

# Vijay Lulla, PhD

## CONTACT INFORMATION

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**Home:** 7839 Eagle Valley Pass  
Indianapolis, IN-46214

**Office:** Department of Geography  
425 University Blvd, CA-207C  
Indiana University-Purdue University Indianapolis  
Indianapolis, IN 46202

**Phone:** (317) 278-5773 office  
(812) 239-8943 mobile

**Email:** [vijaylulla@gmail.com](mailto:vijaylulla@gmail.com)

## EDUCATION

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2010-2012 **Postdoctoral Training** - Remote Sensing  
Indiana University-Purdue University Indianapolis

2005-2010 **Doctor of Philosophy** - Geography  
Concentration: Remote Sensing  
Indiana State University, Indiana, USA

2002-2005 **Masters of Arts** - Geography  
Indiana State University, Indiana, USA

1996-2000 **Bachelors of Engineering** - Electrical Engineering  
Maharaja Sayajirao University, Baroda, Gujarat, India

## ACADEMIC APPOINTMENTS

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**2013-Present** **Assistant Professor**, Department of Geography  
Indiana University-Purdue University Indianapolis

2006-2010 **Graduate Research Assistant (PhD)**  
Indiana State University

2002-2005 **Graduate Research Assistant (MA)**  
Indiana State University

## NON-ACADEMIC APPOINTMENTS

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2012-2013 **GIS Scientist**,  
Environmental Solutions & Innovations Inc., Cincinnati, OH

2010-2011 **GIS Consultant**  
Vertical Integrated Applications (VIA), Indianapolis, IN

## PROFESSIONAL ORGANIZATION MEMBERSHIPS

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<b>2017-Present</b>	Indiana Academy of Social Science (IASS)
<b>2015-Present</b>	IndyR User Group
<b>2014-2016</b>	Association of American Geographers (AAG)
<b>2016-2017</b>	Indiana Academy of Science (IAS)

## PROFESSIONAL DEVELOPMENT

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<b>2015</b>	<b>Large Scale Text Analysis Using R</b> Humanities Intensive Learning and Training (HILT) Department of History, Indiana University-Purdue University Indianapolis
<b>2014</b>	<b>High Performance Computing Workshop</b> University Information Technology Services (UITS) Indiana University

## AWARDS AND RECOGNITION

### RESEARCH

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- Benjamin J. Moulton Ph.D. Award (Indiana State University) 2006.

### SERVICE

- Outstanding Service Award. Department of Geography, Geology, and Anthropology, Indiana State University, 2007.

## TEACHING

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TEACHING ASSIGNMENTS: \* Combined course evaluations for undergraduate/graduate sections

### UNDERGRADUATE

Course	Course name	Semester	Format	n	Evaluation (Out of 5)	Response rate (%)
<b>G-336</b>	Environmental Remote Sensing	Fa 2013	In-person	12	4.1	43.8
		Fa 2015	In-person	9	3.88	44
		Fa 2016*	In-person	14	4.8	58
		Fa 2017*	In-person	16	4.69	58
		Fa 2018*	In-person	8	4.12	36
<b>G-337</b>	Computer Cartography & Graphics	Fa 2013	In-person	14	4.8	46.7
		Fa 2014	Hybrid	10	4.2	50
		Fa 2015	Online	15	4.67	60
		Fa 2016	Online	30	4.73	30
		Fa 2017*	Online	19	4.84	43
		Fa 2018*	Online	18	4.71	45

<b>G-438</b>	Advanced GIS	Sp 2014	In-person	5	4.5	100
		Sp 2014	In-person	4	4.4	100
<b>G-436</b>	Advanced Remote Sensing	Sp 2015	In-person	7	4.6	85.7
		Sp 2016*	In-person	3	4.83	90
		Sp 2017*	In-person	11	4.74	57
		Sp 2018*	In-person	10	5	50
		Sp 2019*	In-person	8	4.96	50
<b>G-390</b>	Programming and databases for geocomputation	Sp 2016*	In-person	5	4.92	50
		Sp 2017*	In-person	4	4.89	50
		Sp 2018*	In-person	7	5	50
		Sp 2019*	In-person	11	4.25	55

## GRADUATE

Course	Course name	Semester	Format	n	Evaluation (Out of 5)	Response rate (%)
<b>G-535</b>	Environmental Remote sensing (Graduate)	Fa 2013	In-person	6	4.4	100
		Fa 2015	In-person	12	4.79	67
		Fa 2016*	In-person	10	4.8	58
		Fa 2017*	In-person	5	4.69	58
		Fa 2018*	In-person	7	4.12	36
<b>G-537</b>	Computer Cartography & Graphics (Graduate)	Fa 2013	In-person	12	4.9	75
		Fa 2014	Hybrid	8	4.5	50
		Fa 2015	Online	9	4.71	56
		Fa 2016	Online	6	4.7	33
		Fa 2017*	Online	9	4.84	43
		Fa 2018*	Online	2	4.71	45
<b>G-539</b>	Advanced GIS	Sp 2014	In-person	10	3.9	100
<b>G-536</b>	Advanced Remote Sensing (Graduate)	Sp 2014	In-person	6	4.5	83.3
		Sp 2015	In-person	4	4.8	50
		Sp 2016*	In-person	7	4.83	90
		Sp 2017*	In-person	3	4.74	57
		Sp 2018*	In-person	3	5	50
		Sp 2019*	In-person	3	4.96	50
<b>G-590</b>	Programming and databases for geocomputation (Graduate)	Sp 2016*	In-person	7	4.92	50
		Sp 2017*	In-person	10	4.89	50
		Sp 2018*	In-person	5	5	50
		Sp 2019*	In-person	0	0	0

## MENTORING

### GRADUATE STUDENT MENTORING

Student	Role	Term completed
Nan Ye	Com. member	Fall 2013
Ben Sperl	Com. member	Fall 2014
Li Li	Com. member	Fall 2014

Steve King	Com. member	Fall 2014
Zachary Vavra	Chairperson	Spring 2015
Miranda Hancock (formerly Ritchie)	Chairperson	Spring 2015
April Douglas	Com. member	Spring 2015
Fahed Alhaj Mohamad	Com. member	Spring 2015
Mandi Seger	Com. member	Spring 2015
Peng Jin	Com. member	Fall 2018
Heather Catlett	Chairperson	Spring 2014 - Present
Brian Hanson	Com. member	Fall 2018
Corrine Leader	Com. member	Fall 2016 - Present
Kayla Swoveland (formerly Kaufmann)	Com. member	Fall 2016 - Present
Ashley Davis	Com. member	Fall 2016 - Present
Laurie Fancher	Com. member	Fall 2016 - Present
Ana de-leyva Respondek	Com. member	Fall 2016 - Present
Payton Fisher	Chairperson	Fall 2017 - Present
Isaac Rowland	Chairperson	Fall 2018 - Present
Garret Merle	Chairperson	Fall 2018 - Present

#### *UNDERGRADUATE STUDENT MENTORING*

<b>Student</b>	<b>Role</b>	<b>Duration</b>	<b>Department</b>
Karen Arnold	Supervisor for IndianaView Scholarship	June 2017 - September 2017	Informatics / GIS Certificate
Matt Wyrick	Committee member of capstone project	January 2013 – December 2013	Geography
Lars Larsen	Advised student on geographic aspect of his capstone project	June 2013 – December 2013	Informatics

#### **TEACHING ADMINISTRATION AND CURRICULUM DEVELOPMENT**

**2014**                      **IU Online Curriculum Enhancement Grant (IU CEG)**  
 Role: Co-Principal Investigator  
 Agency: Indiana University  
 Amount: \$14,000

#### **RESEARCH/CREATIVE ACTIVITY**

##### **GRANTS/FELLOWSHIPS IN RESEARCH**

##### *FUNDED RESEARCH GRANTS*

**2015-2016**                      **Flight Paths: Mapping our Changing Neighborhoods**  
 Role: Subcontract Co-Principal Investigator  
 Agency: National Endowment for Humanities (NEH) / Digital Projects for the Public -- Discovery Grant (MT-253242-17)

Amount: \$30,000

**2016-2019**

**Flight Paths: Mapping our Changing Neighborhoods**

Role: Subcontract Co-Principal Investigator

Agency: National Endowment for Humanities (NEH) / Digital Projects for the Public -- Prototyping Grant (MT-263872-19)

Amount: \$100,000

*RESEARCH PRESENTATIONS*

Regional

- 2018**     **Vijay Lulla**, and Owen J. Dwyer III. Visualizing Neighborhood Racial Transition in Indianapolis 1990-2010. *Indiana Academy of Social Science*, New Albany, IN. October 12, 2018
- 2017**     **Vijay Lulla**, and Owen J. Dwyer III. Investigating racial segregation in Indianapolis using Kernel Density Estimation. *Indiana Academy of Social Science*, Crawfordsville, IN. October 13, 2017.
- 2017**     Banerjee A., and **Lulla, V.** The Statistical Mechanics of Urban Road Networks under Stress. *NetSci* 2017, Indianapolis, IN. June 19, 2017.

National

- 2016**     **Vijay Lulla**. Comparison of programming languages for geoprocessing. *Association of American Geographers Annual Meeting*, San Francisco, CA. March 29-April 2.
- 2015**     **Vijay Lulla**, Anirruddha Banerjee. Some ideas from Open Source worth embracing in GIS. *Association of American Geographers Annual Meeting*, Chicago, IL. 20-24 April.
- 2014**     **Vijay Lulla**. Levee identification from LiDAR data. *Association of American Geographers Annual Meeting*, Tampa, FL, 8–12 April.
- 2009**     Speer, J. H. and **V. Lulla**. Pandora Moth outbreaks recorded in ITRDB chronologies across the entire range of Ponderosa Pine in Western United States. *Association of American Geographers Annual Meeting*, Las Vegas, NV, 22–27 March.

International

- 2019**     Richard Buning, and **Vijay Lulla**. Tracking Tourist Spatial-Temporal Behavior using Bike Share and Big Data. *29th Annual Council of Australian Tourism and Hospitality Education (CAUTHE) Conference*. Cairns, Australia. February 11-14, 2019.
- 2014**     James H. Speer, Kristen de Graauw, Dorothy J. Rosene, Stephen P. Aldrich, and **Vijay O. Lulla**. Pandora Moth as an Example of a Species-Wide Network for Analysis of Insect Outbreaks. *9th International Conference on Dendrochronology*, Melbourne, Australia, 13–17 January.

## SERVICE

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### UNIVERSITY SERVICE

#### DEPARTMENT

Dates	Role	Activity
Spring 2017 – Spring 2019	Presenter (one whole day each semester)	Geography/IUPUI advocacy – Monrovia High School
2016.09.28	Presenter	Student Recruitment – Ben Davis High School
2016.11.06 – 2016.11.08	Logistics	Assist with Departmental Review process

#### SCHOOL

Dates	Role	Activity
2017 – 2018	Member	Nominating Committee
2016 – 2019	Member	Library Committee

#### CAMPUS

Dates	Role	Activity
December 2016	Reviewer	Review internal grant

### PROFESSIONAL SERVICE

Date	Activity	Journal/Institution
2013	Peer review	Geocarto International
2015	Peer review	Geoforum
2015	Peer review	Geocarto International
2016	Peer review	Geography Compass
2016	Technical report review	Friedman Foundation for Education Choice
2018	Peer review	Geocarto International
2018	Peer review	GeoHealth

## PUBLICATIONS

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### RESEARCH/CREATIVE ACTIVITY

Journal Articles: \* In-rank

1. \* **Vijay Lulla**, Owen J. Dwyer. (Accepted). Racial Segregation in Indianapolis, 1990-2010. *Midwest Social Sciences Journal (formerly Journal of Indiana Academy of Social Sciences)*.
2. \* Perry Hardin, **Vijay Lulla**, Ryan Jensen, John Jensen (2018). Small Unmanned Aerial Systems (sUAS) for Environmental Remote Sensing: Challenges and Opportunities revisited. *GIScience & Remote Sensing* 56(2):309-322 doi: <https://doi.org/10.1080/15481603.2018.1510088>

3. \* Daniel P. Johnson, J. Jeremy Webber, Kavya Urs Beerval Ravichandra, **Vijay Lulla**, Austin C. Stanforth.(2014) Spatiotemporal variations in heat-related health risk in three Midwestern US cities between 1990 and 2010. *Geocarto International* 29(1): 65-84 doi: 10.1080/10106049.2013.799718
4. Johnson, D. P., Stanforth, A. C., **Lulla, V.**, Lubber, G. C. (2012) Developing an applied extreme heat vulnerability index. *Applied Geography* 35(1-2): 23-31.
5. Johnson, D. P., **Lulla, V.**, Stanforth, A. C., Weber, J. (2011) Remote sensing of heat-related risks: the trend towards coupling socioeconomic and remotely sensed data. *Geography Compass* 5(10): 767-780.
6. Jensen, R. R., M. W. Jackson, and **V. Lulla** (2008) Single line correction method to remove aircraft roll errors in hyperspectral imagery. *Journal of Applied Remote Sensing* 2:023529
7. Jensen, R. R., P. J. Hardin, M. F. Bekker, D. A. Farnes, **V. Lulla**, and A. Hardin (2009) Modeling Urban Leaf Area Index with AISA+ Hyperspectral Data. *Applied Geography*. 29(3), 320–332
8. Jensen, R. R., G. Yu, P. Mausel, **V. Lulla**, E. Moran and E. Brondizio (2004). An integrated approach to Amazon research – the Amazon Information System. *Geocarto International* 19(3):55–59

#### Non-refereed

1. \* Fabio Famoso, Jeffrey S. Wilson, Pietro Monteforte, Rosario Lanzafame, Sebastian Brusca, and **Vijay Lulla** (2017). Measurement and modeling of ground-level ozone concentration in Catania, Italy using biophysical remote sensing and GIS. *International Journal of Applied Engineering Research* 12(21):10551-10562

#### Book Chapters

1. \* **Lulla V.** and A. Banerjee (2016). Some database concepts for use in geographic analysis. David. Cowen(Ed.), *STEM and GIS in Higher Education*. (pp 295-309) ESRI Press. ISBN: 9781589484481
2. \* **Lulla V.** and R. Jensen (2016). Best practices for Urban hyperspectral remote sensing data acquisition and processing. Gatrell, J., Jensen R., Patterson M., & Hoalst-Pullen N. (eds), *Urban sustainability: Praxis & Place*. (pp 43-54) Heidelberg: Springer. ISBN: 978-3-319-26218-5
3. \* **Lulla V.**, Austin Stanforth, Natasha Prudent, Daniel Johnson, and George Lubber. (2015). Modeling Vulnerable Populations in the Global Context of a Changing Climate. Ahn Roy, Burke Thomas, McGahan Anita M. (Eds.), *Innovations for Healthy Urbanization*. (pp 193–208). Springer. ISBN: 978-1-4899-7597-3.
4. \* D. P. Johnson, **V. Lulla**, and A. C. Stanforth. (2013). Intra-urban variations in vulnerability associated with extreme heat events in relationship to a changing climate. In Sara Pryor's (Ed), *Climate change in the midwest: impacts, risks, vulnerability, and adaptation*. (pp. 134–145). Indiana University Press.
5. **Lulla, V.** (2009). Hyperspectral applications in urban geography. In J. D. Gatrell & R. R. Jensen (Eds.), *Planning and socioeconomic applications* (Vol. 1, pp. 79–86). Springer.
6. Dando, W. A. and **V. Lulla**. (2007). World agriculture and food provisioning. In William A. Dando's *Climate change and variations: A primer for teachers*. Vol. I. Washington, D.C: National Council for Geographic Education, pp. 157–165.

#### Conference Proceedings

1. Gonser, R., R. R. Jensen, **V. Lulla**, and E. McCluskey. (2007). Deer-vehicle collisions in western Indiana. *21<sup>st</sup> Biennial Workshop on Aerial Photography, Videography, and High Resolution Digital Imagery for Resource Assessment*. May 15–17. Terre Haute, Indiana.