

# Luis Guillermo Natera Orozco

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## EDUCATION

- Ph.D. Network Science, Central European University, Budapest, 2020 (expected)  
Dissertation: *Multilayer Urban Networks*  
Advisor: Gerardo Iñiguez  
Co-Advisor: Michael Szell
- M.S. Communication of Science and Culture, ITESO, Tlaquepaque. Mexico, 2015  
Dissertation: *La construcción de comunidades en red sobre conocimiento urbano en el marco del crecimiento urbano: Los blogs de espacio público*  
Advisor: Eduardo Quijano  
Committee: Rossana Reguillo, Francisco Morfín
- B.Arch. Architecture, ITESO, Tlaquepaque. Mexico, 2010

## ACADEMIC AFFILIATIONS

- 2016–17 Executive Coordinator Signa\_Lab, Department of Sociocultural Studies, ITESO, Tlaquepaque. Mexico
- 2015 Visiting Student, Center for Civic Media, Media Lab, Massachusetts Institute of Technology, Cambridge, MA. USA
- 2008 Visiting Student, Universidad de Valparaíso, Valparaíso, Chile.

## RESEARCH AND TEACHING INTERESTS

Network science  
Urban planning and mobility  
Big data for social good  
Data science and data visualization

## PUBLICATIONS

### Journal Article Preprints

- 2019 Natera Orozco, L. G., Battiston, F., Iñiguez, G., Szell, M. “Data-driven strategies for optimal bicycle network growth” *ArXiv ID: 1907.07080*.

## Peer-Reviewed Book Chapters

- 2019 Natera Orozco, L. G. “Un cambio de la comunicación gubernamental y política. De los medios de comunicación a las redes sociales.” *Informe Anual Q Medios 2018*, edited by Bernal, G. Jalisco, Mexico: ITESO.
- 2018 Natera Orozco, L. G., Reguillo, R. “Comunicación y cambio social: participación política e internet en Jalisco” *Enciclopedia Jaliscience de la Comunicación.*, edited by Orozco, G., Reguillo, R. Jalisco, Mexico: Universidad de Guadalajara.

## Reviews and Other Articles

- 2016 Natera Orozco, L. G., (as Signa\_Lab) “Battle of the hashtags: Mapping the online conversation surrounding Mexico’s gas price” *Global Voices*.

## Proceedings, Reports, and Working Papers

- 2019 Natera Orozco, L. G., Deritei, D., Vancso, A., Vasarhelyi, O. “Quantifying life quality as walkability on urban networks” In: Cherifi H., Gaito S., Mendes J., Moro E., Rocha L. (eds) *Complex Networks and Their Applications VIII. COMPLEX NETWORKS 2019. Studies in Computational Intelligence*, 2019, pp. 905–918.
- 2014 Natera Orozco, L. G. “Comunicación, ciudad e internet: flujos de información urbana en entornos digitales” VI Seminario Internacional de Investigación en Urbanismo. Bogota, Colombia.

## Manuscripts in Preparation and Development

- 2019 Natera Orozco, L. G., Battiston, F., Iñiguez, G., Szell, M. “Cities classification by their multiplex infrastructure network” Target: *Transport Findings*
- 2019 Natera Orozco, L. G., Battiston, F., Iñiguez, G., Szell, M. “Dynamics of bicycle sharing systems, an analysis of 120M bike trips” Target: *Environment and Planning B: Urban Analytics and City Science*

## INVITED TALKS

- 2019 Data Science MeetUp. Timisoara, Romania.
- 2019 FabLab, West University of Timisoara. Timisoara, Romania.
- 2019 4D Cities, Multi-Actor Systems Department, TU Delft. Delft, Netherlands.
- 2019 Mobile and Social Computing Lab, Fondazione Bruno Kessler. Trento, Italy.
- 2019 ANET-Talks, ANET Lab, Hungarian Academy of Science. Budapest, Hungary.
- 2018 Signa\_Lab, ITESO. Tlaquepaque, Mexico.
- 2015 Encuentro de Urbanismo Alternativo, Centro Cultural de España en México. Mexico City, Mexico.
- 2015 II Simposio de ciudades y territorios incluyentes “Derecho a la Ciudad”, Universidad Autónoma de Yucatán. Merida, Mexico.

## CONFERENCE ACTIVITY

### Conference Presentations

Presenting author *italicized*, if other.

- 2019 Natera Orozco, L. G., Deritei, D., Vancso, A., Vasarhelyi, O. “Quantifying life quality as walkability on urban networks” VIII Conference in Complex Networks and their Applications. Lisbon, Portugal. December 12-14.
- 2019 Natera Orozco, L. G., Battiston, F., Iñiguez González, G., and Szell, M. “Multiplex urban fingerprints for bicycle infrastructure planning” Cycling Research Board Meeting. Delft, Netherlands. October 31-1 November.
- 2019 Natera Orozco, L. G., Battiston, F., Iñiguez González, G., and Szell, M. “Multiplex urban fingerprints for bicycle infrastructure planning” 2019 NetSci. Burlington, Vermont. May 27-31.
- 2018 Natera Orozco, L. G., Battiston, F., Szell, M. “Characterizing cities from their multiplex infrastructure patterns” SICCC Workshop ComplexCity@PoliTo. Turin, Italy.
- 2013 Natera Orozco, L. G. “Quiosco Libre, reading network in the public space” Future of Places. Stockholm, Sweden.

### Posters

- 2018 Natera, L. “Budapest. Multilayer urban network” State of the Map. Milan, Italy.
- 2017 Natera, L., Ábrego, V. “The evolution of twitter during the US elections” Data Stories. Budapest, Hungary.

## FELLOWSHIPS, GRANTS, AND AWARDS

- 2019 Registration grant. International Conference in Complex Networks and their Applications
- 2019 Ph.D. conference travel grant. CEU Budapest Foundation
- 2018, 19 Travel grant. Department of Network and Data Science, Central European University
- 2015 Academic Stay at MIT. Mexican National Council of Science and Technology
- 2013 Master Studies Grant. Mexican National Council of Science and Technology

## TEACHING EXPERIENCE

### ITESO

- 2019 Network Science (Summer 2019) Invited lecturer, co-taught with Diego Arredondo (ITESO)
- 2017 Network Science (Summer 2017) Co-taught with Emma Towlson (Northeastern University), Sean P. Cornelius (Northeastern University), and Ricardo Zavala (ITESO).
- 2015–17 Communication, Culture and Society (Spring 2016, 2017)
- 2015–16 Social Systems Theory (Fall 2015, 2016)

## **RESEARCH EXPERIENCE**

- 2015–17    Researcher, Anillo Primavera.  
Principal Investigator: Sandra Valdes.
- 2016        Researcher, Online harassment of journalists and activists in Mexico, Jigsaw (formerly Google Ideas) and Global Voices.  
Principal Investigator: Ellery Biddle.
- 2012        Researcher, Public Transportation in Guadalajara.  
Principal Investigator: Mario Silva.

## **ACADEMIC VISITS**

- 2015        Center for Civic Media, MIT Media Lab, Boston, USA, Jan - Jun

## **SERVICE**

### **Journal Peer Review**

Scientific Data

### **Service to Department**

Ph.D. program representative, Central European University, DNDS, 2019-20  
Co-organizer Data Stories visualization exhibition, Central European University, DNDS, 2018-19

## **PROFESSIONAL AFFILIATIONS**

Network Science Society  
Python Software Foundation  
SICC Italian Society for Chaos and Complexity

## **PROFESSIONAL EXPERIENCE**

- 2019        Maven7US City Data Scientist. Budapest, Hungary.
- 2015–17    Mesura, Networks and Data Specialist. Guadalajara, Mexico.
- 2014        Socialinks, Networks Consultant. Guadalajara, Mexico.
- 2014        Institute for Mobility and Transportation of the State of Jalisco, Mobility Analyst. Zapopan, Mexico.

## **SKILLS AND METHODS**

### **Statistical and Computational Methods**

Network science methods

Programming, data wrangling and visualization: Python

Web: basic HTML/Javascript, Wordpress, Jekyll

Network visualization: Gephi, Cytoscape

Version control: Git + GitHub

Other:  $\text{\LaTeX}$ , Adobe CS, CAD, QGIS, Blender

### **Languages**

Spanish    Native

English    Professional proficiency

Updated December 2019