

NACI DILEKLI, Ph.D.

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Curriculum Vitae

NACI DILEKLI, Ph.D.

Professional Preparation

2012 – 2014: Postdoctoral Fellowship in Economics, Rensselaer Polytechnic Institute, Troy, New York
2005 – 2010: Ph.D. in Geography, University of Oklahoma, Oklahoma
2009: Post Graduate Degree in Disaster Management, University of Geneva, Geneva, Switzerland
2002 – 2005: MS in Information Systems, Middle East Technical University (METU), Ankara, Turkey
2002 – 2004: MS in Geodetic and Geographic Information Technologies, METU
2000 – 2002: Minor in GIS/Remote Sensing, METU
1997 – 2002: Bachelor's in City and Regional Planning, METU

SCHOLARSHIP

ARTICLES IN PREPARATION

1. McCarthy, H.; Ghimire, M.; Kedron, P.; Boyer, T.; Zhou, Q.; Zhao, Y.; **Dilekli, N.**; Koch, J. (in preparation) Modeling Greenness of Vegetation for the Oklahoma City Metro Area. Target journal: *Urban Ecosystems*.
2. **Dilekli, N.**; Koch, J. (in preparation) A Spatial Analysis of Historical and Potential Future Urbanization Patterns in the Oklahoma City Metropolitan Area. Target journal: *Journal of Land Use Science*.
3. **Dilekli, N.**; Sabzi Zamani H. (in preparation) Exploring Local Etiology of Lung and Bronchus Cancer using GWR in the Continental United States: A Simultaneous Look at Smoking and Atmospheric Pollution. Target journal: *Spatial and Spatio-temporal Epidemiology*
4. **Dilekli, N.**; Sabzi Zamani H.; Bribiesca E. (in preparation) A Dispersion Measure for Multi-Density and Multidimensional Objects. Target journal: *Pattern Recognition*
5. **Dilekli, N.**; Cazcarro I. (in preparation) Regions May Share Factors of Production, too: Implementation of Topologies within the World Trade Model. Target journal: *Journal of Industrial Ecology*

SUBMITTED TO PEER-REVIEWED JOURNALS

1. **Dilekli, N.**, and Cazcarro, I. (In Review), Waste and Recycle Analysis Using the World Trade Model: A Clean Water Scenario Application. Submitted to *Resources, Conservation & Recycling*
2. **Dilekli, N.**, Janitz, A E., Campbell, J E. (In Review) Improved Geocoding of Cancer Registry Addresses in Urban and Rural Oklahoma. Submitted to *International Journal of Health Geographics*
3. **Dilekli, N.**, Janitz, A E., Gopalani, S.; Campbell, J E. (In Review) Development of a spatiotemporal database of potentially carcinogenic environmental exposures, Oklahoma, United States. Submitted to *Journal of Occupational and Environmental Medicine*
4. **Dilekli N.**; Janitz A., Martinez S.; Gopalani S., Dougherty T., Williams A., Zamani Sabzi H., Campbell J. (In Review) Spatiotemporal Analysis of Oklahoma Tobacco Helpline Registrations in Oklahoma using Geoimputation and Joinpoint Analysis. Submitted to *Journal of Public Health Management & Practice*
5. Zamani Sabzi H., Karimi, L., **Dilekli, N.**, Abudu, S., and King, JP., (In Review) "Evaluation of Water Harvesting and Reuse Options in Southern New Mexico: A Case Study", Technical report submitted to Desalination and Water Reuse (DWR) Committee, ASCE., 2018.

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PUBLICATIONS

1. **Dilekli, N.**, Duchin F. and Cazcarro, I. (2018), *Restricting Water Withdrawals of the Thermoelectric Power Sector: An Input-Output Analysis for the Northeast of the United States*. Journal of Cleaner Production, doi: 10.1016/j.jclepro.2018.06.218
2. **Dilekli, N.**, Janitz, A E., Campbell, J E., de Beurs, K M. (2018). *Evaluation of geospatial strategies in a large case study*. International Journal of Health Geographics 17(1): 30, doi: 10.1016/j.jclepro.2018.06.218
3. Cooper MT, Campbell J, **Dilekli N.**, Darden PM. (2018) Access to Care for Children under five in Oklahoma: a Geographic Imputation Application. Journal of the Oklahoma State Medical Association 111(8).
4. Zamani Sabzi, H., Abudu, S., Alizadeh, Reza., Soltanisehat, L., **Dilekli, N.**, and King, J. Pl. (2018), *Integration of Time Series Forecasting in a Dynamic Decision Support System for Multiple Reservoir Management to Conserve Water Sources*. Journal of Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, doi: 10.1080/15567036.2018.1476934.
5. Zamani Sabzi, H., King, J. P., **Dilekli, N.**, Shoghli, B., and Abudu, S., (2018) *Developing an ANN based streamflow forecast model utilizing data-mining techniques to improve reservoir streamflow prediction accuracy: a case study*. Civil Engineering Journal, doi: 10.28991/cej-0309163
6. **Dilekli, N.** and Duchin, F. (2015), *Prospects for Cellulosic Biofuel Production in the Northeastern United States: A Scenario Analysis*. Journal of Industrial Ecology. 20(1): 120-131. doi: 10.1111/jieec.12291
7. Keceli, A., **Dilekli, N.** and Anaz, N. (2012), *Visualization of a Social Problem: Spatio-Temporal Analysis of Sexual Assaults in Turkey*. Electronic Journal of Social Sciences 11(40) 1-10.

CONFERENCE PROCEEDINGS

- **Dilekli, N.** and Koch, J. (2018) Automated Urban Parcel Ledger Generation to Track Spatiotemporal Parcel Dynamics. 9th International Congress on Environmental Modelling and Software, June 24-28 2018, Fort Collins, USA
- Kharel, G., et al including **Dilekli, N.** (2018) An integrated modeling approach coupling stakeholders' values and policy trade-offs in Oklahoma, USA. 9th International Congress on Environmental Modelling and Software, June 24-28 2018, Fort Collins, USA
- **Dilekli, N.** and T. Rashed. 2007. *Towards a GIS Data Model for Improving the Emergency Response in the Least Developing Countries: Challenges and Opportunities*. In ISCRAM 2007, 57-62. Delft, The Netherlands.

CONFERENCE PRESENTATIONS

- **Dilekli, N.** and Scott, M. (2017) *Web GIS Applications for Campus Operations and Safety*. 20th Oklahoma South Central Arc Users Group
- **Dilekli, N.** and Duchin, F. (2015) *Effects of Water Restrictions on the Thermoelectric Sector in the Northeast of the United States*. 23rd International Input-Output Conference. Mexico City, Mexico.
- **Dilekli, N.** (2013). *Toward Food and Energy Security for the Northeast Region of the United States: Opportunities, Challenges, and Limitations*. U.S. Society for Ecological Economics Conference. Burlington, Vermont

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POSTERS

- Dilekli, N., Koch, J., Zhou Q. (2018) *Exploring Historical and Potential Future Urbanization Patterns in the Oklahoma City Metropolitan Area*. International Association for Landscape Ecology Conference, 8–12 April, 2018. Chicago, IL. Poster Presentation.
- Campbell JE, **Dilekli N**, Janitz AE, *County level clusters of breast, colorectal, lung and prostate cancer in Oklahoma 2010-2014*. Accepted for poster presentation at the 2018 Stephenson Cancer Center Cancer Research Symposium, Oklahoma City, OK, February 2, 2018.
- **Dilekli N**, Baker C, Dao HD*, Janitz A, Campbell J. *Development of a spatiotemporal database of potentially carcinogenic environmental exposures*. 2018 Stephenson Cancer Center Cancer Research Symposium, Oklahoma City, OK, February 2, 2018 and Oklahoma Area Tribal Epidemiology Center Public Health Conference, Norman, OK April 24-26, 2018. Poster Presentation.
- **Dilekli, N.** et al. (2013) *The Northeast Regional Earth System Model: Science to support regional decision making*. Environmental Monitoring, Evaluation, and Protection in New York: Linking Science and Policy. Albany, New York. Poster Presentation.

CHAired SESSIONS AND PANEL ATTENDANCE

- Panel Attendee - 6. Urban and Regional Research Network (KBAM) 2015. *Changes and Transformations in Economy*. Izmir, Turkey.
- Session Chair - 23rd International Input-Output Conference 2015. *Water Issues Worldwide*. Mexico City, Mexico.

THESES

- **Dilekli N.** (2004) Exploring the Relationship Between the Socio-Economic Structure and Some Topographic Variables In Çankırı. Adviser: H. Şebnem Düzgün
- **Dilekli N.** (2005) Superresolution with Image Analogies Approach. Adviser: Yasemin Yardımcı

DISSERTATION

- **Dilekli N.** (2010) Developing and Evaluating a Web-based Emergency Management Spatial Decision Support System. Adviser: Darren Purcell

AWARDS

- Alumni Fellowships from the Department of Geography (OU)
- Graduate Student Senate Travel Award (OU)
- Presidential International Travel Fellowship (OU)
- Fellowship award from United Nations University in Tokyo
- Caldwell Memorial award in Geography for excellence in teaching (OU)
- \$1500 (2018) – University Libraries Open Access fund (OU)

GRANT AND PROGRAM PROPOSALS SUBMITTED (PENDING)

- National Institutes of Health, National Cancer Institute, PA-18-591 Admin Supplements to Existing NIH Grants and Cooperative Agreements. Exploring Patterns of Care among American Indian Children with Cancer (2019 - 2020), August 2018, \$150,000– Co-Investigator (this was submitted as a new proposal under a different mechanism)

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GRANT AND PROGRAM PROPOSALS SUBMITTED (REJECTED)

- National Institutes of Health R01, Enhancing American Indian Cancer Data in the Southern Plains Area (2018-2022), December 2017 and April 2018 (we were allowed to submit as a new proposal in April after an unfundable score in December), \$1,923,642; – co-Investigator
- National Institutes of Health NARCH, Research Project: Aeroallergens, Air Pollution, and Respiratory Health in the Chickasaw Nation; Capacity Building Project: Enhancing the Capacity for Cancer Research in Chickasaw Nation (2018-2022), June 2017, 3,498,855 – Co-Investigator
- National Institutes of Health R21, Exploring Patterns of Care among American Indian Children with Cancer (2018-2019), February 2017 (re-submitted November 2017), \$275,000, Co-Investigator
- National Institutes of Health NARCH, Enhancing the Capacity for Cancer Research in Chickasaw Nation (2018-2022), April 2017, \$420,409 – Co-Investigator
- National Institutes of Health R21, Exploratory Analysis of Environmental Exposures and Cancer in Chickasaw and Choctaw Nations of Oklahoma (2017-2019), October 2016, \$275,000 – PI
- Presbyterian Health Foundation, Development of a Geospatial Environmental Exposures Database for Oklahoma (2017), March 2016, \$50,000 – Co-PI
- Marie Skłodowska-Curie H2020-MSCA-IF-2015: An Economic Analysis of Future Water Use and Stress in the Mediterranean Europe (2016-2018). September 2015, EU111,600 – PI
- Turkish Institute of Science and Technology 2232 Program: Economic Analysis of Water Use and Stress in Turkey (2016-2018). April 2015, \$36,000 – PI

COURSES INSTRUCTED

- Izmir Institute of Technology: Planning Studio (CP302); GIS and Remote Sensing Based Disaster Management Studies (CP571)
- University of Oklahoma: Geographic Information Systems (GEOG 4453/5453)

GUEST LECTURES

- OU - GRAD 5203 - EOS3 Data Analytics on October 26th, 2017 to present expertise with Geographic Information Systems
- OUHSC - GIS in Health class on August 27th, 2017 to present Coordinate Systems and Map Projections
- OUHSC - GIS in Health class on September 4th, 2018 to present Professional and Research Applications of GIS and WebGIS

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EMPLOYMENT HISTORY

FEB 2016 – Current University of Oklahoma, Department of Geography, Norman, OK

GIS Developer II & Research Scientist. Projects currently on:

- 2016 - 2019. **Improving Geocoding of Cancer Registry and Development of a Spatiotemporal Database of Environmental Exposures** for the Oklahoma Center for the Advancement of Science & Technology. This project involves improving geocoding accuracy of cancer registry cases, adding a temporal aspect of patient's geolocation history, building a spatiotemporal database of environmental exposures that are potentially carcinogenic, mapping distribution of cancer cases and environmental exposures by type and conduct exploratory analyses to discover patterns in data and develop plausible scientific hypotheses that can be investigated in later research programs. PI: Naci Dilekli. Budget: \$135,000
- 2017-2018. **Oklahoma EPSCoR** for Population and Urban Greenness Modeling in Oklahoma City Metropolitan Area. National Science Foundation under grant No. OIA-1301789.
- 2017 - 2020. **Oklahoma Archeological Survey Web GIS** for Oklahoma Archeological Survey to facilitate purchasing of geographic data online using Braintree API.
- 2007 - 2017. **Geo-Referencing Maintenance for the Oklahoma Voter Registration System** for the Oklahoma Election Board. PI: Kathryn Hines. Budget: \$2,463,975
- 2007 - 2017. **Sales-Tax Calculation Database using GIS Technologies: Maintenance Efforts** for the Oklahoma Tax Commission. PI: Kathryn Hines. Budget: \$2,627,626
- 2015 - 2017. **OWRB Data Model and Web View Development** for the Oklahoma Water Resources Board. PI: Melissa Scott. Budget: \$21,949
- 2015 - 2017. **Geriatric Trauma Triage Project Year 1** for University of Oklahoma – Health Sciences Center (OCAST subcontract). PI: Melissa Scott. Budget: \$6,700
- 2015 - 2017. **Web GIS for Facilities Management (FMGIS Online)** for University of Oklahoma Facilities Management. PI: Melissa Scott. Budget: \$16,213
- 2015 - 2017. **Emergency Preparedness Campus Population Viewer Phase II** for University of Oklahoma Office of Emergency Preparedness. PI: Melissa Scott. Budget: \$5,000
- 2015 – 2017. **Risk Management Phase I Viewer and Database Development** for University of Oklahoma Office of Risk Management. PI: Melissa Scott. Budget: \$6,179

FEB 2015 – JUN 2015 İzmir Institute of Technology, Dept. of City and Regional Planning, İzmir, Turkey

Instructor

- **CP 302 Urban Planning Studio class:** Development of urban structure plan and action area plans in accordance with the Turkish planning practice.
- **CP 571:** Introduction to the hazards research and application of appropriate spatial tools and technologies disaster management.

MAR 2012 – DEC 2014

Rensselaer Polytechnic Institute, Troy, NY

Post-doctoral Researcher on a National Science Foundation Grant

- **The Northeast Regional Earth System Model** (Award EaSM-1049181; \$1,350,000; 2011 – 2016) (worked March 2012 to December 2014): Analyzed the economic systems and the extent to which these contribute to changes in the earth systems, which in turn impinge on the economic activities involved in production and consumption, using input-output databases of the economies. Extended existing databases to customize them for the purposes of different scenarios using spatial information on land use, water resources, and energy. PI: Faye Duchin

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- **Impacts of Global Change Scenarios on Ecosystem Services from the World's Rivers. Dynamics of Coupled Natural and Human Systems (CNH-1115025; \$1,500,000; 2011-2016)** (worked March to August of 2012): Worked on and maintained GTAP databases, updated the databases using the literature on fishery and freshwater.

AUG 2010 – AUG 2011

GSAREH, Austin, TX

Senior Scientist

- **GIS Public Health Training to the City of Austin, TX:** Worked on a capacity building program for developing and delivering customized training materials to Public Health practitioners and officials at the City of Austin.
- **Country Wide Health Business Intelligence System for Croatia:** Worked on a World Bank sponsored project to support technical development and the ToR for the Government of Croatia to establish a nationwide GIS-based Health Business Intelligence System as part of their ongoing health reform.
- **Cancer Geographic Awareness in the USA:** Principal developer of a web-based GIS tool (using ArcGIS Flex API) for fusing, analyzing, and reporting data and maps pertaining to cancer at the county and state levels for the entire USA in response to a Health Challenge from the National Cancer Institute (NCI). The tool won an award from NCI and was featured in the media, online several professional health and GIS forums, and professional health meetings.

FEB2010 – AUG 2010

University of Oklahoma, Center for Spatial Analysis, Norman, OK

Graduate Research Assistant for

- **Asset Mapping for Workforce Investment in Central Oklahoma:** Responsible for developing an ArcGIS Server Flex website, including some new and customized features.

JAN 2009 – MAY 2010

University of Oklahoma, Oklahoma Biological Survey, Norman, OK

Graduate Research Assistant for

- **Landownership Management Tool Project:** Responsible for developing a web system for entering landowner records, and updating landownership maps through asynchronous check in and checkout programmatically
- **Digital Atlas of Oklahoma Fishes:** Responsible for the migration of existing ArcIMS site at Oklahoma State University to local server

MAY 2007 – JUNE 2009

University of Oklahoma, Center for Spatial Analysis, Norman, OK

Graduate Research Assistant for

- **Development of an Agency GIS Help Desk:** Principal developer in this project, developed a web site using PHP and MySQL, and answered GIS related questions for a year
- **Development of Information Technology Infrastructure for ODWC Fisheries Division:** Assisted with the development of a lake record fish program. Constructed the relational database in SQL
- **Internet Mapping Server (IMS) Planning and Development:** Migrated a third-party hosted site to local server
- **Oklahoma Capital Improvement Program:** Conducted requirements engineering through user interviews; designed a database

SEPT 2008 – DEC 2008

University of Oklahoma, Department of Geography, Norman, OK

Instructor

- Instructor of Geographic Information Systems class

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JUNE 2006 – SEPT
2006

AT&T, Oklahoma City, OK

Intern

- Integrated fiber optic data from various resources into a GIS based system to complete missing inventory. Consolidated and geographically transformed of old individual CAD drawings. Filtered very large fiber optic inventory databases; joined them with existing and newly generated fiber cable records using Access, ArcMap and VBA scripts that run in these environments.

AUG 2005 – MAY 2007

University of Oklahoma, Department of Geography, Norman, OK

Graduate Teaching Assistant

- Assisted Introduction to Human Geography, GIS Applications and Geographic Information Systems courses

AUG 2003 – AUG 2005

Middle East Technical University, Department of City and Regional
Planning, Ankara, Turkey

Research and Teaching Assistant

- Assisted Computer Programming for Planners, Introduction to GIS and 4th year Planning Studio courses.
- Improving Traffic Safety in Renault Car Factory in Bursa (METU Revolving Fund Project): Responsible for abstraction and visualization of human and vehicle traffic flows in open and closed spaces; developed an Autolisp script for visualization in AutoCAD environment.

JUNE 2001 – SEPT 2001

The Scientific and Technical Research Council of Turkey, Ankara, Turkey

Intern

- GIS map production; Georectification of aerial photos; Establishing an inventory system to serve for environmental quality assessment and protection purposes.

ATTENDED ACADEMIC PROGRAMS

SC CSC Early Career Researcher Training 2016	June 19-24, 2016	Texas Tech University, Lubbock, Texas, USA
	A training that involved presentations given by highly reputable research scientists, interactive activities on climate science communication, proposal/grant development, ethics of working in Indian country, perspectives from representatives of the stakeholder community, group activity focused around a real-world case study, and field trips exploring climate impacts on agriculture in West Texas.	
ifgi Spring School 2008	March 2-15, 2008	University of Muenster, Muenster, Germany
	An academic program on advanced and innovative topics on Geographic Information Science.	
ISCRAM Summer School 07	JUN 20-27 2007	Tilburg University, Tilburg, the Netherlands
	An academic program on Information Systems for Global Disaster Risks and Humanitarian Assistance"	

TECHNICAL PROFICIENCIES

GIS: ArcGIS Desktop, ArcGIS Server, ArcGIS Server JavaScript API, ArcSDE, QGIS, GDAL

Remote Sensing: ENVI, ERDAS IMAGINE

Database: MSSQL, PostgreSQL, MySQL, MS Access, MongoDB

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Statistics: MATLAB, R, SPSS, S-Plus

Programming: AJAX, REST APIs, JavaScript, Dojo, Node.js, Python, Java/Android, PHP, Visual Basic

Drafting: AutoCAD

REFERENCES

Dr. Jennifer Koch

Assistant Professor

Department of Geography and Environmental Sustainability

University of Oklahoma, Department of Geography

Norman, OK, 73019

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E-mail: jakoch@ou.edu

Dr. Kirsten de Beurs

Chair, President's Associates Presidential Professor

Department of Geography and Environmental Sustainability

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Norman, OK, 73019

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Dr. Janis Campbell

Associate Professor of Research

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Dr. Faye Duchin

Professor of Economics

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School of Humanities and Social Sciences

Sage Labs Room 3408

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Troy, NY 12180

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Dr. Charles Vörösmarty

Professor and Distinguished Scientist

Department of Civil Engineering

The City College of New York

Steinman Hall, Rm T-513

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Dr. Darren Purcell

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