



SAN DIEGO STATE
UNIVERSITY

CURRICULUM VITAE

Atsushi Nara

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EDUCATION

2011 Ph.D.	Arizona State University Geography
2005 M.S.	University of Utah Geography
2000 B.S.	Shimane University Environmental Engineering

ACADEMIC POSITIONS

2019 – Present San Diego State University	Associate Professor Geography
2014 – 2019 San Diego State University	Assistant Professor Geography
2012 – 2014 University of Oklahoma	Research Scientist Geographic Information Science
2011– 2012 University of Maryland, College Park	Research Associate/Lecturer Geography
2011 University of Oklahoma	Post-Doctoral Research Associate Geographic Information Science
2010 University of Tokyo	Research Scientist Engineering
2008 – 2010 National Institute of Advanced Industrial Science and Technology, Japan	Research Scientist Geographic Information Science
2005 – 2008 Arizona State University	Research Assistant/Teaching Assistant Geography

PROFESSIONAL GROWTH

(*) marks non-first, corresponding author

(+) marks publication joint-authored with students

Refereed Journal Articles

1. +Jin, C., *Nara, A., Yang, J-A, & Tsou, M-H. (Accepted). Similarity Measurement on Human Mobility Data with Spatially Weighted Structural Similarity Index (SpSSIM), *Transactions in GIS*.
2. +Seidl, D., Jankowski, P., Clarke, K., & Nara, A. (Accepted). Please Enter Your Home Location: Geoprivacy Attitudes and Personal Location Masking Strategies of Internet Users, *Annals of the American Association of Geographers*.
3. Gibbons, J., Malouf, R., Spitzberg, B., Martinez, L., Appleyard, B., Thompson, C., Nara, A., & Tsou, M-H. (2019). Twitter-based measures of neighborhood sentiment as predictors of residential population health. *PLOS ONE*, 14(7), e0219550. <https://doi.org/10.1371/journal.pone.0219550>
4. +Seidl, D., Jankowski, P., & Nara, A. (2018). An Empirical Test of Household Identification Risk in Geomasked Maps, *Cartography and Geographic Information Science*, 0(0), 1–14. <https://doi.org/10.1080/15230406.2018.1544932>
5. +Şalap, S., Jankowski, P., Clarke, K., Kyriakidis, P., & Nara, A. (2018). A Meta-Modelling Approach for Spatio-Temporal Uncertainty and Sensitivity Analysis: An Application for a Cellular Automata based Urban Growth and Land Use Change Model. *International Journal of Geographic Information Science*. 32(4), 637-662. <https://doi.org/10.1080/13658816.2017.1406944>.
6. Nara, A., Yang, X., Ghanipoor-Machiani, S., & Tsou, M-H. (2017). An Integrated Evacuation Decision Support System Framework with Social Perception Analysis and Dynamic Population Estimation. *International Journal of Disaster Risk Reduction*. 25, 190-201. <https://doi.org/10.1016/j.ijdrr.2017.09.020>.
7. Gibbons, J., Nara, A., & Appleyard, B. (2017). Exploring the Imprint of Social Media Networks on Neighborhood Community through the Lens of Gentrification. *Environment and Planning B: Urban Analytics and City Science*. <https://doi.org/10.1177/2399808317728289>.
8. +Issa, E., Tsou, M-H., Nara, A., & Spitzberg, B. (2017). Understanding the spatio-temporal characteristics of Twitter data with geotagged and non-geotagged content: two case studies with the topic of flu and Ted (movie). *Annals of GIS*. 23(3), 219-235. <http://dx.doi.org/10.1080/19475683.2017.1343257>.
9. Schiaffino, M., Nara, A., & Liang, M. (2016). Language services in hospitals vary by ownership and location. *Health Affairs*, 35(8), 1399-1403. <https://doi.org/10.1377/hlthaff.2015.0955>.
10. +Luo, N., An, L., Nara, A., Yan, X., & Zhao, W. (2016). GIS-based multielement source analysis of dustfall in Beijing: A study of 40 major and trace elements. *Chemosphere*, 152, 123-131. <https://doi.org/10.1016/j.chemosphere.2016.02.099>.
11. Yuan, M., Nara, A., & Bothwell, J. (2014). Space–time representation and analytics. *Annals of GIS*, 20(1), 1-9. <http://dx.doi.org/10.1080/19475683.2013.862301>.
12. Torrens, P. M., & Nara, A. (2012). Polyspatial agents for multi-Scale urban simulation and regional policy analysis. *Regional Science Policy & Practice*, 4(4), 419-445. <https://doi.org/10.1111/j.1757-7802.2012.01084.x>.
13. Torrens, P. M., Nara, A., Li, X., Zhu, H., Griffin, W. A., & Brown, S. B. (2012). An extensible simulation environment and movement metrics for testing walking behavior in agent-based models. *Computers, Environment and Urban Systems*, 36(1), 1-17. <https://doi.org/10.1016/j.compenvurbsys.2011.07.005>.
14. Izumi, K., Nara, A., Iseki, H., Suzuki, T., Nambu, K., Chinzei K., Murakawa, M., & Sakanasi, H. (2011). Workflow monitoring by data gathering from a surgical room and surgical strategic desk. *The Journal of the Institute of Electronics, Information and Communication Engineers*, 94(4), 288-293. <https://ci.nii.ac.jp/naid/110008593838>. [In Japanese].

15. Suzuki, T., **Nara, A.**, Sakurai, Y., Izumi, K., Nambu, K., & Iseki, H. (2009). Surgical control center. *International Journal of Computer Assisted Radiology and Surgery*, 4(Suppl.1), S232-S234. <https://doi.org/10.1007/s11548-009-0341-y>.
16. Torrens, P. M., & **Nara, A.** (2007). Modeling gentrification dynamics: A hybrid approach. *Computers, Environment and Urban Systems*, 31(3), 337-361. <https://doi.org/10.1016/j.compenvurbsys.2006.07.004>.
17. Kawabata, M., Iwata, O., Esaki, R., Kurata, Y., **Nara, A.**, Hamada, Y., & Yamazaki, Y. (2006). Investigation of Geographic Information Science education systems at 14 universities in North America. *Theory and Applications of GIS*, 14(2), 107-113. <http://doi.org/10.5638/thagis.14.179>. [In Japanese].

Refereed Book Chapters

1. Thompson, C. A., Ilango, S., Gibbons, J., **Nara, A.**, & Tsou, M.-H. (2019). Systematic Review of Geospatial Approaches to Breast Cancer Epidemiology. In D. Berrigan & N. A. Berger (Eds.), *Geospatial Approaches to Energy Balance and Breast Cancer*, 141-160. https://doi.org/10.1007/978-3-030-18408-7_7.
2. **Nara, A.**, Tsou, M-H., +Yang, J-A., & +Huang C-C. (2018). The opportunities and challenges with social media and big data for research in human dynamics. In S-L. Shaw & D. Sui (Eds.), *Human Dynamics Research in Smart and Connected Communities*. https://doi.org/10.1007/978-3-319-73247-3_12.
3. **Nara, A.** (2018). Space-Time GIS and Its Evolution. In: Huang, B. (Ed.), *Comprehensive Geographic Information Systems*. 1, 287-302. Oxford: Elsevier. <http://dx.doi.org/10.1016/B978-0-12-409548-9.09626-3>.
4. **Nara, A.**, +Allen, C., & Izumi, K. (2017). Surgical Phase Recognition using Movement Data from Video Imagery and Location Sensor Data. In Griffith D., Chun Y., Dean D. (Eds.), *Advances in Geocomputation*. 229-237. Springer, Cham. https://doi.org/10.1007/978-3-319-22786-3_21.
5. **Nara, A.** (2017). *Data Model, Moving Objects*. In Richardson, D., Castree, N., Goodchild, M. F., Kobayashi, A., Liu, W., Marston, R. A., & Al-Hindi, K. F. (Eds.) *International Encyclopedia of Geography: People, the Earth, Environment, and Technology*. pp. 1–9. John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781118786352.wbieg0896>.
6. Yuan, M., & **Nara, A.** (2015). Space-time Analytics of Tracks for the Understanding of Patterns of Life. In Kwan, M.-P., Richardson, D., Wang, D., Zhou, C. (Eds.) *Space-Time Integration in Geography and GIScience - Research Frontiers in the US and China*, 373-398. Springer Netherlands. https://doi.org/10.1007/978-94-017-9205-9_20.
7. **Nara, A.**, Izumi, K., Iseki, H., Suzuki, T., Nambu, K., & Sakurai, Y. (2011). Surgical workflow monitoring based on trajectory data mining. In T. Onada, D. Bekki, & E. McCready (Eds.), *New Frontiers in Artificial Intelligence*, 283-291. Springer Berlin Heidelberg. https://doi.org/10.1007%2F978-3-642-25655-4_27.
8. Griffin, W., Schmidt, S., **Nara, A.**, Torrens, P.M., & Sechler, C. (2007). Integrating ABM and GIS to model typologies of playgroup dynamics in preschool children. In M.J. North, C.M. Macal, and D.L. Sallach (eds.), *ABM2007: Complex Interaction and Social Emergence*. Argonne, IL, Argonne National Labs and University of Chicago, 17-24.

Refereed Proceedings

1. **Nara, A.**, +Allen, C., & Izumi, K. (2015). Surgical Phase Recognition using Movement Data from Video Imagery and Location Sensor Data. *Proceedings of the 13th International Conference of Geocomputation 2015*, University of Texas at Dallas, TX.
2. **Nara, A.**, & Torrens, P.M. (2011). Trajectory Data Mining: Classification and Spatio-Temporal Visualization of Mobile Objects. In Cheng, T., Longley, P., Ellul, C., and Chow, A. (eds), *Proceedings of the 11th International Conference of Geocomputation 2011*, University College London, London, 338-344.

3. **Nara, A.**, Izumi, K., Iseki, H., Suzuki, T., Nambu, K., & Sakurai, Y. (2009). Trajectory data mining for surgical workflow analysis. In Lees, B.G. & Laffan, S.W. (eds), *Proceedings of the 10th International Conference on GeoComputation 2009*, UNSW, Sydney.
4. **Nara, A.**, Izumi, K., Iseki, H., Suzuki, T., Nambu, K., & Sakurai, Y. (2009). Surgical workflow analysis based on staff's trajectory patterns. *Proceedings of the 1st Workshop on Modeling and Monitoring of Computer Assisted Interventions (M2CAI)*.
5. **Nara, A.**, Izumi, K., Iseki, H., Suzuki, T., Nambu, K., & Sakurai, Y. (2008). Spatial information technology to support the surgical headquarters. *Proceedings of the Japan society of computer aided surgery*, 10(3), 231-232. [In Japanese]
6. **Nara, A.** & Torrens, P.M. (2007). Spatial and temporal analysis of pedestrian egress behavior and efficiency. *Proceedings of Association of Computer Machinery (ACM) Advances in Geographic Information Systems*, 284-287.
7. **Nara, A.** & Torrens, P.M. (2007). Fractal Analysis of Pedestrian Egress Behavior and Efficiency. *Proceedings of the 9th International Conference on GeoComputation 2007*, National University of Ireland, Maynooth.
8. **Nara, A.** & Torrens, P.M. (2005). Simulating Inner-City Gentrification using Hybrid Models of Cellular Automata and Multi-Agent Systems. *Proceedings of the 8th International Conference on GeoComputation 2005*, University of Michigan, MI.

Non-refereed Proceedings

1. **Nara, A.**, Izumi, K., Suzuki, T., & Iseki, H. (2010). Surgical workflow recognition by trajectory data mining. *Papers and Proceedings of the Geographic Information Systems Association*, 19. [In Japanese]
2. Izumi, K., & **Nara, A.** (2010). Trajectory driven segmentation of surgical procedures. *Proceedings of the Digital Human Symposium 2010*. Digital Human Research Center, National Institute of Advanced Industrial Science and Technology.
3. **Nara, A.**, & Izumi, K. (2009). Spatio-temporal behaviors during a neurosurgical operation. *Proceedings of the Digital Human Symposium 2009*. Digital Human Research Center, National Institute of Advanced Industrial Science and Technology.

Book Reviews

1. **Nara, A.** (2015). Book Review: Visual Analytics of Movement by Andrienko, G., Andrienko, N., Bak, P., Keim, D., and Wrobel, S. *Annals of GIS*.
2. **Nara, A.** (2015). Book Review: Big Data: Techniques and Technologies in Geoinformatics by Karimi, H.A. (ed.). *International Journal of Geographic Information Science*.

Invited Presentations

1. **Nara, A.** (2019). Alert San Diego Request Tool (ART). *County of San Diego Innovation Day 2019*, County Operations Center, San Diego, CA, August 29.
2. **Nara, A.** (2019). Spatiotemporal Data Analytics on Large Event Data. *HDMA Lightning Talk Series*. Human Dynamics in the Mobile Age, San Diego State University, San Diego, CA, April 19.
3. Yuan, M., & **Nara, A.** (2017). Identify Movement and Interaction Patterns from Large GPS Data of Individual Entities (**Keynote presentation**). *The 2nd International Workshop on Interactive and Spatial Computing (IWISC)*, The University of Texas Dallas Institute for Interactive and Spatial Computing (UT-DIISC), April 13-14.
4. **Nara, A.**, Gibbons, J., & Appleyard, B. (2016). Examining Gentrification by Location-based Social Network Analysis. *2016 Summer Specialist Meeting on Human Dynamics and Big Data*, San Diego, CA, August 1-2.
5. **Nara, A.** (2016). Space-Time Analytics for Mining Behavior of Moving Objects. *Center for Business GIS and Spatial Analysis Speaker Series*, University of Redlands, May 25.

6. **Nara, A.** (2015). Spatial Analysis of Movement Patterns in Operating Rooms. *University Consortium for Geographic Information Science (UCGIS) Webinar Series*, December 3.
7. **Nara, A.** (2015). A data mashup for understanding fine scale human dynamics. *2015 Summer Specialist Meeting on Representing Human Dynamics with Big Data, Social Media, and Social Networks in Hyperlocal Contexts*, San Diego, CA, August 11-12.
8. **Nara, A.** (2015). Behavior mining from large moving object data. Big Data Science at SDSU. *Lightning Talks and Forums at the SDSU Student Research Symposium*, San Diego State University, San Diego, CA, March.
9. **Nara, A.** (2015). A cohesive space-time information framework for analyzing human dynamics in real and simulated environments. *Department of Geography Colloquium*, University of California Santa Barbara, Santa Barbara, CA, February.
10. **Nara, A.** (2014). Human Dynamics in the Mobile Age (HDMA): Modeling and Mining Human Dynamics. *Lunch-Time Lecture Series*. Institute for Behavioral and Community Health (IBACH), San Diego State University, San Diego, CA, December.
11. **Nara, A.** (2014). Integrating of Big Data and Spatio-Temporal Analytics for Modeling Human Dynamics: An Agent-Based Simulation Approach. *A specialist meeting on Human Dynamics in the Mobile Age: New Frontiers of Knowledge Discovery in Cyberspace and Big Data*, August 11-12.
12. **Nara, A.** (2014). Modeling and Mining Spatio-temporal Dynamics of Moving Objects. *HDMA Lightning Talk Series*. Human Dynamics in the Mobile Age, San Diego State University, San Diego, CA, April.
13. **Nara, A.** (2013). Track analysis of location based offender monitoring system. *National Institute of Justice, Technology Institute for Corrections*, Alexandria, VA, January.
14. **Nara, A.** (2012). Track analysis of location based offender monitoring system. *National Institute of Justice, Technology Institute for Corrections*, Washington D.C., August.
15. **Nara, A.** (2011). Track analysis of location based offender monitoring system. *National Institute of Justice, Technology Institute for Corrections*, Washington D.C., August.
16. **Nara, A.** (2008). Geographic Information Systems - tools for exploring spatial phenomena. *Center for Social Dynamics and Complexity*, Arizona State University, Tempe, AZ, April.
17. **Nara, A.** (2006). GIS and Agent-Based Models: application to gentrification dynamics. *School of Geographical Sciences*, Arizona State University, Tempe, AZ, October.

Conference Presentations

1. **Nara, A.**, +Luo, N., Ghanipoor Machiani, S., +Ahmadi, A., +Tominaga, K., & Tsou, M-H. (2019). Examining human decision making factors toward wildfire evacuation using Twitter. *Social Media & Society 2019*, Toronto, Canada, July 20-21.
2. +Jain, P., **Nara, A.**, Gibbons, J., & Thompson, C. (2019). Identifying Spatial Patterns and Predictors of Liver Cancer Incidence within Small Geographic Areas in California. *Society for Epidemiologic Research 52nd Annual Meeting*, Minneapolis, MN, June 18-21, 2019.
3. **Nara, A.** (2019). Data Analytics on Large Spatiotemporal Event Datasets. *Association of American Geographers 2019 Annual Meeting*, Washington D.C., April 3-7.
4. Luo, N. & **Nara, A.** (2019). An Activity-based Method to Simulate Finer-scale Human Daily Movement. *Association of American Geographers 2019 Annual Meeting*, Washington D.C., April 3-7.
5. +Hawks, J. R., Mendoza-Vasquez, A., **Nara, A.**, Walsh-Buhi, E.R., & Madanat, H. (2019). Diet on Instagram: A Case Study of What People Post When Trying to Lose Weight. *Society for Behavioral Medicine 40th Annual Meeting and Scientific Sessions 2019*, Washington, D.C., March 6-9. (Poster)
6. Dony, C., Magdy, A., Rey, S., **Nara, A.**, Herman, T., & Solem, M. (2019). RPP for geocomputation: partnering on curriculum in geography and computer science. *RESPECT (Research on Equity & Sustained Participation in Engineering, Computing, & Technology) 2019*, Minneapolis, MN, February 27. (Poster)
7. +Dozier, J., McFarland, K., Ghanipoor-Machiani, S., **Nara, A.**, Yang, X., & Tsou, M-H. (2019).

Improve Disaster Communication in Hyperlocal Online and Offline Communities Using Social Media: A Case Study of the 2015 Nepal Earthquake. *The 2019 Transportation Research Board (TRB) Annual Meeting*, Washington D.C., January 13-17. (Poster)

8. Kinoshita, A., **Nara, A.**, and +Luo, N. (2018). Exploring spatial and temporal trends between wildfires, climate, and human development in the contiguous United States. *American Geophysical Union (AGU) 2018 Fall Meeting*, Washington, D.C., December 10-14. (Poster)
9. +Jin, C., **Nara, A.**, Tsou, M-H., Gibbons, J., Murphy, J., & Thompson, C. (2018). Identifying geographic disparities in breast cancer mortality in California. *American Public Health Association (APHA) 2018 Annual Meeting & Expo*, San Diego, CA, November 10-14.
10. Oren, E., Purnajo, I., Martinez, L., Islam, T., Hensley, E., Jain, P., **Nara, A.**, & Tsou M-H. (2018). Using Social Media to Complement Hepatitis A Outbreak Efforts. *American Public Health Association (APHA) 2018 Annual Meeting & Expo*, San Diego, CA, November 10-14.
11. +Jin, C., ***Nara, A.**, Yang, J-A, & Tsou, M-H. (2018). Similarity Measurement on Human Mobility Data with Spatially Weighted Structural Similarity Index: A Case Study to Compare Mobility Data from Twitter and LODES. *Center for Human Urban Mobility Summit (CHUM)*, UC San Diego, San Diego, CA, September 20. (Poster)
12. Tsou, M-H., +Zhang, H., +Park, J., **Nara, A.**, & Jung, C-T (2018). Spatial Distribution Patterns of Geotagged Twitter Data Created by Social Media Bots and Recommended Data Wrangling Procedures. *10th International Conference on Geographic Information Science (GIScience 2018)*, Melbourne, Australia, August 28-31.
13. **Nara, A.** (2018). AlertSanDiego Request Tool (ART) for Real-time Emergency Area Labeling. *2018 Summer Specialist Meeting on Analyzing Social Perception and Amplification using Social Media and Big Data in Human Dynamics*, San Diego, CA, August 7-8.
14. **Nara, A.** (2018). Examining fine-scale human mobility extracted from geotagged social media data. *New Horizons in Human Dynamics Research: Social Media and Big Data*, Association of American Geographers 2018 Annual Meeting, New Orleans, LA, April 10-14.
15. +Luo, N. & **Nara, A.** (2018). Microsimulation of Human Daily Activities Integrating Social Media and Survey Data. *New Horizons in Human Dynamics Research: Social Media and Big Data*, Association of American Geographers 2018 Annual Meeting, New Orleans, LA, April 10-14.
16. +Jin, C. & **Nara, A.** (2018). Flows Extracted from Geotagged Social Media using Spatial Structural Similarity Index. *New Horizons in Human Dynamics Research: Social Media and Big Data*, Association of American Geographers 2018 Annual Meeting, New Orleans, LA, April 10-14.
17. +Zhang, Q., Tsou, M-H., **Nara, A.**, & Gawron, J. (2018). Building Dynamic Ontological Models for Place Names using Social Media Data from Twitter and Sina Weibo. *New Horizons in Human Dynamics Research: Social Media and Big Data*, Association of American Geographers 2018 Annual Meeting, New Orleans, LA, April 10-14.
18. Tsou, M-H., **Nara, A.**, Jahangiri, A., & Ghanipoor-Machiani, S. (2018). Developing web-based spatiotemporal analytics software tools for analyzing connected vehicle data and aggressive driving behaviors. *The first workshop on the Geospatial Software: Connecting Big Data with Geospatial Discovery and Innovation*, University of Southern California, Los Angeles, CA, January 28-30.
19. Yang, X., Zhang, Z., Tsou, M., Ghanipoor-Machiani, S., & **Nara, A.** (2018). Development of Integrated Wildfire Evacuation Decision Support System (IWEDSS) with Population Density Distribution and Robust Optimization Framework. *97th Transportation Research Board Annual Meeting*, Washington D. C., January 7-11.
20. **Nara, A.** (2017). Prototype Design and User Needs for an Integrated Wildfire Evacuation Decision Support System. *2017 Summer Specialist Meeting on Social Media Analytics and Decision Support Systems: Applications to Public Health and Crisis Management*, San Diego, CA, August 15-16.
21. +Herndon, D. & **Nara, A.** (2017). Street Sign & Stop Sign Map Layers. *2017 Sage Symposium*, San Diego State University, San Diego, CA, April 24. (Poster)
22. +Brown, K. & **Nara, A.** (2017). Bike Lane Network Plan – Mapping Bikeability Routes across the City

- of Lemon Grove. *2017 Sage Symposium*, San Diego State University, San Diego, CA, April 24. (Poster)
23. **Nara, A.**, Gibbons, J., & Appleyard, B. (2017). Location-based social networks to examine urban dynamics. *Symposium on Human Dynamics in Smart and Connected Communities: Social Media and Big Data*, Association of American Geographers, 2017 Annual Meeting, Boston, MA, April 10-14.
 24. ⁺Huang, C-C., & **Nara, A.** (2017). A social media data mining approach to identify sense of gentrification. *Symposium on Human Dynamics in Smart and Connected Communities: Social Media and Big Data*, Association of American Geographers, 2017 Annual Meeting, Boston, MA, April 10-14.
 25. Schiaffino, M. and **Nara, A.** (2016). Social-Spatial Organizational Factors Associated with Hospital Patient-Provider Communication Outcomes. *2nd International Conference Systems and Complexity in Health*, Billings Clinic, Billings, MT, November 9-10. (Poster)
 26. Tsou, M-H., ⁺Han, S., **Nara, A.**, Gibbons, J., & Thompson, C.A. (2016). An Interactive Web Mapping Tool for Visualizing Cancer Disparities with Socioeconomic Variables. *Conference on Geospatial Approaches to Cancer Control and Population Sciences*, Natcher Conference Center, NIH Campus, Bethesda, MD, September 12-14.
 27. ⁺Ilango, S., Torres, K., Doshi, V., Obrochta, C., Tsou, M-H., **Nara, A.**, Gibbons, J., Han, S., Gomez, S., Shariff-Marco, S., & Thompson, C.A. (2016). A systematic review of research utilizing geospatial analytic approaches to describe and understand the burden of screening-detectable cancers in the United States. *Conference on Geospatial Approaches to Cancer Control and Population Sciences*, Natcher Conference Center, NIH Campus, Bethesda, MD, September 12-14.
 28. Schiaffino, M., **Nara, A.**, Wood, J., & Walsh, Thom. (2016). A systems approach to predicting healthcare failures. *Research and Advancements in System Engineering methods for the 21st century, INCOSE (International Council on Systems Engineering) Regional Mini-Conference 2016*, Loyola Marymount University, Los Angeles, CA, April 9-10.
 29. **Nara, A.** (2016). Space-time data analytics for modeling fine-scale dynamics. *Symposium on Human Dynamics Research: Modeling Human Dynamics*, Association of American Geographers, 2016 Annual Meeting, San Francisco, CA, March 29 - April 2.
 30. ⁺Luo, N., **Nara, A.**, & ⁺Huang, C-C. (2016). Modeling friendship and interaction in social networks using Bayesian inference. *Symposium on Human Dynamics Research: Social Media and Big Data*, Association of American Geographers, 2016 Annual Meeting, San Francisco, CA, March 29 - April 2.
 31. ⁺Huang, C-C., **Nara, A.**, Gibbons, J., & Luo, N. (2016). Using Instagram data for measuring gentrification dynamics: Alternative way to identify gentrification typology. *Symposium on Human Dynamics Research: Social Media and Big Data*, Association of American Geographers, 2016 Annual Meeting, San Francisco, CA, March 29 - April 2.
 32. Buhi, E. R., ⁺Hawks, J., Rezai, R., Dorsey, K., Salgin, L., **Nara, A.**, & Wells, K. (2015). Expanding boundaries in sexual health research: A case study of sentiment toward the HPV vaccine on Twitter. *Society for the Scientific Study of Sexuality Annual Meeting*, Albuquerque, NM, November, 2015.
 33. **Nara, A.**, ⁺Allen, C., & Izumi, K. (2015). Surgical Phase Recognition using Movement Data from Video Imagery and Location Sensor Data. *GeoComputation 2015*, University of Texas at Dallas, Dallas, TX, May 20-23.
 34. **Nara, A.** (2015). A GPGPU approach for simulating and analyzing human dynamics. *Association of American Geographers, 2015 Annual Meeting*, Chicago, IL, April 21-25.
 35. **Nara, A.** (2014). Integrating of Big Data and Spatio-Temporal Analytics for Modeling Human Dynamics: An Agent-Based Simulation Approach. *Human Dynamics in the Mobile Age (HDMA): New Frontiers of Knowledge Discovery in Cyberspace and Big Data*, 2014 Summer Specialist Meeting, San Diego, CA, August 11-12.
 36. **Nara, A.**, Yuan, M., Keese, M., Greenwood, W., Mouser, M., & Floyd, G. (2014). Discovering activity space from GPS tracks. *Association of American Geographers, 2014 Annual Meeting*, Tampa, FL, April 8-13.
 37. Zhang, Y., **Nara, A.**, & Yuan, M. (2014). Modeling and simulating complex driving behaviors and urban traffic phenomena. *Association of American Geographers, 2014 Annual Meeting*, Tampa, FL,

April 8-13.

38. Yuan, M., **Nara, A.**, Keesee, M., & Drake, G. (2013). Online Analysis Tools for GPS Offender Monitoring. *American Probation and Parole Association, 38th Annual Training Institute*, Baltimore, MD, July 28-31.
39. **Nara, A.**, Keesee, M., Greenwood, W., Denney, M., & Yuan, M. (2013). Space-Time Analytics of Movement Patterns from GPS data. *Association of American Geographers, 2013 Annual Meeting*, Los Angeles, CA, April 9-13.
40. Yuan, M., & **Nara, A.** (2013). Criminogenic Places. *Association of American Geographers, 2013 Annual Meeting*, Los Angeles, CA, April 9-13.
41. **Nara, A.**, Keesee, M., Lei, T., Redden, J., Denney, M., & Yuan, M. (2012). Spatio-Temporal Analysis of GPS Tracks and Spatial Behavior. *Association of American Geographers, 2012 Annual Meeting*, New York, NY, February 24-28.
42. Haojie, Z., Torrens, P.M., & **Nara, A.** (2012). An Agent-Based Simulation Framework for Emergency Evacuation.” *Association of American Geographers, 2012 Annual Meeting*, New York, NY, February 24-28.
43. **Nara, A.**, & Torrens, P.M. (2011). Trajectory Data Mining: Classification and Spatio-Temporal Visualization of Mobile Objects. *GeoComputation 2011*, University College London, London, UK, July 20-22.
44. Yuan, M., **Nara, A.**, Keesee, M., Redden, J., & Meredith, D. (2011). Development of Space-Time Analytic Tools for GPS Offender Tracking. *The 2011 NIJ Conference: Translational Criminology – Shaping Policy and Practice with Research*, Arlington, VA, June 20-22.
45. **Nara, A.**, Keesee, M., Redden, J., Meredith, D., & Yuan, M. (2011). GPS track analysis to facilitate location-based offender monitoring. *The 2011 NIJ Conference: Translational Criminology – Shaping Policy and Practice with Research*, Arlington, VA, June 20-22. (Poster)
46. **Nara, A.**, Izumi, K., Suzuki, T., & Iseki, H. (2010). Surgical workflow recognition by trajectory data mining. *The 19th Annual Meeting of the Geographic Information Systems Association of Japan*, Ritsumeikan University, Kyoto, Japan, October 24.
47. **Nara, A.**, Izumi, K., Iseki, H., Suzuki, T., Nambu, K., & Sakurai, Y. (2009). Trajectory data mining for surgical workflow analysis. *The 10th International Conference on GeoComputation*, University of New South Wales, Sydney, Australia, December 1.
48. **Nara, A.**, Izumi, K., Iseki, H., Suzuki, T., Nambu, K., & Sakurai, Y. (2009). Surgical workflow analysis based on staff's trajectory patterns. *The 1st Workshop on Modeling and Monitoring of Computer Assisted Interventions (M2CAI)*. Imperial College, London, UK, September 20.
49. Torrens, P.M., McDaniel, A., & **Nara, A.** (2009). Modeling complex crowds with anti-social agents. *Association of American Geographers 2009*. Las Vegas, NV, USA, March 26.
50. Suzuki, T., **Nara, A.**, Sakurai, Y., Izumi, K., Nambu, K., & Iseki, H. (2009). Safe Surgery based on Surgical Monitoring System. *The 18th Conference on Neurosurgical Techniques and Tools*. Akita, Japan, April 24.
51. **Nara, A.**, Izumi, K., Iseki, H., Suzuki, T., Nambu, K., & Sakurai, Y. (2008). Spatial information technology to support the surgical headquarters, *The 17th Conference on Japan society of computer aided surgery*, Tokyo Womens Medical University, Tokyo, Japan, October 31-November 2.
52. **Nara, A.**, & Torrens, P.M. (2008). A space-time toolkit for mining movement behavior in geosimulation. *Association of American Geographers, 2008 Annual Meeting*, Boston, MA, April 15-19.
53. Zhu, H., **Nara, A.**, Brown, S., & Torrens, P.M. (2008). An OpenGL Visualization and Analysis Framework for Time Geography.” *Association of American Geographers, 2008 Annual Meeting*, Boston, MA, April 15-19.
54. Brown, S., Torrens, P.M., **Nara, A.**, & Zhu, H. (2008). Wayfinding simulation and complexity: A case for cognizance. *Association of American Geographers, 2008 Annual Meeting*, Boston, MA, April 15-19.
55. **Nara, A.**, & Torrens, P.M. (2007). Spatial and temporal analysis of pedestrian egress behavior and efficiency. *15th ACM International Symposium on Advances in Geographic Information Systems (ACM*

- GIS 2007*), Seattle, WA, November 7-9. (Poster)
56. **Nara, A.**, & Torrens, P.M. (2007). Fractal Analysis of Pedestrian Egress: Behavior and Efficiency. *Geocomputation 2007*, Maynooth, Ireland, September 3-5.
 57. Griffin, W.A., Schmidt, S.K., **Nara, A.**, Torrens, P.M., Fewell, J.H., & Sechler, C.M. Modeling time, space, and behavior: combining ABM & GIS to create typologies of playgroup dynamics in preschool children. *North American Computational Social and Organizational Science (NAACSOS)*, Atlanta, GA. June 6.
 58. **Nara, A.**, & Torrens, P.M. Simulating Inner-City Gentrification using Hybrid Models of Cellular Automata and Multi-Agent Systems. *Geocomputation 2005*. University of Michigan, Ann Arbor, MI, August 1-3.

Other Research Articles and Technical Reports

1. Dony, C., **Nara, A.**, Rey, Sergio., Solem, M., Z & Herman, T. (2019). Encoding Geography: Building Capacity for Inclusive Geo-Computational Thinking with Geospatial Technologies. *The California State University Geospatial Review* (Accepted).
2. +Chen, Y., Tsou, M-H., & **Nara, A.** (2019). Analyzing Transportation Big Data with GIS: Detecting Over-speeding Vehicles from Traffic GPS Data. *The California State University Geospatial Review* (Accepted).
3. **Nara, A.** (2015). A data mashup for understanding fine scale human dynamics. *Position paper for 2015 Summer Specialist Meeting on Representing Human Dynamics with Big Data, Social Media, and Social Networks in Hyperlocal Contexts*, August 11-12.
4. Yuan, M., Keesee, M., **Nara, A.**, Mouser, M., Greenwood, W. (2015). Geoshadow: Evaluating the Effectiveness of the ODOC's Location based Offender Monitoring System. *Technical Report*. Center for Spatial Analysis, University of Oklahoma.
5. **Nara, A.** (2014). Integrating of Big Data and Spatio-Temporal Analytics for Modeling Human Dynamics: An Agent-Based Simulation Approach. *Position paper for a specialist meeting on Human Dynamics in the Mobile Age: New Frontiers of Knowledge Discovery in Cyberspace and Big Data*, August 11-12.
6. Kawabata, M., Iwata, O., Esaki, R., Kurata, Y., **Nara, A.**, Hamada, Y., & Yamazaki, Y. (2007). Investigating geographic information science education systems at 14 universities in North America. In Murayama, Y., ed. *Establishment of GIScience Education Methods: How to Teach GIS at Universities Effectively, Interim Report on Research Results*. Japan Society for the Promotion of Science, 104-110. [In Japanese]
7. Kuby, M., Chen, A., Joseph, L., Kelley, J., Kim, JG., **Nara, A.**, & Rupnow, J. (2006). Optimization of Transportation of Products from the Pastaza Region of Ecuador, *An Interim Report*. School of Geographical Science, Arizona State University.

Scholarly Awards

1. Tenure-Track Faculty CAL Excellence in Research Award for the Humanities and Social Sciences, AY2018-19, College of Arts and Letters, SDSU
2. NSF Early Career Participants Support for Geocomputation 2015.
3. Grants and Research Enterprise Writing (GREW) Professors Helping Professors Mentorship Module, 2015, Vice President for Research - San Diego State University.
4. Grants and Research Enterprise Writing (GREW) Fellowship, 2014 – 2015, San Diego State University.
5. Travel Grant, 2007, Division of Graduate Studies, Arizona State University.
6. Travel Grant, 2005, School of Geographical Science, Arizona State University.

Funded Research Grants - Extramural

1. \$299,989 - *Encoding Geography: Building Capacity for Inclusive GeoComputational Thinking with Geospatial Technologies*, **Co-PI (Subcontract PI at SDSU)**, National Science Foundation (CSforAll), Acceptant Rate: 20%, PI: Coline Dony, 11/01/2018 – 10/31/2020.
2. \$4,364,734 - *SDSU HealthLINK Center for Transdisciplinary Health Disparities Research*, **Co-Investigator**, National Institute of Health, MPI: Ayala, G.X. and Wells, K., 09/11/2018 – 05/31/2023
3. \$20,000 - *Encoding Geography Research Coordination Network (EG-RCN): Building Capacity for Inclusive Geo-Computational Thinking at the College Level*, **Co-Investigator**, National Center for Research in Geography Education (NCRGE), PI: Coline Dony, 07/01/2018 – 06/30/2019
4. \$280,672 - *Big Data Visualization and Spatiotemporal Modeling of Aggressive Driving*, **Co-PI**, Safety through Disruption (SAFE-D), University Transportation Center (UTC), PI: Jahangiri, A., 02/01/2018 – 06/01/2019
5. \$15,987 - *Integrated Stage-based Evacuation with Social Perception Analysis and Dynamic Population Estimation*, **Co-PI**, National Science Foundation (CMMI-IMEE), REU (Research Experiences for Undergraduates) Supplement, PI: Tsou, M-H. 03/20/2017 – 08/31/2019
6. \$150,000 - *Improving the CalEnviroScreen score at the US-Mexico border*, **Co-PI**, Air Resources Board, California Environmental Protection Agency, PI: Quintana, P.E., 03/15/2017 – 03/14/2019
7. \$50,000 - *Is it race, or place? Disentangling racial, socioeconomic and geographic disparities in the cancer burden of San Diego and Imperial counties*, **Co-Investigator**, University of California at San Diego, MPI: Thompson, C. and Murphy, J. 01/01/2017 – 03/23/2018
8. \$449,202 - *Integrated Stage-based Evacuation with Social Perception Analysis and Dynamic Population Estimation*, **Co-PI**, National Science Foundation (CMMI-IMEE), Acceptant Rate: 10%, PI: Tsou, M-H. 09/01/2016 – 08/31/2019
9. \$10,000 - *Visualizing socioeconomic and racial disparities in the burden of screening detectable cancers using GIS and web mapping tools*, **Co-Investigator**, SDSU/UCSD Cancer Center Partnership, MPI: Thompson, C. and Murphy, J. 03/01/2016 – 08/01/2016
10. \$1,162,576 - *Developing and Evaluating the Effectiveness of the Location-based Offender Monitoring System for Offender Supervision*, **Post-Doctoral Research Associate**, PI: Yuan, M. 12/01/2010 – 09/30/2014

Funded Research Grants - Intramural

1. \$3,000 – *Examining Dynamic Population Distribution and Human Risk Perception by Geospatial Big Data Analytics*, **PI**, Vice President for Research - San Diego State University (Summer Undergraduate Research Program), Summer 2018
2. \$500 - *Social media and big data mining to analyze human and gentrification dynamics*, **PI**, College of Letters and Arts, San Diego State University (Microgrant), Spring 2018
3. \$3,000 - *Applying geospatial and mobile technologies to map the structure of health care delivery networks*, **PI**, Vice President for Research - San Diego State University (Summer Undergraduate Research Program), Summer 2015

Participation in Professional Associations

1. GIS Association of Japan (2010 – present)
2. Association of American Geographers (2007 – present)

TEACHING

Course Taught

1. Fall 2014 – present San Diego State University

- GEOG 383 – GIS Scripting Fundamentals
- GEOG 484 – Introduction to Geographic Information Systems.
- GEOG 580 – Data Management for GIS
- GEOG 582 – Introduction to GIS Programming with Python
- GEOG 584 – Methods and Applications of Geographic Information Systems
- GEOG 780 – Seminar: Geocomputation

2. Fall 2011 – Spring 2012 University of Maryland, College Park

- GEOG 170 – Introduction to Methods of Geospatial Intelligence and Analysis

3. Guest Lectures

- Geography of Japan, Japan Studies Institute, American Association of State Colleges and Universities (AASCU). SDSU (June 2015; June 2016; June 2017; June 2018; June 2019)
- GEOG 701 – Seminar in Development of Geographic Thought. Modeling and Mining Spatio-Temporal Dynamics of Moving Objects. SDSU (November, 2014)
- GEOG 5990 – Selected Studies in Geography. University of Oklahoma (2013)
- GIS 5970 – Graduate Seminar in Geoinformatics. University of Oklahoma (2012 – 2013)
- RCPL 5463 – Computer Mapping and GIS in Planning. Trajectory Analysis and GIS. Division of Regional & City Planning, University of Oklahoma (April, 2013)
- GIS 2013 – Introduction to Geoinformatics. University of Oklahoma (2012)

List of students supervised and currently supervising

Ph.D. student advising (committee chair/advisor):

In progress (2)

- Nana Luo (Joint PhD Program SDSU-UCSB, in progress)
- Chanwoo Jin (Joint PhD Program SDSU-UCSB, in progress)

Completed (0)

Ph.D. student advising (committee member):

In progress (4)

- Chris Allen (Joint PhD Program SDSU-UCSB, Geography)
- Andy Loerch (Joint PhD Program SDSU-UCSB, Geography)
- Jaehee Park (Joint PhD Program SDSU-UCSB, Geography)
- Chelsea Obrochta (Joint PhD Program SDSU-UCSD, Graduate School of Public Health)

Completed (4)

- Jessica Hawks (Joint PhD Program SDSU-UCSD, Graduate School of Public Health, graduated in Summer 2019)
Instagram for diet and weight loss research.
- Seda Şalap (Joint PhD Program SDSU-UCSB, Geography, graduated in Summer 2018)
Spatially Explicit Uncertainty & Sensitivity Analysis Methods for Land-Use Models
- Dara Seidl (Joint PhD Program SDSU-UCSB, Geography, graduated in Spring 2018)
Geoprivacy: Location Making Strategies and Personal Identification Risk

- Su Han (Joint PhD Program SDSU-UCSB, Geography, graduated in 2016)
Discovering Spatial Relationships between Cyberspace and Real Space, and Reexamining Theories in Geography with Social Media and Big Data

Master student advising (committee chair/advisor):

In progress (1)

- Eduardo Cordova (M.S. in GIScience, Geography, SDSU, in progress)

Completed (2)

- Kristen Monteverde (M.S. in GIScience, Geography, SDSU, graduated in Summer 2019, Adjunct Faculty, Department of Earth Sciences, Grossmont College)
Coastal erosion risk mapping of the San Diego region: An assessment of spatial and temporal change.
- Cheng-Chia Huang (M.S. in GIScience, Geography, SDSU, graduated in Fall 2017, works at ESRI as a Space-Time Pattern Mining and Spatial Statistics Product Engineer)
Developing a Data Mining Framework to Identify a Sense of Gentrification through Social Media Data: A Case Study Using Instagram Posts in Salt Lake City, Utah.

Master student advising (committee member):

In progress (9)

- Garland McNew (M.S. GIScience, Geography, SDSU)
Dasymetric Multi-Criteria Decision Analysis: A Case Study in Vaccine Market Area Choice using Dasymetric Modeling and Local Weighted Linear Combination
- Melanie Lopez (M.S. GIScience, Geography, SDSU)
- Gavin Schag (M.S. GIScience, Geography, SDSU)
Evaluating Landscape-Level Controls of Wildfire Spread Rates Using Repetitive Airborne Thermal Infrared (ATIR) Imagery
- Alexandra Yost (M.S. GIScience, Geography, SDSU)
- William Orihuela (M.S. GIScience, Geography, SDSU)
- Greta Schmidt (M.S. Biology, SDSU)
Spatial ecology of south Texas wild felids in the context of roads and wildlife crossing structures
- Craig Fischer (M.S. Biology, SDSU)
*Evaluating Spatial Capture-Recapture Models Using Telemetry Data of Flat-tailed Horned Lizards (*Phrynosoma mcallii*)*
- Yesenia Garcia (M.A. Anthropology, SDSU)
Computational Erosion Modeling: Preserving Archaeological Sites on San Miguel Island
- Asmim Faria (MPH, Graduate School of Public Health, SDSU)
Summer and Winter time Chemical Composition and Source Apportionment of fine particulate matter (PM_{2.5}) at four sites in San Ysidro, California, Year 2017 and 2018

Completed (20)

- Haihong Huang (M.S. GIScience, SDSU, graduated in Spring 2019)
Development and evaluation of HealthWebMapper: a web-based user-friendly geovisualization tool for cancer disparities
- Benjamin Melendez (M.S. Engineering, SDSU, graduated in Spring 2019)
Modeling traffic during lilac wildfire evacuation using cellular data
- Madison McLaughlin (MPH, Graduate School of Public Health, SDSU, graduated in Fall 2018)
Evaluation of a Portable Chamber for Field Calibration of Particulate Matter Monitors

- Judy Mak (M.S. GIScience, Geography, SDSU, graduated in Summer 2018)
Agent-based modeling of Rhinopithecus Brelichi population and movements in the Fanjingshan national nature reserve
- Stefany Pickett (M.S. GIScience, Geography, SDSU, graduated in Summer 2018)
Analyzing spatio-temporal patterns of Pokémon Go game users and the impacts of users' physical activities
- Kaltoum Kerdi (MPH, Graduate School of Public Health, SDSU, graduated in Summer 2018)
Seasonal variation of chemical composition of PM 2.5 in four locations in San Ysidro, California
- Matthew Plummer (M.S. GIScience, Geography, SDSU, graduated in Spring 2018)
The effect of shadow removal on the co-registration accuracy of aerial image pairs
- Charles Lewis Belt III (M.S. Engineering, SDSU, graduated in Spring 2018)
Public Perceptions of Connected and Automated Vehicles before and after Informative Intervention
- Alidad Ahmadi (M.S. Engineering, SDSU, graduated in Fall 2017)
Examination of drivers' performance using a personalized adaptive curve speed warning: a driving simulator study
- Joey Lee (M.S. GIScience, Geography, SDSU, graduated in Summer 2017)
Mapping tourist behavior hotspots through photo-sharing service data
- Alejandra Coronado (M.S. GIScience, Geography, SDSU, graduated in Summer 2017)
Spatial Associations and Network Dynamics between the Vaccine Exemption Discussion in Twitter and the Corresponding Geographic Space
- Hao Zhang (M.S. GIScience, Geography, SDSU, graduated in Summer 2017)
Building a dynamic population distribution model with geo-tagged tweets (from twitter) and dasymetric maps in urban area
- Rick Zhang (M.S. GIScience, Geography, SDSU, graduated in Summer 2017)
Building Dynamic Ontological Models for Place Names using Social Media Data from Twitter and Sina Weibo
- Andrew Kerr (M.S. GIScience, Geography, SDSU, graduated in 2017)
Optimizing Radiometric Fidelity to Enhance Aerial Image Change Detection Utilizing Digital Single Lens Reflex (DSLR) Cameras
- Eugene Schweizer (M.S. GIScience, Geography, SDSU, graduated in 2017)
Automating Near Real-Time, Post-Hazard Detection of Crack Damage to Critical Infrastructure
- Natalie Goddard (M.S. Biology, SDSU, graduated in 2017)
Landscape Genetics of the Endangered San Diego Fairy Shrimp Branchinecta Sandiegonensis
- Samuel, St. Lifer (M.S. in GIScience, Geography, SDSU, graduated in 2016)
Evaluating the Potential for Mixed-Use Urban Land Development using Multi-Criteria Decision Analysis: A Case Study in the City of San Diego
- Garrick Macdonald (M.S. in GIScience, Geography, SDSU, graduated in 2016)
Multi-criteria Decision Analysis in Conservation Planning: A Case Study in San Diego County using Multi-Criteria Design of Conservation Area Networks
- Jessica Dozier (M.S. in GIScience, Geography, SDSU, graduated in 2016)
Improve Disaster Communication in Online and Offline Communities using Social Media (Twitter) and Big Data
- Elias Issa (M.S. in GIScience, Geography, SDSU, graduated in 2016)
Understanding the Spatio-Temporal Characteristics of Twitter Data with Geo-tagged and Non Geo-tagged Content: Two Case Studies with the Topic of Flu and Ted (Movie)

- Ranjana Venkataraman (M.S. Computer Science, SDSU, graduated in 2015)
Interactive Campus Map Application for SDSU

Undergraduate Supervision:

San Diego State University

- Dustin Smith
 - Sage Project: Housing market analysis (Partnership with the City of La Mesa)
 - GEOG 499 Special Study (Fall 2019)
- Adam Russnogle
 - Sage Project: Housing market analysis (Partnership with the City of La Mesa)
 - GEOG 499 Special Study (Fall 2019)
- Ken Tominaga
 - Summer Undergraduate Research Program: Examining Dynamic Population Distribution and Human Risk Perception by Geospatial Big Data Analytics (Summer 2018)
- Kolbe Kulda
 - REU (Research Experiences for Undergraduates), NSF-IMEE, “Integrated Stage-based Evacuation with Social Perception Analysis and Dynamic Population Estimation” (Spring 2018)
- Eva Sanchez
 - REU (Research Experiences for Undergraduates), NSF-IMEE, “Integrated Stage-based Evacuation with Social Perception Analysis and Dynamic Population Estimation” (Fall 2016 – Spring 2017)
 - Sage Project: Housing market analysis (Partnership with the City of La Mesa)
 - GEOG 499 Special Study (Fall 2019)
- Brianna Haeckl
 - Natural History Museum GIS Internship Project (Spring 2017)
- Damien Herndon
 - Sage Project: GIS city assets mapping project (Partnership with the of Lemon Grove) (Fall 2016 – Fall 2017)
- Kayla Brown
 - Sage Project: GIS city assets mapping project (Partnership with the City of Lemon Grove) (Fall 2016 – Spring 2017)
- Timothy Schempp
 - Summer Undergraduate Research Program: Applying geospatial and mobile technologies to map the structure of health care delivery networks (Summer 2015)
 - GEOG 499 Special Study (Fall 2015)
- Andrew Novak
 - Sage Project: GIS city assets mapping project (Partnership with the City of Santee)
 - GEOG 499 Special Study (Spring 2016)

Brazil Scientific Mobility Program (BSMP)

- Erick Cesar Knoll (Summer 2016)
- Mateus De Alencar Costa (Summer 2016)

Teaching in practice and community engagement

• Sage Project

During the academic year 2015-16 and 2016-17, I have participated in the Sage Project (Director: Dr. Jessica Barlow, Professor of School of Speech, Language, and Hearing Sciences), which is a partnership between SDSU and a city or government entity in the San Diego region. The mission of the program is to

engage students from across the University in assisting a local government with projects that address their smart growth, quality of life, and sustainability goals. I have provided opportunities for students in GEOG 484 and GEOG 584 to engage in meaningful real-world projects and make positive contributions to local communities, the City of Santee and the City of Lemon Grove. Through the project, students were able to learn and practice cutting-edge geospatial technologies including data collection via mobile devices and cloud-based data management and map production. Student learning outcomes went beyond expectations: One student obtained a paid internship position and later became a full-time employee at the City of Santee; three students were hired through the Sage Project as an intern; and participated students successfully presented their project outcomes at the Santee City Council meeting, the Student Research Symposium 2016 at SDSU, and the 2017 Sage Symposium at SDSU.

- Natural History Museum GIS Internship Project

In Spring 2017, Brianna Haeckl, an Anthropology major student, participated in the San Diego Natural History Museum (theNAT) GIS Internship Program partially as her final project in my GEOG 584. Throughout the program, Brianna and I worked with theNAT, built a GIS database, and analyzed archeological sites in Baja California, Mexico.

- Big Data Hackathon for San Diego

I have served on the organizing committee for the Big Data Hackathon for San Diego held in 2015, 2017, and 2019 at SDSU. We attracted a large number of participants (177 in 2017, 300+ in 2019) including students from SDSU, other colleges and universities, and high schools, engaged them in collaborative programming, and facilitated the development of software and tools to solve community challenges.

SERVICE

Service for the Department

1. 2018 – present Computing Committee (Chair)
2. 2014 – present Scholarships/Awards Committee
3. 2019 – present Student Outcomes Committee
4. 2014 – 2018 Computing Committee
5. 2014 – 2015 MA Advising Committee

Service for the University

1. 2014 – present Associate Director, Center for Human Dynamics in the Mobile Age (HDMA)
2. 2014 – present Steering Committee, Big Data Analytics Master of Science Degree Program in Big Data Science
3. 2014 – present Selection Committee, Japan Exchange Programs

Service for the Profession

1. 2019 Session Organizer (Chair), Social Media and Big Data, Association of American Geographers, Annual Meeting
2. 2018 Session Organizer (Chair), Symposium on Human Dynamics Research: Social Media and Big Data, Association of American Geographers, Annual Meeting
3. 2016, 2017 Session Organizer, Symposium on Human Dynamics Research: Social Media and Big Data, Association of American Geographers, Annual Meeting
4. 2016, 2018 Program Committee, Rethinking the ABCs: Agent-Based Models and Complexity Science in the age of Big Data, GIScience Workshop
5. 2017, 2018 NSF Proposal Reviewer, Geography and Spatial Science (GSS) Program
6. 2015, 2017, 2019 Organizing Committee, Big Data Hackathon for San Diego
7. 2017 Science Committee, Agent-Based Modeling (ABM) 17: A Workshop That Advances the Science of ABM (2017)
8. 2015 Research Program Proposal Reviewer, Israel Science Foundation
9. 2013 – present Editorial Board Member, Journal of Finance and Economics

10. Manuscript Acknowledgement

- Petros, S., Abay, F., Desta, G., & O'Brien, C. (2018). Women Farmers' (Dis)Empowerment Compared to Men Farmers in Ethiopia. *World Medical & Health Policy*, 10(3), 220–245. <https://doi.org/10.1002/wmh3.280>
Contribution: Created Figure 1 (GIS Map)

11. Reviews for Academic Manuscripts

Refereed Journals

- International Journal of Geographic Information Science
- Transactions in GIS
- ISPRS International Journal of Geo-Information
- ACM Transactions on Spatial Algorithms and Systems
- Computers, Environment and Urban Systems
- Decision Support Systems
- Annals of the American Association of Geographers
- Annals of GIS
- Environment and Planning B: Urban Analytics and City Science
- Spatial Cognition and Computation

- Stochastic Environmental Research and Risk Assessment
- International Journal of Disaster Risk Reduction
- Georisk
- PLOS ONE
- Journal of Visual Languages and Computing
- Journal of Medical Internet Research

Refereed Book Chapters

- Handbook of Remote Sensing
- Human Dynamics Research in Smart and Connected Communities
- GIS & Technology: Body of Knowledge