete Pavements, sponsored by Minnesota Department of Transportation

Investigation of Deterioration of Stainless Steel Dowel Tubes under Repeated Loading, sponsored by Minnesota Department of Transportation

TEACHING EXPERIENCE**Assistant Professor in Residence**

CE4750 – Pavement Design (combined undergrad and grad level) Fall 2012

CE2410 – Geomatics and Spatial Measurements (undergraduate level) Fall 2012

CE4410 - Computer Aided Site Design (undergraduate level)
Spring 2013

Lecturer, University of Connecticut

CE4570/5570 – Bituminous Materials (combined undergraduate and grad level) Fall 2011

Teaching Assistant, University of Connecticut

CE5580 – Pavement Design (graduate level) Fall 2010

CE3520 – Civil Engineering Materials (undergraduate level) Spring 2009

ENGINEERING EXPERIENCE

Engineer-in-Training, John Emery Geotechnical Engineers Limited, Toronto, Ontario 2007-2008

2007 Geotechnical Investigation Program, sponsored by Transportation Department, Region of Waterloo, Ontario

Bridge Structures and Groundside Roads Condition Inspection, Toronto-Lester B. Pearson International Airport, sponsored by Greater Toronto Airports Authority

MTO Complete Network Roughness Measurements, sponsored by Ministry of Transportation, Ontario

CONSULTING AND APPLIED RESEARCH EXPERIENCE

Engineering Associate, Applied Pavement Technology Incorporated, Urbana, Illinois 2006-2007

Guide for the Development and Use of Condition Assessment Systems for Transportation Assets, NCHRP Project 20-7/Task 206 sponsored by National Cooperative Highway Research Program

Caltrans Network Level Analysis, sponsored by California Department of Transportation.

Redesign of the MDOT Pavement Management System, sponsored by Mississippi Department of Transportation.

Mechanistic-Empirical Pavement Design Guide Implementation Plan, sponsored by South Dakota Department of Transportation.

Skid Resistance Relationships between Ribbed and Smooth Tires, Sponsored by Ohio Department of

REFEREED JOURNAL PUBLICATIONS

- Yut I., Zofka A., and Bernier A., Correlation between Rheology and Chemical Composition of Aged Polymer-Modified Asphalts, **In review**, International Journal of Pavement Engineering, submitted on May 23, 2012
- Yut I. and Zofka A., Fingerprinting of Chemical Admixtures in Fresh Portland Cement Concrete by Portable Infrared Spectrometer, Accepted for publication in *Transportation research Record, Journal of Transportation Research Board*, 2012
- Li J., Zofka A., Yut I., Evaluation of Dynamic Modulus of Typical Asphalt Mixtures in Northeast U.S Region, *Road Materials and Pavement Design*, Vol. 13 (2), 2012
- Yut I., Bernier A., and Zofka A., Development of a Compact Laboratory Aging Procedure for Asphalt Binders, *Accepted for publication in Journal of Association of Asphalt Pavement Technologists*, Vol. 81, 2012
- Bernier A., Zofka A., Yut I., Laboratory Evaluation of Rutting Susceptibility of Polymer-Modified Asphalt Mixtures Containing Recycled Pavements, *Journal of Construction and Building Materials*, Vol. 31, 2012
- Yut I. and Zofka A., Attenuated Total Reflection (ATR) Fourier Transform Infrared (FT-IR) Spectroscopy of Oxidized Polymer-Modified Bitumens, *Applied Spectroscopy*, Vol. 65 (7), 2011
- Zofka A. and Yut I., Alternative Procedure for Determination of Hot Mix Asphalt Creep Compliance, *ASTM Journal of Testing and Evaluation*, Vol. 39 (1), 2011
- Zofka A., Marasteanu M., Khazanovich L., Yut I., Comparison of Data Interpretation Procedures for Indirect Tensile Creep Test for Linear Viscoelastic Materials, *Road Materials and Pavement Design*, Vol. 11 (3), 2010
- Khazanovich L., Yut I., Husein S., Turgeon C., Burnham T., Adaptation of Mechanistic-Empirical Pavement Design Guide for Design of Minnesota Low-Volume Portland Cement Concrete Pavements, *Transportation Research Record, Journal of Transportation Research Board*, Vol. 2087 (7), 2008
- Khazanovich L., Yut I., Tompkins D., Schultz A., Accelerated Loading Testing of Stainless Steel Hollow Tube Dowels, *Transportation research Record, Journal of Transportation Research Board*, Vol. 1947 (10), 2006

SPONSORED RESEARCH REPORTS

- Zofka A., Yut I., Shaw M., Chrysochoou M. et al., Evaluating Applications of Field Spectroscopy Devices to Fingerprint Commonly Used Construction Materials: Final SHRP2 R06 (B) Report, Transportation Research Board of National Academies, **In Press**, 2012
- Mahoney J., Zinke S., DaDalt J., Zofka A., Bernier A., Yut I., Recycling Asphalt Pavements Containing Modified Binders, Final Report NETC 04-1, New England Transportation Consortium, Fall River, Massachusetts, 2011
- Jackson E., Li J., Zofka A., Yut I., Mahoney J., Establishing Default Dynamic Modulus Values For New England, New England Transportation Consortium, Fall River, Massachusetts, 2011
- Velasquez R., Hoegh K., Yut I., Funk N., Cochran G., Marasteanu M., Khazanovich L., Implementation of the MEPDG for New and Rehabilitated Pavement Structures for Design of Concrete and Asphalt Pavements in Minnesota, Final Report MN/RC 2009-06, Minnesota Department of Transportation, St. Paul, Minnesota, 2009
- Yut I., S. Husein, C. Turgeon, and L. Khazanovich, Adaptation of the 2002 Guide for the Design of Minnesota Low-Volume Portland Cement Concrete Pavements, Final Report MN/RC-2007-23, Minnesota Department of Transportation, St. Paul, MN, 2007

Yut I., Tompkins D., Khazanovich L., Shultz A., Investigation of Deterioration of Stainless Steel Dowel Tubes Under Repeated Loading, Final Report MN/RC-2006-01, Minnesota Department of Transportation, St. Paul, Minnesota, 2006

CONFERENCE PROCEEDINGS AND PRESENTATIONS

Yut I., Application of 2-D Correlation Spectroscopy to Evaluation of Oxidized Polymer-Modified Asphalts, Invited Presentation, Accepted for 245th ACS National Meeting and Exposition April 7-11, 2013, New Orleans, Louisiana

Yut I. and Zofka A., Effect of Asphalt Oxidation on Performance of LTPP SPS-9 Sections in Connecticut, Accepted for presentation on *TRB 92nd Annual Meeting*, Washington, D.C., January 14, 2013

Yut I. and Zofka A., Evaluation of the Effect of Polymer Modification on Aging Properties of SHRP Core Asphalts, *Presented on 49th Peterson Asphalt Research Conference*, Laramie, Wyoming, July 10-12, 2012

Yut I., Bernier A., Zofka A., Development of a Compact Laboratory Aging Procedure for Asphalt Binders, Accepted for presentation on *2012 Annual Meeting and Technical Sessions of the Association of Asphalt Paving Technologists*, April 4, 2012, Austin, Texas

Zofka A., Chrysochoou M., Yut I., Spectroscopic Evaluation of Recycled Asphalt Pavement Materials, Accepted for presentation on *Geo-Congress 2012*, Oakland CA, March 27, 2012.

Yut I. and Zofka A., Spectroscopic Evaluation of Recycled Asphalt Pavement Materials, Paper 12-1259, *Presented on TRB 91st Annual Meeting*, Washington, DC, January 25, 2012

Yut I. and Zofka A., Fingerprinting of Chemical Admixtures in Fresh Portland Cement Concrete by Portable Infrared Spectrometer, Paper 12-1257, *Presented on TRB 91st Annual Meeting*, Washington, D.C., January 23, 2012

Zofka A., Yut I., Investigation of Rheology and Aging Properties of Asphalt Binder Modified with Coffee Berries, presented at *AFK20 & AFK30 Joint Workshop on Alternative Binders for Sustainable Asphalt Pavements*, *TRB 91st Annual Meeting*, Washington, D.C., January 22, 2012

Yut I., Zofka A., Spectroscopic Evaluation of Recycled Asphalt Pavement Materials, Poster Presentation, New England Asphalt User/Producer Group Annual Meeting, October 6-7, 2010, Providence, RI

Yut I., A. Bernier, and Zofka A., Spectroscopic Evaluation of Recycled Pavement Materials, *Presented on 48th Peterson Asphalt Research Conference*, Laramie, Wyoming, July 11-13, 2011

Yut I., A. Bernier, and Zofka A., Development of an Alternative Laboratory Aging Procedure for Asphalt Binders, *Presented on 48th Peterson Asphalt Research Conference*, Laramie, Wyoming, 11-13 July, 2011

Henault J. W., Yut I., Zofka A., Friction Study on LTPP Sections in Connecticut, *Proceedings, Pavement Evaluation 2010 Conference*, Roanoke, VA, October 25-27, 2010

Yut I., Zofka A., Spectroscopic Evaluation of Oxidative Aging of Polymer-Modified Asphalt Binders: Laboratory Phase, Poster Presentation, New England Asphalt User/Producer Group Annual Meeting, October 6-7, 2010, Saratoga Springs, NY

Zofka A., Chrysochoou M., Shaw M., Mahoney J., Farquharson S., Yut I., Sun S., Zhang X., SHRP 2 R06(B): Evaluating Applications of Field Spectroscopy Devices to Fingerprint Commonly Used Construction Materials, *NDE/NDT for Highways and Bridges: Structural Materials Technology (SMT) 2010*, August 16-20, 2010, New York, New York.

Yut I., Zofka A., and Sun S.-P., Investigation of Oxidative Aging of Polymer Modified Binders by Spectroscopy Methods, *Presented on 47th Peterson Asphalt Research Conference*, Laramie, Wyoming, 12-14 July, 2010

- Yut I., Zofka A., and Sun S.-P., Spectroscopic Evaluation of Polymer-Modified Hot-Mix Asphalt Mixtures, *Presented on 47th Peterson Asphalt Research Conference*, Laramie, Wyoming, 12-14 July, 2010
- Yut, I., Nener-Plante D., and Zofka A., Preservation of Flexible Pavement in Connecticut, *Proceedings, First International Conference on Pavement Preservation*, Newport Beach, California, April 12-16, 2010
- Yut, I., Investigation of Aging In Polymer Modified Binders by Using Spectroscopy Methods, *Presented on Institute of Transportation Engineers' 6th Annual Student Symposium*, April 7, 2010
- Yut, I., Nener-Plante D., and Zofka A., Preservation of Flexible Pavements in Connecticut: A Case Study, *Presented on 89th TRB Annual Meeting, Transportation Research Board of National Academies*, January 10-14, 2010
- Yut I., Investigation of Oxidative Aging in Polymer Modified Binders by Using Spectroscopy Methods, *Presented on Doctoral Student Research Workshop on Bituminous Materials and Mixtures on 89th TRB Annual Meeting, Transportation Research Board of National Academies*, Washington D.C., January 10-14, 2010
- Zofka A., Yut I., Nener-Plante D., RAP Study for Asphalt Mixtures Used in Connecticut, *II International Conference Environmentally Friendly Roads, ENVIROAD*, Warsaw, Poland, October 15-16, 2009
- Yut, I., Nener-Plante D., and Zofka A., Case Study on Perpetual Pavement in Connecticut, *Presented on the First International Conference on Perpetual Pavements*, Columbus, Ohio, September 30, 2009
- Khazanovich L., Yut I., Tompkins D., Schultz A., Accelerated Loading Testing of Stainless Steel Hollow Tube Dowels, *Presented on 85th TRB Annual Meeting, Transportation Research Board of National Academies*, Washington D.C., January 24, 2006
- Khazanovich, L., Yut I., Tompkins D., Schultz A., The Second Generation of Minnesota Accelerated Loading Facility – Minne-ALF2, *Proceedings, Eighth International Conference on Concrete Pavements*, Colorado Springs, CO, August 15-17, 2005

AWARDS

- Teaching Fellowship**, Department of Civil Engineering, University of Connecticut, Fall 2011
- Doctoral Dissertation Fellowship**, Graduate School, University of Connecticut, Summer 2011
- Pre-doctoral Fellowship**, School of Engineering, University of Connecticut, Spring 2010
- Cum Laude**, B.S. Degree, Civil Engineering Institute of Leningrad, USSR, June 1983

AFFILIATIONS

- Association of Asphalt Pavement Technologists, 2011- Present
- Institute of Transportation Engineers, 2009–Present
- Transportation Research Board of National Academies, 2006-Present
- International Society for Concrete Pavements, 2005-2008