Curriculum Vitae

Dr. Timur Dogan
Assistant Professor
Cornell AAP

Personal Data

Name	Timur Dogan, Dipl.-Ing., MDes, PhD
Birthday/Place	02/25/1985, Freiburg i. Br.
Nationality:	German

Education

2012 - 2015	P.h.D. in Building Technology at MIT
	Title: Procedures for automated building energy model production for urban and early design. http://hdl.handle.net/1721.1/101500
2010 - 2012	Master in Design Studies at Harvard Graduate School of Design
	Research area: Accelerated large scale daylight simulations for urban and early design
2010	Diploma in architecture with distinction for remarkable program achievements at TU Darmstadt (Dipl.-Ing., Ø 1.0)
	Area of concentration: Sustainable residential architecture, building in historic context, light surface-active structures
2004	Abitur (Ø 1.9), Georg Büchner Schule, Darmstadt

Professional and academic work

Since 2015	Assistant Professor at Cornell AAP
	Teaching building technology related classed and head of the Environmental Systems Lab
Since 2015	Interdisciplinary laboratory for TC Erciyes University, Kayseri, Turkey. (12,000m2)
	Commissioned architect and sustainability consultant
Since 2014	Member of the DIVA for Rhino developer team. www.diva4rhino.com
Since 2012	Member of the “umi” developer team (urban environmental modeling software), www.urbanmodeling.net
Since 2012	Lead developer of “Archsim Energy Modeling” software for Grasshopper, www.solemma.net
2011-2014	Transsolar Energietechnik GmbH, München (Summer)
2010	Wandel Hoefer Lorch Architekten GmbH
2008-2009	Prosa Architektur & Grafik, Darmstadt
2009	Architekten NKBAK, Frankfurt
2007	KSP Engel Zimmermann in Frankfurt

Professional memberships

Since 2016	Member of the Chartered Institution of Building Services Engineers (CIBSE). Membership number: 050579
Since 2015	Member of the International Building Performance Simulation Association (IBPSA). Membership number: 29842964
Since 2010	Chamber of Architects, Section UIA in Turkey. Registration Number: 49295

Courses at Cornell University

Fall Environmental Systems I: Site and Sustainability

Spring Environmental Systems II: Building Dynamics

Spring Option studio: Building Better Cities

Fall/Spring Special Investigations in Environmental Systems and Conservation

Funding

2015 ACSF RRF: Towards Urban Building Energy Modeling of US Cities. $20,000

2016 ACSF AVF: New Generation of Urban Building Simulation Software. $113,000

2016 NVIDIA Hardware Grant. $4,000 eq.

2017 Konika Minolta Hardware Grant. $2,100 eq.

2017 ACSF RRF: Mobility aware Integrated Urban Design. $20,000

2017 CTECH NRIF Mobility aware Integrated Urban Design with Kohn Pedersen Fox Associates

Publications

2017 Proceedings of the Symposium on Simulation for Architecture and Urban Design. Edited by Michela Turrin, Brady Peters, William O'Brien, Rudi Stouffs and Timur Dogan

2008 T Dogan et al., "Concerning Istanbul", Entwerfen und Hochbaukonstruktion, TU Darmstadt, ISBN: 978 3 88536 107 7

2008 T Dogan, K Kral, "anSICHTEN, Katalog zur Jahresausstellung 2008 des Fachbereichs Architektur der TU Darmstadt", Wasmuth, Tübingen 2008, ISBN: 978 3 8030 0701 8

Journal articles

2017 T Dogan, YC Park, A critical review of daylighting metrics and their use in residential architecture. Submitted to Lighting Research & Technology

2017 T Dogan, CF Reinhart, Shoeboxer: An algorithm for automated "typical room" model generation for urban and schematic building energy modelling. DOI information: 10.1016/j.enbuild.2017.01.030

2016 Dogan, T., & Stec, P. (2016). Prototyping a façade-mounted, dynamic, dual-axis daylight redirection system. Lighting Research & Technology, 1477153516675392.

2016 E Saratsis, T Dogan, CF Reinhart, Simulation-based daylighting analysis procedure for developing urban zoning rules, BUILDING RESEARCH & INFORMATION 2016. doi:10.1080/09613218.2016.1159850

2015 T Dogan, C F Reinhart, P Michalatos, "Autozoner: An algorithm for automatic thermal zoning of buildings with unknown interior space definitions", Journal of Building Performance Simulation, 2015. doi:10.1080/19401493.2015.1006527

2011 C F Reinhart, T Dogan, D Ibarra and H W Samuelson, “Learning by doing - Teaching energy simulation as a game”, Journal of Building Performance Simulation, 2011. doi:10.1080/19401493.2011.619668

Peer reviewed conference proceedings

2017 T Dogan, YC Park. Towards a Novel Framework for Residential Daylight Evaluation. To be published in the Proceedings of Building Simulation 2017, San Francisco, USA, August 2017

2017 J Hoover, T Dogan. Fast and Robust External Solar Shading Calculations using the Pixel Counting Algorithm. To be published in the Proceedings of Building Simulation 2017, San Francisco, USA, August 2017

2017 T Suesser, T Dogan. Campus Energy Model: Using Semi-Automated Workflows to Build Spatially Resolved Campus Building Energy Models for Climate Change and Net-Zero Scenario Evaluation. To be published in the Proceedings of Building Simulation 2017, San Francisco, USA, August 2017

2015 T Dogan, E Saratsis, C F Reinhart. Towards an Energy Simulation-Informed Design Process: A 3-Phase Approach for a Performative Interdisciplinary Laboratory Building. Proceedings of Building Simulation 2015, Hyderabad, India, December 2015

2015 T Dogan, E Saratsis, C F Reinhart. The Optimization Potential of Floor-Plan Typologies in Early Design Energy Modeling. Proceedings of Building Simulation 2015, Hyderabad, India, December 2015

2015 CM Rose, E Saratsis, S Aldawood, T Dogan, C F Reinhart. A tangible interface for collaborative urban design for energy efficiency, daylighting, and walkability. Proceedings of Building Simulation 2015, Hyderabad, India, December 2015

2014 C Cerezo, T Dogan, C Reinhart, “Towards standardized building properties template files for early design energy model generation”, Proceedings of 2014 ASHRAE/IBPSA-USA Building Simulation Conference, Atlanta, USA

2014 T Dogan, C F Reinhart, P Michalatos, “Automated multi-zone building energy model generation for schematic design and urban massing studies”, Proceedings of eSIM 2014, Ottawa, Canada

2013 C F Reinhart T Dogan, J A Jakubiec, T Rakha, and A Sang, “UMI. An urban simulation environment for building energy use, daylighting and walkability”, Proceedings of Building Simulation 2013, Chambery, France, August 2013

2013 T Dogan and C F Reinhart, “Automated conversion of architectural massing models into thermal “shoebox” models”, Proceedings of Building Simulation 2013, Chambery , France, August 2013

2013 T Dogan, CF Reinhart, “Atmospheres: Proof of concept for web-based 3D Energy Modeling for designers with WebGL/HTML5 and modern event-driven, asynchronous server systems.”, Proceedings of Building Simulation 2013, Chambery , France, August 2013

2012 T Dogan, C F Reinhart and P Michelatos, “Urban daylight simulation: Calculating the daylit area of urban designs”, Proceedings of SimBuild 2012, Madison, Wisconsin, USA

2012 B Wang, T Dogan, D Pal and C F Reinhart, “Simulating naturally ventilated buildings with detailed CFD-based wind pressure database”, Proceedings of SimBuild 2012, Madison, Wisconsin, USA

Awards and patents

2013 Patent for Dynamic Light Control System and Methods for Producing the Same. Appl. No(s): PCT/US13/70622 at the Harvard Wyss Institute.

2013 First price, design competition, “Bürgerbrunnen für Wilhelmsplatz, Offenbach”

2012 MIT Presidential Fellow

2012 Fellowship Transsolar Energietechnik GmbH. Partial funding of my PhD position.

2011 DAAD Fellowship for graduate studies

2010 Distinction for remarkable program achievements of TU Darmstadt

2007 Scholarship Studienstiftung des Deutschen Volkes e.V.

Press, interviews

2017 Interview in Computing the Environment book by Terri and Brady Peters, to be published by John Wiley & Sons Ltd.

2016 Cornell Chronicle: Atkinson Center gives record number of seed research grants.
http://news.cornell.edu/stories/2016/06/atkinson-center-gives-record-number-seed-research-grants

2015 AAP News: Dogan, Expert in Sustainable Design, Joins Architecture Faculty
https://aap.cornell.edu/news-events/dogan-expert-sustainable-design-joins-architecture-faculty

2015 Form Follows Performance: Urban Modeling “umi” for Rhino Released
http://www.formfollowsperformance.com/2015/01/urbanmodeling-v2-0-for-rhino-released/

2013 Rhino News: Archsim Energy Modeling for Grasshopper
http://blog.rhino3d.com/2013/09/archsim-energy-modeling-for-grasshopper.html

Lectures, workshops and presentations

2017 Workshop Licht. Three-day workshop at TU Darmstadt on daylight simulations and digital design workflows. https://www.architektur.tu-darmstadt.de/fachbereich_architektur/aktuelles_fachbereich/newsdetails_76416.de.jsp

2017 EMPOWER ARCHITECTS! Tools to design livable and sustainable urban habitats. Invited talk at Institute for Sustainable Urbanism - ISU, Technische Universität Braunschweig. http://sustainableurbanism.de

2017 Scientific chair and panel member of SIMAUD 2017 conference, Toronto Canada
http://www.simaud.org/2017/

2017 Invited talk and workshop at Kohn Pedersen Fox Associates PC, New York City.

2017 Invited lecture for the Ezra Round Table at Cornell Systems Engineering
https://cornell.mediasite.com/Mediasite/Play/4b053b6c475d443284618460d7bce9e31d

2016 Summit on Science and Technology Enablement for the Sustainable Development Goals | The New York Academy of Sciences (November 29, 2016).
Invite only event to discuss urbanization (http://www.nyas.org/Events/Detail.aspx?cid=27c7f9cb-251f-46ee-9ac7-25282effd9c4)

2016 Invited keynote speaker at Harvard Project for Asian and International Relations, Cambridge, MA, USA

2015 Energy performance evaluation of buildings with Archsim, DIVA Day, Architecture Association, London, UK

2014 Guest lecture on “Architecture and the environment” at the Department of Architecture at TC Erciyes University, Kayseri, Turkey

2014 Invited presentation on “Building technology and simulation methodologies” at TC Erciyes University, Kayseri, Turkey

2013 Invited lecturer and course instructor at the “active buildings – active cities” summer school at TU-Darmstadt

2013 Invited guest lecturer in “Energy Simulation in Design” at Harvard Graduate School of Design

Service

2017 Scientific Chair, SimAUD, Toronto.

Since 2016 Faculty Fellow at the Atkinson Center for Sustainable Future

Since 2016 Reviewer for Atkinson Center for Sustainable Future Academic Venture Fund and Post-Doctoral fellowship proposals

Since 2016 Graduate Field Member Civil Engineering

Since 2016 Graduate Field Member Systems Engineering

Since 2016 Member of the Built Environment Planning Group Committee: John Albertson, David Albonesi, Kavita Bala, Mark Cruvellier, Timur Dogan, Jennifer Minner, David Schneider, Max Zhang

Since 2017 Journal reviewer for Energy and Buildings

Since 2016 Journal reviewer for Building Research & Information

Since 2016 Journal reviewer for LEUKOS

Since 2015 Journal reviewer for Building and Environment