MEHLIKA INANICI

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Education:

Ph.D. in Architecture, University of Michigan, Ann Arbor, MI, 2004.
Major: Environmental Technology (Lighting), Minor: Computer Graphics

Master of Science in Architecture, University of Michigan, Ann Arbor, MI, 2001.
Specialization: Environmental Technology (Lighting)

Doctoral studies, METU Department of Architecture, Ankara Turkey, 1996-1998.
Specialization: Building Science

Master of Science in Building Science, METU, Department of Architecture, Ankara, Turkey, 1995.
Specialization: Thermal Performance

Bachelor of Architecture, METU, Department of Architecture, Ankara, Turkey, 1993.

Academic Appointments:

Associate Professor (September 2011 – present)
University of Washington, Department of Architecture, Seattle, WA.

Core Faculty, Ph.D. Program in the Built Environment (2006 – present)
College of Built Environments, University of Washington, Seattle, WA.

Assistant Professor (September 2005 – 2011)
University of Washington, Department of Architecture, Seattle, WA.

Postdoctoral Research Fellow (2004 – 2005)
Lawrence Berkeley National Laboratory, Building Technologies, Berkeley, CA.

Research / Teaching Assistant (1994 -1998)
METU, Department of Architecture, Ankara, Turkey.

Peer reviewed Publications: [J_{ournal} A_{rticle}], [C_{onference} P_{roceeding}], [T_{echnical} R_{eport}], [T_{hesis}], [D_{issertation}]

Jakubiec A, van den Wymelenberg K, Inanici M, Mahic A. "Accurate Measurement of Daylit Interior Scenes using High Dynamic Range Photography," CIE (International Commission on Illumination) 2016 Lighting Quality and Energy Efficiency Conference, Melbourne, Australia, March 3-5, 2016. [CP]

Inanici M, Brennan M, Clark E. "Spectral Lighting Simulations: Computing Circadian Light," International Building Performance Simulation Association (IBPSA) Conference, Hyderabad, India, 7-9 December, 2015. [CP]

Hashemloo AR, Inanici, M, and Meek C. "GlareShade: A Visual Comfort-based Approach to Occupant-centric Shading Systems," *Journal of Building Performance Simulation*, 2015. DOI: 10.1080/19401493.2015.1058421. [JA]

van den Wymelenberg K and Inanici, M. "Evaluating a New Suite of Luminance-Based Design Metrics for Predicting Human Visual Comfort in Offices with Daylight," Leukos: The Journal of the Illuminating Engineering Society of North America, 2015. DOI: 10.1080/15502724.2015.1062392. [JA]

Inanici M. "Lighting Analysis of Hagia Sophia", Annuals of Hagia Sophia Museum, No. 17, Istanbul, Turkey. December 2014, 128-201. [A]

Van den Wymelenberg K and Inanici M. "A Critical Investigation of Common Lighting Design Metrics for Predicting Human Visual Comfort in Offices with Daylight", Leukos: The Journal of Illuminating Engineering Society of North America, 10(3), 145-164, 2014. [JA]

Inanici, M. "Dynamic Daylighting Simulations from Static High Dynamic Range Imagery using Extrapolation and Daylight Coefficient Methodologies", *International Building Performance Simulation Association (IBPSA) 2013 Conference,* Chambery, France, August 25-28, 2013. [CP]

Kumaragurubaran, V. and Inanici, M. "hdrscope: High Dynamic Range Image Processing Toolkit for Lighting Simulations and Analysis", *International Building Performance Simulation Association (IBPSA) 2013 Conference,* Chambery, France, August 25-28, 2013. [CP]

Van den Wymelenberg K and Inanici M. "Limitations of Common Lighting Metrics for Evaluating Human Visual Comfort in Spaces with Daylight", *Illuminating Engineering Society (IES) 2013 Conference,* Huntington Beach, CA, October 26-29, 2013. [CP]

Tai NC and Inanici M. "Luminance Contrast as Depth Cue: Investigations and Design Applications", *Journal of Computer-Aided Design and Applications*, 9(5), 2012, 691-705. [JA]

Tai NC and Inanici M. "Space Perception and Luminance Contrast: Investigation and Design Applications through Perceptually based Simulations", *Spring Simulation Multi-conference, Symposium on Simulation for Architecture and Urban Design* (SimAUD2010), Orlando, FL, April 12-15, 2010. [CP]

Inanici M. "Evaluation of High Dynamic Range Image-based Sky Models in Lighting Simulation", *Luekos, Journal of the Illuminating Engineering Society (IES),* 7(2), October 2010, 69-84. [JA]

Van den Wymelenberg K, Inanici M and Johnson P. "The Effect of Luminance Distribution Patterns on Occupant Preference in a Daylit Office Environment", *Luekos, Journal of the Illuminating Engineering Society (IES),* 7(2), October 2010, 103-122. [JA]

Tai NC and Inanici M. "Lighting in Real and Pictorial Spaces: A Computational Framework to Investigate the Scene based Lighting Distributions and their Impact on Depth Perception", *Association of Computer Aided Design and Research in Asia (CAADRIA) 2010 Conference*, Hong Kong, April 7-10, 2010. [CP]

Inanici M. "Applications of Image based Rendering in Lighting Simulation: Development and Evaluation of Image based Sky Models", *International Building Performance Simulation Association (IBPSA) 2009 Conference,* Glasgow, UK, July 27-30, 2009. [CP]

Van den Wymelenberg K and Inanici M. "A Study of Luminance Distribution Patterns and Occupant Preferences in Daylit Offices", *Proceedings of the Passive and Low Energy Architecture (PLEA) 2009 Conference,* Quebec City, Canada, June 22-24, 2009. *(Finalist for Best Paper Award in PLEA 2009.)* [CP]

Tai NC and Inanici M. "Depth perception as a function of Lighting, Time, and Spatiality", *Illuminating Engineering Society (IES) 2009 Conference*, Seattle, WA, Nov. 15-17, 2009. [CP]

Tai NC and Inanici M. "Depth Perception in Real and Pictorial Spaces: A Computational Framework to Represent and Simulate the Built Environment", *Proceedings of the Association of Computer Aided Design and Research in Asia (CAADRIA) 2009 Conference*, Yunlin, Taiwan, April 22-25, 2009. [CP]

Greivulis Z and Inanici M. "Composing with Light: An Inside-out Evaluation of the Role of Intuition and Simulation throughout the Design Process", *Proceedings of the Passive and Low Energy Architecture (PLEA) 2008 Conference,* Dublin, Ireland, October 22-24, 2008. [CP]

Cheney K and Inanici M. "Image Based Rendering: Using High Dynamic Range Photographs to Light Architectural Scenes", *[Architecture] in the age of [Digital] Reproduction,* 2008 ACSA West Central Fall Conference, University of Illinois Champaign-Urbana, October 23-26, 2008. [CP]

Inanici M. "Computational Approach for Determining the Directionality of Light: Directional to Diffuse Ratio", *Proceedings of the International Building Performance and Simulation Association (IBPSA) 2007 Conference,* Beijing, China, September 3-7, 2007. [CP]

Inanici M and Navvab M. "The Virtual Lighting Laboratory: Per-pixel Luminance Data Analysis", *Luekos, Journal of the Illuminating Engineering Society (IES),* 3(2), Oct. 2006, 89-104. [JA]

Inanici M. "Evaluation of High Dynamic Range Photography as a Luminance Data Acquisition System," *Lighting Research and Technology*, 38(2), June 2006, 123-136. [JA]

Inanici M. "Per-pixel Lighting Data Acquisition and Analysis with High Dynamic Range Photography", *Proceedings of the International Commission on Illumination (CIE) 2005 Mid-Conference*, Leon, Spain, May 18 - 20, 2005. [CP]

Inanici M. *Per-pixel Lighting Data Analysis*. Lawrence Berkeley National Laboratory, LBNL Report # 58659, 2005. Available from: eScholarship Repository, University of California, http://repositories.cdlib.org/lbnl/LBNL-58659 and U.S. Department of Energy, Office of Scientific and Technical Information, http://www.osti.gov/energycitations/product.biblio.jsp?osti_id=891345. [TR]

Lee ES, Selkowitz S, Clear R, Inanici M, Inkarojrit V, Lai J, Hughes G, Ward G, Mardaljevic M. *Daylighting the New York Times Headquarters Building: Final Report*. Lawrence Berkeley National Laboratory, Berkeley, CA. LBNL Report# 57602, 2005. Available from: http://windows.lbl.gov/comm_perf/pdf/Daylighting-NYTimes-final.pdf. [TR]

Inanici M and Galvin J. *Evaluation of High Dynamic Range Photography as a Luminance Mapping Technique*. Lawrence Berkeley National Laboratory, LBNL Report # 57545, 2004. Available from: eScholarship Repository, University of California, http://repositories.cdlib.org/lbnl/LBNL-57545, and U.S. Department of Energy, Office of Scientific and Technical Information, http://www.osti.gov/energycitations/product.biblio.jsp?osti_id=841925&query_id=0. [TR]

Inanici, M. "Transformations in Architectural Lighting Analysis: Virtual Lighting Laboratory", Dissertation, University of Michigan. Available from: ProQuest Information and Learning, AAT 3121949, 2004. [D]

Demirbilek N, Yalciner U, Ecevit A, Sahmali E, and Inanici M. "Analysis of the Thermal Performance of a Building Design located at 2465m: Antalya - Saklikent National Observatory Guesthouse", *Building and Environment*, 38(1), Jan 2003, pp. 177-184. [JA]

Inanici M. "Utilization of Image Technology in Virtual Lighting Laboratory", *Proceedings of the International Commission on Illumination (CIE) 2003 Conference*, San Diego, June 26 - 28, 2003. [CP]

Inanici M. "Transformation of High Dynamic Range Images into Virtual Lighting Laboratories", *Proceedings of the International Building Performance and Simulation Association (IBPSA) 2003 Conference*, Eindhoven, Netherlands, August 10 - 14, 2003. [CP]

Inanici M. "Application of the state-of-the-art Computer Simulation and Visualization in Architectural Lighting Research", *Proceedings of the 7th International Building Performance and Simulation Association (IBPSA) 2001 Conference,* Rio de Janerio, Brazil, August 13-15, 2001. [CP]

Demirbilek N, Yalciner U, Inanici M, Ecevit A, and Demirbilek O. "Energy Conscious Dwelling Design for Ankara", *Building and Environment*, 35(1), Jan 2000, pp. 33-40. [JA]

Inanici M and Demirbilek N. "Thermal Performance Optimization of Building Aspect Ratio and South Window Size in Five Cities having Different Climatic Characteristics of Turkey", *Building and Environment,* 35(1), Jan 2000, pp. 41-52. [JA]

Ozdamar M, Inanici M and Yener C. "Daylighting in Atria", *Proceedings of the 2nd National Illumination Congress,* Istanbul, Turkey, November 26-27, 1998. [CP]

Demirbilek N, Sahmali E, and Inanici M. "A Passively Climatized Building, 2500 m Above Sea Level", *Proceedings of Solar'97 - Australian and New Zealand Solar Energy Society,* Canberra, Australia, paper 56, Dec. 1-3, 1997. [CP]

Inanici, M. "Thermal Performance Optimization of Passive Solar Building Components in Five Different Climatic Regions", M.Sc. Thesis, METU, 1996. [T]

Selected Recent Presentations: [Invited] [Refereed Event]

"Designing for Circadian Friendly Built Environments," 3 hour workshop, *Lightfair International, Lightfair Institute*, to be held in San Diego, CA, April 24-28, 2016. [R]

"Design for Well-being: A metropolis Think Tank Program," Panelist, Seattle, October 14, 2015 [I].

"Designing Circadian Friendly Work Environments," (with M. Brennan and E. Clark), webinar, General Service Administration, June 17, 2015. [I]

"Simulation based Design Approaches in Architectural Education", Presented at Universidad del Bio Bio, Department of Architecture, Concepcion, Chile, March 24, 2015. [I]

One day Workshop on "Use of High Dynamic Range Photography in Lighting Research and Practice (Part 1: HDR Image Capture; Part2: HDR Image Analysis; Part3: HDR Image Display; Part 4: Applications)," *IlumiNa 2015: International Workshop on Advanced Daylighting Simulation*, Concepcion, Chile, March 20, 2015. [I]

"Computational Daylighting Design and Analysis," *IlumiNa 2015: International Workshop on Advanced Daylighting Simulation*; Concepcion, Chile, March 18-20, 2015. [I]

"Prediction of Dynamic Daylighting Simulations from a Limited Number of High Dynamic Range Photographs", Presented at the 4th DIVA Day: DIVA for Rhino (Environmental Performance Analysis in Design Practice + Research) Seattle, October 2, 2014. [I]

"From pixels to Sensors: Designing and Engineering Sustainable Buildings," Lawrence Berkeley National Laboratory, March 29, 2011. [I]

"Informed Design Decision Making In Pursuit of Sustainability," University of California, Berkeley, Department of Architecture, March 28, 2011. [I]

"Validation and Applications of Image based Sky Models in Architectural Lighting Simulations," *Pecha Kucha at NSF Workshop – Collaborative Practice: When Engineering Design Meets Architecture*, Philadelphia, PA, November 4, 2010. [I]

Workshop on High Dynamic Range Imagery and Glare Analysis, Harvard University, Graduate School of Design, Cambridge, MA, October 21, 2009. [I]

"Applications of Image based Sky Models in Daylighting Simulations", *8th International Radiance Workshop*, Harvard University, Graduate School of Design, Cambridge, MA, October 22-23, 2009. [I]

"Recording Light: High Dynamic Range Imagery," 3 hour workshop, *Lightfair International, Lightfair Institute*, Las Vegas, NV, May 26, 2008. [I]

"High Dynamic Range Imaging," 3 hour workshop, *Lightfair International, Lightfair Institute*, New York, NY, May 6, 2007. [R]

"Luminance Measurements with High Dynamic Range Photography," *Joint Daylighting / Lighting Seminar on Research and Practice*, Pacific Energy Center, San Francisco, CA, April 21, 2005. [I]

"Lighting Measurement and Simulation, and Analysis Toolbox," presented for an independent group of eight peer reviewers. Group was assembled by the *U.S. Department of Energy* to conduct a formal peer review of the Lighting Research and Development element of the Building Technologies Program. Washington D.C., January 2005. [R]

Fellowships, Awards, and Grants:

Visiting Researcher: University of Cambridge, Department of Engineering, UK. *Energy Efficient Cities Initiative at Cambridge*, August 2013.

University of Washington Royalty Research Fund, "Development and Validation of Image based Sky Models for Daylighting Applications", Principal Investigator, 2009-2010.

Faculty Development Award, College of Built Environments, University of Washington, 2008.

Nuckolls Funding for Lighting Education, Development of a course titled "Computational Lighting Design", University of Washington, Department of Architecture, Principal Investigator, 2006 – 2007.

Gerald William Faculty Prize, University of Washington, Department of Architecture, 2006.

Outstanding Performance Award, Lawrence Berkeley National Laboratory, 2005.

U.S. Department of Energy, Building Technologies Program, "Lighting measurement, Simulation, and Analysis Toolbox", Lawrence Berkeley National Laboratory, Lighting Research Group, Principal Investigator, 2004 – 2005.

Distinguished Dissertation Award, Taubman College of Architecture and Urban Planning, University of Michigan, 2004.

University of Michigan, Ph.D. Scholarship, Rackham Graduate School Dissertation Grant, Architectural Merit Award, Nathan Levine Architectural Scholarship, 2002 - 2003.

Michigan Teaching Fellow, University of Michigan, Center of Research on Learning and Teaching, 2002.

Scholarship for Doctoral Education, Board of the Higher Education Council of Turkey, 1998 - 2002.

Study Trip Award, Philips Lighting: Indoor, Outdoor, and Architectural Lighting Application Centers, Holland and France, 1999.

Courses:

University of Washington

Arch. 533 Advanced Environmental Systems

Arch. 582 Computational Lighting Design

Arch. 588 Research Practice

Arch. 581 Advanced Rendering

Arch. 380 Introduction to Computers

METU, Ankara, Turkey (Teaching Assistant) (1995-1998)

> Arch. 503   Building Science Workshop
>
> Arch. 487   Solar Control and Utilization in Architecture
>
> Arch. 462   Computer Aided Drafting and Design
>
> Arch. 461   Computer Literacy in Architecture
>
> Arch. 282   Design of Energy Efficient Buildings
>
> Arch. 281   Introduction to Environmental Factors
>
> Arch. 190   Introduction to Computer Applications

Thesis Committees:

Ph.D.: (University of Washington and Other Institutions)

Yue Liu, Ph.D. program in Built Environments, University of Washington, 2013-present (Chair).

Nathaniel Jones, "Development of GPU lighting simulation in naturally and artificially lit spaces," Ph.D. in Building Technology, Massachusetts Institute of Technology, Department of Architecture, 2015-present, (Committee member).

Lars Grobe, "Evaluation of Daylight Redirecting Systems using Data-Driven Models," Ph.D. Program in Architecture, Izmir Institute of Technology, 2015-present, (Committee member).

Alstan Jakubiec, "The Use of Visual Comfort Metrics in the Design of Built Spaces," Ph.D. in Building Technology, Massachusetts Institute of Technology, Department of Architecture, 2014, (Committee member).

Kevin van den Wymelenberg, "Evaluating Human Visual Preference and Performance in an Office Environment using Luminance-based Metrics", Ph.D. program in Built Environments, University of Washington, 2012, (Chair).

Nan-Ching Tai, "Depth Perception and its Dependency on Scene based Lighting Patterns: Perceptual Study of Built Environment through Lighting Simulation and High Dynamic Range Imagery", Ph.D. program in Built Environments, University of Washington, 2010, (Chair).

Master of Science in Architecture, University of Washington:

Alireza Hashemloo, "Simulating Annual Luminance Maps with Complex Fenestration Systems," 2014-present (Chair).

Nicole Peterson, "Computer-based Lighting Analysis throughout design stages: A Critical Evaluation of Practices, Metrics, and Techniques", 2015 (Chair).

Peter Schiller, "Guerilla Productivity: Gamification and Design Related Touch Interfaces," 2014 (Committee Member).

Viswanathan Kumaragurubaran, "High Dynamic Range Image Processing Toolkit for Lighting Simulations and Analysis", 2012 (Chair).

Randolph Fritz, "Interactive Modeling of Luminaires for Lighting Simulations and Architectural Visualizations", 2010, (Chair).

Chih-Pin Hsiao, "Vision based Tangible User Interfaces for Architecture", 2009, (Committee member).

Kathleen Cheney "Image based Rendering as an Architectural Visualization and Analysis Technique", 2008, (Chair).

Daniel Belcher "Augmented Reality, Architecture, and Ubiquity: Technologies, Theories, and Frontiers", 2008, (Committee member).

Dipti Shah "Sense, Response, Adapt: An Architecture to Mitigate Natural Disasters", 2007, (Co-Chair).

Hoda Homayouni "A Genetic Algorithm Approach to Space Layout Planning Optimization", 2007, (Committee member).

Chen Lien Yen, "Dual View Information Navigation", University of Washington, 2007, (Committee member).

Master of Architecture, University of Washington:

Alireza Hashemloo, "GlareShade: A Visual Comfort based Approach to Adaptive Shading Devices", 2014, (Chair).

Eric Brooks, "Critical Color: The Use of Color in Nature for Energy Performance and Its Applications to Building Skins", 2012, (Chair).

Steve Duncan, "The Architecture of Light: An Evidence based Design Approach to Treating Winter Depression in Seattle", 2011, (Chair).

Chih-Yin Chou, "Sustainable Design for Panda Exhibition and Research Center", 2009, (Committee member).

Scott Crawford, "Architecture of Relationships: Built on the use of Generative Approaches and Evaluative Analysis in Design", 2008, (Committee member).

Zigurds Grevulis, "Composing with Light: Simulation based Design of Library at Seattle Center", 2007, (Chair).

Consultancy:

Hagia Sophia Museum, Istanbul, Turkey, 2013.

New York Times Headquarters, NYC, Visual Comfort Studies.
        Lawrence Berkeley National Laboratory, Windows and Daylighting Research Group, 2004.

Low Glare Outdoor Luminaire - California Energy Commission's Public Interest Energy Research (PIER) Buildings Program. Lawrence Berkeley National Laboratory, Lighting Research Group, 2004.

New Lighting Solutions for High-Bay Spaces – Federal Energy Management Program (FEMP). Lawrence Berkeley National Laboratory, Lighting Research Group, 2004.

Thermal Performance Analysis of Saklikent National Observatory Guesthouse. METU Research Coordination and Industrial Liaison Office, Ankara, Turkey, 1994.

Energy Conscious Dwelling Design for Ankara. METU Research Coordination and Industrial Liaison Office, Ankara, Turkey, 1993 – 1994.

Professional Membership and registrations:

1993 – Registered Architect, Chamber of Architects, Ankara, Turkey

1998 – IESNA - Illuminating Engineering Society of North America

2002 – IBPSA - International Building Performance Simulation Association