

Nicholas J. Linesch

Urban Land Use and Transportation Center (ULTRANS)
Institute of Transportation Studies
University of California
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Education:

- *Bachelor of Science (B.S.)* in Applied Mathematics, University of California, Davis, **2007**
- *Master of Science (M.S.)* in Civil Engineering, Transportation, University of California Davis, **expected December 2010.**

Research Interest:

- Applying new technology, such as computer network systems, to forecast growth in cities
- Expounding data systems that describe the make up of our urban core and connecting landscapes
- Depicting model results and data information systems in plain English for the public and policy makers to understand
- Utilizing knowledge and information about network theory to better understand flows within a system

Work Experience:

- October 2009- Present. Graduate Researcher. Urban Land Use and Transportation (ULTRANS), University of California, Davis.
- September 2008- September 2009, Graduate Intern. San Francisco County Transportation Authority. San Francisco, CA
 - Proposed an integrated model project to analyze the relationship between the activity based model (SF-CHAMP) and the land use model (URBANSIM) which is maintained with the SF Planning Department.
 - Conducting historical review on land use modeling in San Francisco for documentation with the project
- September 2007- August 2008, Independent Contractor. San Francisco County Transportation Authority. San Francisco, CA
 - Full time work on planning and modeling projects
 - Projects included Mobility, Access, and Pricing Study (MAPS), Columbus Ave. neighborhood study, and upkeep of the San Francisco activity based travel model
- August 2006- June 2007, Student Intern. University of California Office of the President. Oakland, CA

Work Experience (Cont'd):

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- Hired as student coordinator for sustainable transportation policy and planning by Charlotte Strem.
 - Tasks include attending sustainability steering committee meetings, organizing projects in transportation planning, and reporting to student groups involved with transportation studies at respective UC campuses.
 - March 2006- June 2007, Researcher. Center for Computational Engineering at the University of California, Davis. Davis, CA
 - Worked with Professor Raissa D'Souza on traffic congestion modeling
 - The project includes theoretical analysis of a traffic model with applications in computer science, mathematics, and transportation policy
 - This project resulted in a publication in Physical Review A
 - March 2006- September 2006, Research Experience for Undergraduates (REU). Davis, CA
 - Math department fellowship with professor Jesus De Loera
 - Topics included optimization of networks, applied geometry, and linear programming
 - September 2005- February 2006, Teaching Assistant. Math Modeling Experience. Davis, CA
 - Trained high school math students for the COMAP math competition
 - Preparation involved intensive meeting schedule including TA and faculty meetings with and without high school students
 - Combined with personal research on applied math modeling techniques.
 - July 2001-0 July 2005. Aquatics Manager, Marlborough School. Los Angeles, CA
 - Manager of the summer aquatics instruction program and swim activities
 - Certifications: American Red Cross-Certified swimming instructor and life guard

Recent Publications:

- N. J. Linesch and R. M. D'Souza, "Periodic States, Local Effects and Coexistence in the BML Traffic Jam Model", *Physica A*, **387** 6170-6176, 2008. (<http://mae.ucdavis.edu/dsouza/Pubs/bml-physa2008.pdf>)

Relevant Coursework:

- Environmental and Energy Aspects of Transportation
- Flow in Transportation Networks
- Transportation Economics
- Transportation Engineering Systems
- Differential Equations

Organizations:

- Institute of Transportation Engineers (ITE), UC Davis Chapter
 - Vice President 2005-2006
 - President 2006-2007
 - Activities include organizing events and speakers; conducting research sponsored by an ITE grant and analyzing data for bicycle pathway capacity project
- California Student Sustainability Coalition
 - UC Davis Organizer (03/04-08/06)
 - Northern California Organizer (09/06-06/08)
 - Representative to the Move U campaign for sustainable transportation on college campuses
 - Securing participants for research and involvement
 - Weekly regional meetings and quarterly statewide meetings
 - Co-authored and presented the University of California's sustainable transportation policy to the UC Regents