

## Nathan Parker

Curriculum vitae

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Arizona State University  
School of Sustainability  
Tempe, AZ 85281

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### **EDUCATION**

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- 2011 Ph.D. Transportation Technology and Policy, University of California, Davis
- 2007 M.S. Transportation Technology and Policy, University of California, Davis
- 2001 B.S. Physics, Wake Forest University

### **PROFESSIONAL APPOINTMENTS**

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- 2017 – present Assistant Professor, School of Sustainability, Arizona State University
- 2015 – 2017 Assistant Research Professor, School of Geographical Sciences and Urban Planning, Arizona State University
- 2011 - 2016 Postdoctoral Scholar, Institute of Transportation Studies and Energy Institute, University of California, Davis
- 2003 – 2011 Graduate Student Researcher, Institute of Transportation Studies, University of California, Davis
- 2001 – 2003 Physics Demonstrations Manager, North Carolina A&T State University

### **AWARDS AND FELLOWSHIPS**

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- 2011 Friends of ITS-Davis Outstanding Ph.D. Dissertation award
- 2010 Outstanding Student of the Year for the UC Davis Sustainable Transportation Center
- 2007 Charley V. Wootan Award for Outstanding MS Thesis
- 2003 U.S. DOE Graduate Automotive Technology Education (GATE) Fellowship

### **GRANTS**

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#### **Principal author**

- 2007 Development of GIS-based Biomass Supply Curves for Forest and Agricultural Biomass Resources – Chevron Technology Ventures
- 2007 Comparison of Optimal Biofuel Supply Chains Utilizing Real-World Distributions of Waste Biomass Supply in CA – Chevron Technology Ventures

#### **Major contributor**

- 2015 The Technological, Economic and Environmental Potential of Natural Gas as a Sustainable Transportation Fuel in the United States – Alfred P. Sloan Foundation

- 2013 The Feasibility of Renewable Natural Gas as a Large-Scale, Low-Carbon Substitute – California Air Resources Board
- 2012 Addressing Air Quality Issues for Biopower – California Energy Commission
- 2011 System For Advanced Biofuels Production From Woody Biomass In The Pacific Northwest – United States Department of Agriculture -Agriculture and Food Research Initiative
- 2009 Market Feasibility Biobased Polymer Technologies – California Department of Toxic Substances Control
- 2008 National Biorefinery Siting Model – United States Department of Energy Office of Biomass Programs
- 2007 Strategic Development of Bioenergy in the United States: Spatial Analysis and Supply Curve Development – United States Department of Agriculture Economic Research Service

## **PUBLICATIONS**

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### **Refereed Journal Articles**

1. Merz, Justin, Varaprasad Bandaru, Quinn Hart, **Nathan Parker**, and Bryan Jenkins. “Hybrid Poplar based Biorefinery Siting Web Application (HP-BiSWA): An online decision support application for siting hybrid poplar based biorefineries.” *Computers and Electronics in Agriculture* (2018), 155, 76-83.
2. Aragon, Nazli, Melissa Wagner, Meng Wang, Ashley M Broadbent, **Nathan Parker**, Matei Georgescu. “Sustainable Land Management for Bioenergy Crops.” *Energy Procedia* 125 (2017): 379-388.
3. **Parker, Nathan**, Robert Williams, Rosa Dominguez-Faus, and Daniel Scheitrum. “Renewable natural gas in California: an assessment of the technical and economic potential.” *Energy Policy* (2017) 111:235-245.
4. Scheitrum, Daniel, Amy Myers Jaffe, Rosa Dominguez-Faus, and **Nathan Parker**. “California Low Carbon Fuel Policies and Natural Gas Fueling Infrastructure: Synergies and Challenges to Expanding the use of RNG in Transportation.” *Energy Policy* (2017) 110:355-364.
5. Fan, Yueyue, Allen Lee, **Nathan Parker**, Daniel Scheitrum, Amy Myers Jaffe, Rosa Dominguez-Faus, and Kenneth Medlock. “Geospatial, temporal and economic analysis of alternative fuel infrastructure: The case of freight and U.S. natural gas markets.” *Energy Journal* (2017) 38(6).
6. Li, Yuanzhe, Peter Tittmann, **Nathan Parker**, and Bryan Jenkins. "Economic impact of combined torrefaction and pelletization processes on forestry biomass supply." *GCB Bioenergy* (2017) 9(4), 681-693.
7. Morrison, Geoffrey, Julie Witcover, **Nathan Parker** and Lew Fulton. "Three routes forward for biofuels: Incremental, leapfrog, and transitional." *Energy Policy* (2016) 88: 64-73.
8. Bandaru, Varaprasad, **Nathan Parker**, Quinn Hart, Mark Jenner, Boon-Ling Yeo, Jordan Crawford, Yuanzhe Li, Peter Tittmann, Luke Rogers, Stephen Kaffka and Bryan Jenkins. “Economic sustainability modeling provides decision support for assessing hybrid poplar-based biofuel development in California.” *California Agriculture* (2015) 69(3), 171-176.

9. Holland, Steven, Jonathan Hughes, Chris Knittel and **Nathan Parker**. "Unintended Consequences of Carbon Policies: Transportation Fuels, Land-Use, Emissions, and Innovation." *Energy Journal* (2015) 36(3), 35-74.
10. Holland, Stephen P., Jonathan E. Hughes, Christopher R. Knittel, and **Nathan C. Parker**. "Some inconvenient truths about climate change policy: The distributional impacts of transportation policies." *Review of Economics and Statistics* 97, no. 5 (2015): 1052-1069.
11. Morrison, Geoffrey, **Nathan Parker**, Julie Witcover, Lew Fulton and Yu Pei. "Contribution of Biofuels to U.S. Energy Independence: Weighing Supply and Demand Constraints." *Energy Strategy Reviews* (2014) 5, 42-47.
12. Prilepova, Olga, Quinn Hart, Justin Merz, **Nathan Parker**, Varaprasad Bandaru, and Bryan Jenkins. "Design of a GIS-based web application for simulating biofuel feedstock yields." *ISPRS International Journal of Geo-Information* (2014) 3(3), 929-941.
13. Murphy, Colin and **Nathan Parker**. "Spatial Analysis of the Effects of Air Pollution Control Regulation Compliance Costs on U.S. Biofuel Supply," *Environmental Science & Technology*. (2014) 48:4, pp 2157–2164
14. **Parker, Nathan**. "Spatially-Explicit Biofuel Supply Projection for Meeting the Renewable Fuel Standard," *Transportation Research Record* (2012) (No. 2287), pp. 72–79.
15. **Parker, Nathan**, Peter Tittmann, Quinn Hart, Richard Nelson, Ken Skog, Anneliese Schmidt, Edward Gray, and Bryan Jenkins. "Development of a biorefinery optimized biofuel supply curve for the Western United States." *Biomass and Bioenergy* (2010) (34), pp 1597-1607.
16. Jenkins, Bryan M., Robert B. Williams, **Nathan Parker**, Peter Tittmann, Quinn Hart, Martha C. Gildart, Steve Kaffka, Bruce R. Hartsough, and Peter Dempster. "Sustainable use of California biomass resources can help meet state and national bioenergy targets" *California Agriculture* (2010) 63(4):168-177.
17. Tittmann, Peter, **Nathan Parker**, Quinn Hart, and Bryan Jenkins. "A spatially explicit techno-economic model of bioenergy and biofuels production in California." *Journal of Transport Geography* (2010) 18(6):715-728.
18. **Parker, Nathan**, Yueyue Fan, and Joan Ogden. "From wastes to hydrogen: an optimal design of biohydrogen supply chain," *Transportation Research Part E* (2010) 46(4): 534-545.
19. Yeh, Sonia, Nicholas Lutsey and **Nathan Parker**. "Assessment of technologies to meet a low carbon fuel standard." *Environ. Sci. Technol.* (2009) 43 (18), pp 6907-6914.
20. **Parker, Nathan**, Joan Ogden and Yueyue Fan. "The role of biomass in California's hydrogen economy." *Energy Policy* 36 (2008) 3925–3939.

### Book Chapters

1. **Parker, Nathan**, Bryan Jenkins, Peter Dempster, Brendan Higgins, and Joan Ogden. "The Biofuel Pathway," in *Sustainable Transportation Energy Pathways: A Research Summary for Decision Makers*. edited by: Joan Ogden and Lorraine Anderson. 2011.
2. Ogden, Joan, Christopher Yang, Joshua Cunningham, Nils Johnson, Xuping Li, Michael Nicholas, **Nathan Parker**, and Yongling Sun. "The Hydrogen Fuel Pathway," in

*Sustainable Transportation Energy Pathways: A Research Summary for Decision Makers.* edited by: Joan Ogden and Lorraine Anderson. 2011.

3. Ogden, Joan, Christopher Yang, Yueyue Fan, and **Nathan Parker**. "Comparing Infrastructure Requirements," in *Sustainable Transportation Energy Pathways: A Research Summary for Decision Makers.* edited by: Joan Ogden and Lorraine Anderson. 2011.
4. Ogden, Joan, Christopher Yang, and **Nathan Parker**. "Transition Scenarios for the U.S. Light-Duty Sector," in *Sustainable Transportation Energy Pathways: A Research Summary for Decision Makers.* edited by: Joan Ogden and Lorraine Anderson. 2011.

### Manuscripts in Submission

1. Merz, Justin, Varaprasad Bandaru, Quinn Hart, **Nathan Parker** and Bryan M. Jenkins. "Hybrid Poplar based Biorefinery Siting Web Application (HP-BiSWA): an online decision support application for optimizing hybrid poplar based biorefinery siting and feedstock supply." Submitted to *Computers and Electronics in Agriculture*.

### Conference Proceedings

1. Li, Yuanzhe. **Nathan Parker** and Bryan Jenkins. "Modeling the biofuel production system from hybrid poplar under crop competition." Presented at the 2016 Transportation Research Board 95<sup>th</sup> Annual Meeting. Washington, DC. January 10-14, 2016.
2. Lee, Allen. Yueyue Fan, **Nathan Parker** and Amy Meyers Jaffe. "Sequential Buildup of an LNG Refueling Infrastructure Systems for Heavy-Duty Freight Trucks." Presented at 2015 Transportation Research Board 94<sup>th</sup> Annual Meeting. Washington, DC. January 11-15, 2015
3. Li, Yuanzhe. **Nathan Parker** and Bryan Jenkins. "Impact of Combined Torrefaction and Pelletization Process on Forestry Biomass Supply in California." Presented at 2015 Transportation Research Board 94<sup>th</sup> Annual Meeting. Washington, DC. January 11-15, 2015
4. Johnson, Nils. **Nathan Parker** and Joan Ogden. "How negative can biofuels with CCS take us and at what cost? Refining the economic potential of biofuel production with CCS using spatially-explicit modeling" *Energy Procedia* (2014) (63), pp.6770-6791.
5. Pei, Yu. **Nathan Parker** and Bryan Jenkins. "Projecting Spatial E85 Demand for 2015 and 2020." Presented at 2014 Transportation Research Board 93<sup>rd</sup> Annual Meeting. Washington, DC. January 22-26, 2014
6. **Parker, Nathan**. "Spatially-Explicit Biofuel Supply Projection for Meeting the Renewable Fuel Standard." Presented at 2012 Transportation Research Board 91<sup>st</sup> Annual Meeting. Washington, DC. January 22-26, 2012
7. **Parker, Nathan**, Peter Tittmann, Quinn Hart, Bryan Jenkins, Richard Nelson, Anneliese Schmidt, Gayle Gordon and Edward Gray. "Development of an Optimized Biofuel Supply Curve for the Western United States." Presented at the 16th European Biomass Conference and Exhibition. Valencia, Spain. June 2-6, 2008.
8. **Parker, Nathan**. "Spatially-Explicit Economic Assessment of Hydrogen from Waste Biomass: A California Case Study with Rice Straw," presented at 2006

Transportation Research Board 85th Annual Meeting, Washington, DC. January 22-26, 2006.

9. Burke, Andrew, Marshall Miller and **Nathan Parker**. "Ultracapacitor Technology: Present and Future Performance and Applications," presented at Advanced Capacitor World Summit 2004. Washington, DC. July 14-16, 2004.

### Technical Reports

1. Haider, Nora, **Nathan Parker**, and Patricia Townsend. "Potential for a hybrid poplar industry using recycled water: An environmental application of poplar in Northern Idaho." *Washington State University Extension Technical Bulletin*. November 2018.
2. Jaffe, Amy Myers, Rosa Dominguez-Faus, Joan M. Ogden, **Nathan C. Parker**, Daniel Scheitrum, Zane McDonald, Yueyue Fan, Tom Durbin, George Karavalakis, Justin Wilcock, Marshall Miller, Christopher Yang (2017) The Potential to Build Current Natural Gas Infrastructure to Accommodate the Future Conversion to Near-Zero Transportation Technology. Institute of Transportation Studies, University of California, Davis, Research Report UCD-ITS-RR-17-04
3. Jaffe, Amy Meyers, Rosa Dominguez-Faus, **Nathan Parker**, Daniel Scheitrum, Justin Wilcock, and Marshall Miller. "The Feasibility of Renewable Natural Gas as a Large-Scale, Low Carbon Substitute." Prepared for the California Air Resources Board and the California Environmental Protection Agency in fulfillment of Contract No. 13-307. Sacramento, CA. June 2016.
4. **Parker, Nathan**, Lindsay Price; Katherine Mitchell. "Impact of Biofuel Demand on Forest Woody Biomass Supply." 2016. California Energy Commission. Publication Number: CEC-600- 11-006 Task 8.
5. Samuelsen, Scott, Alejandra Cervantes, Brendan Shaffer, Marc Carreras-Sospreda, Robert Williams, **Nathan Parker** and Bryan Jenkins. "Air Quality And Greenhouse Gas Emissions Impact Assessment From Biomass And Biogas Derived Transportation Fuels And Electricity And Heat Generation." 2015. California Energy Commission/Contract 500-11-028. Sacramento, CA.
6. Jaffe, Amy Myers, Rosa Dominguez-Faus, Allen Lee, Kenneth Medlock, **Nathan Parker**, Daniel Scheitrum, Andrew Burke, Hengbing Zhao, Yueyue Fan. "Exploring the Role of Natural Gas in U.S. Trucking." Institute of Transportation Studies, University of California, Davis, Research Report 2014.
7. Fulton, Lewis, Geoffrey M. Morrison, **Nathan C. Parker**, Julie Witcover, Daniel Sperling (2014) "NextSTEPS White Paper: Three Routes Forward – Incremental, Transitional, and Leapfrog." Institute of Transportation Studies, University of California, Davis, Research Report UCD-ITS-RR-14-12.
8. Yeh, Sonia, Daniel Sperling, Miroslav Batka, Michael Griffin, David Heres Del Valle, Haixiao Hung, Madhu Khanna, Matthew Kocoloski, Paul Leiby, Gouri Shankar Mishra, Siwa Msangi, Kimberly Mullins, Hayri Onal, **Nathan Parker**, James Rhodes, Jonathan D. Rubin, Aranya Venkatesh, Julie Witcover, Christopher Yang (2012) "National Low Carbon Fuel Standard: Technical Analysis Report." Institute of Transportation Studies, University of California, Davis, Research Report UCD-ITS-RR-12-11

9. **Parker, Nathan**, Quinn Hart, Peter Tittmann, and Bryan Jenkins. "National Biofuel Supply Analysis," prepared for the Western Governors' Association, contract # 20113-03. April, 2011.
10. **Parker, Nathan**, Quinn Hart, Peter Tittmann, Colin Murphy, Mui Lay, Richard Nelson, Kenneth Skog, Edward Gray, Annelise Schmidt, and Bryan Jenkins. "Strategic Development of Bioenergy in the United States: Spatial Analysis and Supply Curve Development." report to USDA, Project Number: 58-3000-7-0158. February, 2010.
11. **Parker, Nathan**, Peter Tittmann, Quinn Hart, et al. "Strategic assessment of bioenergy development in the west: Spatial analysis and supply curve development." 2008. Denver, CO.:Western Governors' Association.
12. Tittmann, Peter, **Nathan Parker**, Quinn Hart, et al. "Economic potential of California biomass resources for energy and biofuel." 2008. California Energy Commission/Contract 500-01-016. Sacramento, CA.
13. **Parker, Nathan**. "Using Natural Gas Transmission Pipeline Costs to Estimate Hydrogen Pipeline Costs." UCD-ITS-RR-04-35. December 2004. (cited 108 times according to Google Scholar on November 15, 2015)

## **PRESENTATIONS**

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### **Invited Talks.**

1. Jaffe, Amy Meyers and Nathan Parker. "The Feasibility of Renewable Natural Gas as a Large-Scale, Low Carbon Substitute." California Air Resources Board Research Seminar. Sacramento, CA. December 2<sup>nd</sup>, 2016.
2. Parker, Nathan. "Envisioning the future of cellulosic biofuels." Sustainability Series at Arizona State University. March 18, 2016.
3. Parker, Nathan. "Transition costs for cellulosic biofuels: overcoming the mountain of despair." Presenting at the Energy Policy Seminar Series at Iowa State University. March 2, 2016.
4. Parker, Nathan. Prasad Bandaru, Quinn Hart and Bryan Jenkins. "Lessons from regional and national applications of the Geospatial Bioenergy Systems Model (GBSM)" Presented at Bioenergy Model Workshop. Washington, DC. July 22-23, 2014.
5. Parker, Nathan, "Understanding the economic potential for cellulosic biofuels." Presented at Arizona State University School of Geographical Science and Urban Planning Colloquium. Tempe, AZ. April 14, 2014.
6. Parker, Nathan. "Status of biofuel development and commercialization." Presented at California Energy Commission 2014 Integrated Energy Policy Report Transportation Workshop. Sacramento, CA. April 10, 2014.
7. Parker, Nathan. "Biofuel opportunities and transition costs." Presented at California Energy Commission 2013 Bioenergy Staff Integrated Energy Policy Report Workshop. Sacramento, CA. June 3, 2013.
8. Parker, Nathan. "Development of Biofuel Supply Curves using a Spatially-explicit Supply Chain Optimization." Presented at Energy Biosciences Institute Seminar. Berkeley, CA. April 17, 2012.
9. Parker, Nathan, Bryan Jenkins, Sonia Yeh, Peter Tittmann and Quinn Hart. "Compliance Pathways for Meeting the Low Carbon Fuel Standard in California:

Biofuel Supply Curves.” Presented at California Air Resources Board Low Carbon Fuel Standard Workshop. May 2008.

### **Selected Conference Presentations**

1. Parker, Nathan. “The role of out-of-state renewable natural gas in meeting the California low carbon fuel standard.” Presented at Energy Policy Research Conference 2018. Boise, ID. September 6-7, 2018.
2. Parker, Nathan and Nazli Uludere Aragon. “Economic evaluation of biofuel production in hot spots identified for hydroclimatic sustainability.” Presented at The Institute for Operations Research and Management Science (INFORMS) Annual Meeting. Phoenix, AZ. November 4-7, 2018.
3. Parker, Nathan. “Potential for Renewable Natural Gas.” Presented at The Technological, Economic and Environmental Potential of Natural Gas as a Sustainable Transportation Fuel in the United States Workshop. Davis, CA. October 1, 2015.
4. Parker, Nathan, Rob Williams, Rosa Dominguez-Faus, Daniel Scheitrum and Marshall Miller. “Potential for Renewable Natural Gas in Transportation.” Presented at 201 STEPS Spring Symposium. Davis, CA. May 12-15, 2015.
5. Parker, Nathan. “The Challenge of Developing Alternate Fuel Markets: Lessons from the Slow Development of CNG/LNG Fuel Markets.” Presented at 52<sup>nd</sup> Paving and Transportation Conference. Albuquerque, NM. January 5-6, 2015.
6. Parker, Nathan, Nils Johnson and Joan Ogden. “Refining the Economic Potential of Biofuel Production with CCS using Spatially-explicit Modeling.” Presented at The Institute for Operations Research and Management Science (INFORMS) Annual Meeting. San Francisco, CA. November 9-12, 2014.
7. Fulton, Lewis and Nathan Parker. “Three routes forward with biofuels.” Presented at 2014 NextSTEPS Spring Symposium. Davis, CA. May 29-30, 2014.
8. Parker, Nathan, Quinn Hart, Varaprasad Bandaru, Boon-Ling Yeo, Peter Tittmann, Mark Jenner, Stephen Kaffka and Bryan Jenkins. “Sustainability Research at UC Davis” Presented at Advanced Hardwood Biofuels Northwest 3<sup>rd</sup> Annual Meeting. Davis, CA. September 10-11, 2014.
9. Parker, Nathan, Lew Fulton and Yu Pei. 2013. “Update of NextSTEPS Biofuels Research.” Presented at 2013 NextSTEPS Fall Symposium. Davis, CA. December 9-10, 2013.
10. Parker, Nathan, Quinn Hart, Peter Tittmann, Mark Jenner, Stephen Kaffka and Bryan Jenkins. 2013. “Sustainability Research at UC Davis” Presented at Advanced Hardwood Biofuels Northwest 2<sup>nd</sup> Annual Meeting. Corvallis, OR. September 10-11, 2013.
11. Parker, Nathan, Nils Johnson and Joan Ogden. 2013. “Reality check on carbon negative liquid biofuels.” Presented at 2013 NextSTEPS Spring Symposium. Davis, CA. May 20-21, 2013.
12. Parker, Nathan. 2012. “Prospects for Biofuels.” Presented at 2012 NextSTEPS Fall Symposium. Davis, CA. November 29-30, 2012.
13. Parker, Nathan. “Spatially-Explicit Biofuel Supply Projection for Meeting the Renewable Fuel Standard.” Presented at 2012 Transportation Research Board 91<sup>st</sup> Annual Meeting. Washington, DC. January 22-26, 2012.

14. Parker, Nathan and Jie Zheng. "Simulating Early Cellulosic Biofuel Infrastructure in the US." Presented at The Institute for Operations Research and Management Science (INFORMS) Annual Meeting. Charlotte, NC. November 13-16, 2011.
15. Parker, Nathan. "Understanding the Challenges for Individual Fuel/Vehicle Pathways: Biofuels," presented at 2011 STEPS/NextSTEPS Symposium: Insights from STEPS & Introduction to NextSTEPS, Davis, CA. January 18-19, 2011.
16. Parker, Nathan, Quinn Hart and Bryan Jenkins. "Development of Biofuel Supply Curves using Spatially-explicit Supply Chain Optimization Model." Presented at The Institute for Operations Research and Management Science (INFORMS) Annual Meeting. Austin, TX. November 7-10, 2010.
17. Parker, Nathan. "Is there value in spatial supply chain optimization for policy analysis of cellulosic biofuels?" Presented at The Institute for Operations Research and Management Science (INFORMS) Annual Meeting. San Diego, CA. October 10-14, 2009.
18. Parker, Nathan, Yueyue Fan. "Competition for biomass for energy products." Presented at The Institute for Operations Research and Management Science (INFORMS) Annual Meeting. Washington, DC. October 12-15, 2008.
19. Parker, Nathan, Peter Tittmann, Quinn Hart, Bryan Jenkins, Richard Nelson, Anneliese Schmidt, Gayle Gordon and Edward Gray. "Development of an Optimized Biofuel Supply Curve for the Western United States." Presented at the 16th European Biomass Conference and Exhibition. Valencia, Spain. June 2-6, 2008.
20. Parker, Nathan and Peter Tittmann. "Spatially explicit optimization biofuels production in the Western U.S." presented at the 2008 Association of American Geographers' Annual Meeting, Boston, MA. March 15-19, 2008.
21. Parker, Nathan, Peter Tittmann, Quinn Hart, Bryan Jenkins, Richard Nelson, Anneliese Schmidt, Gayle Gordon and Edward Gray. "Western Governors' Association: Strategic Development of Biofuels in the Western States," presented at Ecological Society of America's Conference on the Ecological Dimensions of Biofuels, Washington, DC. March 10, 2008.
22. Parker, Nathan, Yueyue Fan. "From Waste to Hydrogen: An Optimal Design of Energy Production and Distribution Network." Presented at National Urban Freight Conference 2007. Long Beach, CA. December 5-7, 2007.
23. Parker, Nathan, Yueyue Fan. "Design of biofuel supply chains under uncertainty." Presented at The Institute for Operations Research and Management Science (INFORMS) Annual Meeting. Seattle, WA. November 4-7, 2007.
24. Parker, Nathan. "Optimal Design of Hydrogen Production from Agricultural Waste," presented at the National Hydrogen Association Annual Meeting. San Antonio, TX. March 19-22, 2007.
25. Eggert, Anthoy and Nathan Parker. "Production of Hydrogen from Waste Biomass," presented at the International Symposium on Fuels and Lubricants 2006, New Delhi, India. March 7-10, 2006.
26. Parker, Nathan. "Spatially-Explicit Economic Assessment of Hydrogen from Waste Biomass: A California Case Study with Rice Straw," presented at 2006 Transportation Research Board 85th Annual Meeting, Washington, DC. January 22-26, 2006.



## **Webinars**

1. Parker, Nathan. "Economic Evaluation of Potential Biorefineries with High-Resolution Decision Support Tool." Advanced Hardwood Biofuels Webinar Series. November 9, 2016.
2. Yeo, Boon-Ling, Nathan Parker and Josué Medellín-Azuara. "Estimation of job creation and economic activity from investment in hybrid poplar bio-jet fuel." Advanced Hardwood Biofuels Webinar Series. January 20, 2016.
3. Parker, Nathan. "Locating poplar biorefineries in the Pacific Northwest." Advanced Hardwood Biofuels Webinar Series. September 17, 2014.
4. Fulton, Lew. Nathan Parker, Julie Whitcover and Geoff Morrison. "Three routes forward for biofuels." NextSTEPS Webinar Series from the University of California, Davis. May 16, 2014.

## **Campus Talks.**

1. Parker, Nathan. "Can biofuel production in the United States meet the promises of policy makers?" presented at the Institute of Transportation Seminar. Davis, CA. Nov. 29, 2009.

## **Panels**

Regional Circular Organic Resource System Design. Disruptive Innovation Festival organized by Ellen MacArthur Foundation. November 14, 2016.

## **TEACHING EXPERIENCE**

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### **Arizona State University**

Sustainable Energy Materials and Technology – Fall '17, Spring '18, Fall '18, Spring '19

Interdisciplinary Learning Laboratory – Fall '18

Developed online version of Sustainable Energy Materials and Technology

#### *Lecturer*

Optimization Fundamentals for Spatial Analysis – Fall '15

Served on 2 PhD committees and as primary advisor to one undergraduate honor's thesis.

### **University of California, Davis**

#### *Lecturer*

Fundamentals of Transportation Technology – Winter '10, '11, '12, '13

#### *Teaching Assistant*

Policy Analysis – Fall '05

Served on 6 comprehensive exam committees for Transportation Technology and Policy MS degree and 2 qualifying exam committees for Ph.D. in Transportation Technology and Policy

### **North Carolina A&T State University**

Physics Demonstrations Manager - 2001-2003

### **Wake Forest University**

*Teaching Assistant*  
General Physics – Fall '99, '00 and Spring '00, '01

### **ACADEMIC SERVICE**

#### **Reviewer**

Energy Policy  
Environmental Science and Technology  
Biomass and Bioenergy  
Bioresource Technology  
Journal of Sustainability  
PLoS ONE  
European Journal of Operations Research  
Environmental Research Letters  
Biofuels  
Energy Economics  
GCB Bioenergy

### **POLICY OUTREACH**

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Member of the Technical Advisory Committee for California Energy Commission project “Long term strategic view of the use of natural gas in a carbon-constrained and water-efficient environment.”

Advised a group of NGOs evaluating feasible targets for California’s Low Carbon Fuel Standard 2030 rulemaking process

Reviewer for Department of Energy’s Biomass Scenario Model. Washington, D.C. December 13-14, 2016.

Reviewer for Department of Energy’s 2016 Billion Ton Report – Mobilizing the Bioeconomy. Washington, D.C. December 9-10, 2015.

Invited speaker, Valley of the Sun Clean Cities Coalition event: Arizona’s Future Transportation Needs, September 2015

Advisory Board member for Pacific Coast Low Carbon Fuel Supply Scenario project.

Plevin, Richard, Gouri Shankar Mishra, Nathan Parker. “Estimating 2014 cellulosic biofuel production.” Comments to the Environmental Protection Agency. Docket ID EPA-HQ-OAR-2013-0747.

Presented research findings to policy makers and industry sponsors (CA Legislative Analyst’s Office, U.S. Department of Energy, U.S. EPA, CA Energy Commission, CA Air Resources Board, Chevron, BP, ExxonMobil, Shell, BMW, Volkswagen, GE, ConocoPhillips, and IndianOil)

Jenkins, Bryan, Nathan Parker, Quinn Hart, Peter Tittmann, et al. “National Biorefinery Siting Model: Optimizing Bioenergy Development in the U.S.” presented to National

Research Council Committee on the Economic and Environmental Impacts of Increasing Biofuels Production. Washington, D.C. March 5, 2010.

Served as a scientific expert for the California Air Resources Board on the California Low Carbon Fuel Standard regulation. 2009.

Parker, N., "Production of Hydrogen from Waste Biomass," Presentation for Cal/EPA Secretary's Seminar, Sacramento, CA. September 27, 2005.