

ZHENHONG LIN (DAVID)

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6600 Orchard Park Circle, # 6823
Davis, CA 95616

zhenhong@gmail.com

Phone & Fax: (530) 758-5688
Mobile: (530) 220-0487

SYNOPSIS

Skilled graduate researcher with strong multidisciplinary background and seven years of experience analyzing transportation energy issues.

EDUCATION & CERTIFICATION

PhD Candidate in Civil & Environmental Engineering, Univ. of California, Davis	Expected 2007
MS in Transportation Technology & Policy, Univ. of California, Davis	08/2004
MS in Power Machinery & Engineering, Tsinghua University	07/2002
BE in Automotive Engineering, Tsinghua University	07/2000
Engineer-in-Training (Certificate No. 126861)	01/2007

PROFESSIONAL EXPERIENCES

Student Researcher, Institute of Transportation Studies, UC Davis, CA 03/2003-present

Assisted in and led research projects on transportation energy. Highlights:

- *Energy system dynamics*: analyzed transportation infrastructure using GIS and system optimization; built a sophisticated model to assess transportation hydrogen transitions.
- *Economics*: assessed economic feasibility of transportation hydrogen in Beijing and California.
- *Policy*: conducted detailed financial assessment of different scenarios of alternative fuel pricing, subsidy, and carbon tax.
- *Alternative energy*: assessed coal, natural gas, biomass, solar, and wind for hydrogen production.
- *Rural transportation*: interviewed rural vehicle manufacturers, users and regulators in China; assessed rural vehicles as related to rural development, energy use, air pollution, and global impact.
- *Poverty issues*: interviewed low-income farmers regarding choices of transportation tools; analyzed the conflicts between environmental protection and poverty alleviation.

Consultant, Global Energy Decisions, Sacramento, CA 11-12/2006

Assisted in liquefied natural gas supply project. Highlights:

- *LNG infrastructure*: collected worldwide LNG supply data.
- *Risk analysis*: built a VBA spreadsheet model for supply uncertainty analysis.

Contract Researcher, U.S. Environmental Protection Agency, Durham, NC 06-09/2006

Assisted in a multi-year energy modeling project in support of climate change analysis. Highlights:

- *Database*: collected and analyzed census data and transportation data.
- *Modeling*: modeled hydrogen infrastructure for urbanized areas, urban clusters and rural areas.
- *Inter-region comparison*: estimated and compared hydrogen costs among nine census regions.

Adjunct Professor, University of the Pacific, Stockton, CA 05-07/2005

Lectured engineering economics, covering rate of return, cash flow, net present value, cost estimation, life-cycle analysis, project management, decision tree, work breakdown structure, and request for proposal.

Student Researcher, Tsinghua University, Beijing 09/1999-07/2002

Led research projects and assisted in program administration. Highlights:

- *Vehicle simulation*: invented a simulation tool for hybrid fuel cell vehicle.
- *Program application*: assisted in application for the "863" funding for fuel cell bus development.

Other Internship

- China Dong Feng Motor Corporation (1999)
- China National Petroleum Corporation (1998)

LEADERSHIP EXPERIENCES

Committee Member of Chinese Students and Scholars Fellowship (Davis, 2005)
Organized the 1st Vehicle Knowledge Competition (Beijing, 2001)
Organized the Beijing International Automotive Exhibition (Beijing, 2000)
Participated in the Red Cross Society of China flooding relief activities (Beijing, 1998)

AWARDS & HONORS

ChevronTexaco Research Fellowship
2nd place in General Motors China Vehicle Design Competition
Tsinghua First Honor Scholarship
Chaoshan Xinghe Scholarship

JOURNAL ARTICLES

1. Lin, Zhenhong, Chien-Wei Chen, Joan Ogden, Yueyue Fan (2007, forthcoming). Optimized Pathways for Regional H2 Infrastructure Transitions for Southern California. International Journal of Hydrogen Energy.
 2. Lin, Zhenhong, Joan Ogden, Yueyue Fan, Chien-Wei Chen (2007, forthcoming). A VMT-based Approach to Siting Hydrogen Refueling Stations. International Journal of Hydrogen Energy.
 3. Sperling, Daniel, Zhenhong Lin and Peter Hamilton (2005). "Rural Vehicles in China: Appropriate Policy for Appropriate Technology." Transport Policy, Volume 12, Issue 2
 4. Lin, Zhenhong, Ming Zhou and Minggao Ouyang (2002). "Improvement of Solenoid Controlled Valve for Electronic Diesel Injection System." Automotive Engineering (3)
 5. He, Bin, Zhenhong Lin and Minggao Ouyang (2002). "Simulation on Direct Hydrogen Fuel Cell Engine Performance." Automotive Engineering (6)
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CONFERENCE PAPERS

1. Lin, Zhenhong, Joan Ogden, Yueyue Fan and Dan Sperling (2006). The Hydrogen Infrastructure Transition (HIT) Model---Case Study in Beijing. Proc. of the NHA conference, Long Beach, California
2. Lin, Zhenhong, Joan Ogden, Yueyue Fan and Dan Sperling (2005). Optimal Dynamic Strategy of Building a Hydrogen Infrastructure in Beijing. Proceedings of the Fourth Asia Pacific Conference on Transportation and the Environment, Xi'an, China, UCD-ITS-RP-05-38
3. N. Johnson, C. Yang, J. Ni, J. Johnson, Z. Lin, and J. Ogden (2005). Optimal Design of a Fossil Fuel-Based Hydrogen Infrastructure with Carbon Capture and Sequestration: Case Study in Ohio. Proceedings of the NHA Annual Meeting, Washington D.C.
4. Ogden, Joan, N. Johnson, C. Yang, N. Jason, Z. Lin and J. Johnson (2005). Technical and Economic Assessment of Transition Strategies toward Widespread Use of Hydrogen as an Energy Carrier. Proc. of the US DOE Hydrogen and Fuel Cells and Infrastructure Technologies Annual Review Meeting.
5. Ogden, Joan, N. Johnson, C. Yang, J. Ni, Z. Lin, J. Johnson and J. Figueroa (2005). Conceptual Design of a Fossil Hydrogen Infrastructure with Capture and Sequestration of Carbon Dioxide: Case Study in Ohio. Proceedings of the 4th National Carbon Sequestration Meeting, Arlington, VA.

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BOOK CHAPTERS

1. Sperling, Dan and Zhenhong Lin (2005). Energy and Environmental Impacts of Rural Vehicles in China. Proc., Air Pollution in China: The Challenges Ahead, National Academies Press
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PRESENTATIONS

1. "Optimized Pathways for Regional H2 Transitions: A Case Study for Southern California", 2nd World Congress of Young Scientists on Hydrogen Energy Systems, Turin, Italy, 2007 (forthcoming)
 2. "A VMT-based Approach to Siting Hydrogen Refueling Stations", 2nd World Congress of Young Scientists on Hydrogen Energy Systems, Turin, Italy, 2007 (forthcoming)
 3. "The Hydrogen Infrastructure Transition Model: A State-Filter Dynamic Programming Approach", 2006 INFORMS Annual Conference, Pittsburgh, PA, November 8, 2006
 4. "The Hydrogen Infrastructure Transition (HIT) Model --- Case Study for Urban Beijing", National Hydrogen Association conference, Long Beach, Mar 2006
 5. "Hydrogen Infrastructure Transition Model and Its Application in Optimizing 50-Year H2 Infrastructure for Urban Beijing", TRB Annual Meeting (Poster), Washington D.C., Jan 2006
 6. "Optimal Dynamic Strategy of Building a Hydrogen Infrastructure in Beijing", the Fourth Asia Pacific Conference on Transportation and the Environment, Xi'an, China, 2005
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SKILLS & INTERESTS

Computer Skills: Matlab/Simulink, ArcGIS, SPSS, LINGO, GAMS, AutoCAD, VBA, MS Office, etc.

Activities: travel, cooking, skiing, cycling, badminton, soccer