# Luis Guillermo Natera Orozco

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## EDUCATION

**Ph.D.**    Network Science, Central European University, Budapest, 2021 (expected)
Dissertation: *Multilayer Urban Networks*
Advisor: Federico Battiston
Co-Advisor: Michael Szell

**M.A.**    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

### Peer-Reviewed Journal Articles

2018    Natera Orozco, L.G., Battiston, F., Iñiguez, G., Szell, M. "Extracting the multimodal fingerprint of urban transportation networks" *Transport Findings*, 2020.
`https://doi.org/10.32866/001c.13171`

## 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 Seminatio Internacional de Investigación en Urbanismo. Bogota, Colombia.

## Manuscripts in Preparation and Development

2020  Natera Orozco, L. G., Battiston, F., Iñiguez, G., Szell, M. "Cities classification by their multiplex infrastructure network" Target: *Transport Findings*

2020  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. |
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| 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. |
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| 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" SICC 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. |
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| 2017 | Natera, L., Ábrego, V. "The evolution of twitter during the US elections" Data Stories. Budapest, Hungary. |

## FELLOWSHIPS, GRANTS, AND AWARDS

| 2020 | Award for Advanced Doctoral Students. Central European University |
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| 2019 | Best lighting talk award. International Conference in Complex Networks and their Applications. |
| 2019 | Registration grant. International Conference in Complex Networks and their Applications |
| 2019 | Ph.D. conference travel grant. CEU Budapest Foundation |
| 2019 | Registration grant. NetSci |
| 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

### Central European University

2020    Teaching Assistant, Scientific Python

2019    Teaching Assistant, Statistical Methods in Network Science

### 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

2020        ITESM Urban Observatory, Network Scientist Consultant. Guadalajara, Mexico.

2019–20   Latin American Capital, Senior Data Scientist Consultant. Guadalajara, Mexico.

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, GitLab, BitBucket

Other: LaTeX, Adobe CS, CAD, QGIS, Blender

### Languages

Spanish   Native

English   Professional proficiency

Updated June 2020