

## Curriculum Vitae

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Professor

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**ROLAND GEYER**

**University of California at Santa Barbara**

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Roland Geyer is Professor at the Bren School of Environmental Science and Management, University of California at Santa Barbara. Prior to joining the Bren School he held research positions at the Centre for Environmental Strategy (University of Surrey, UK), the Centre for the Management of Environmental Resources (INSEAD, France), and was consultant in financial risk management for AMS (now part of CGI) in Germany. Since 2000 he has worked with a wide range of governmental organisations, trade associations, and companies on environmental sustainability issues. In his research he uses the approaches and methods of industrial ecology, such as life cycle assessment and material flow analysis, to assess pollution prevention strategies based on reuse, recycling, and material and technology substitution. Roland also combines these approaches with research methods from other disciplines in order to study the relationship between environmental performance, economic viability, and technical and operational feasibility of pollution prevention strategies. His overarching goal is to help develop the knowledge, tools, and methods necessary to reduce the environmental impact from industrial production and consumption. Roland has a graduate degree in physics from the Technical University Berlin and a PhD in engineering from the University of Surrey.

February 2020

## EDUCATION

- 2004           **PhD in Engineering**  
Centre for Environmental Strategy, School of Engineering, University of Surrey, UK  
Thesis: *Environmental and Economic Evaluation of Supply Loops and their Constraints*
- 1997           **German Diplom in Physics** (MSc or MPhil equivalent)  
1992           **German Vordiplom in Physics** (BSc equivalent)  
Department of Physics, Technical University Berlin, Germany  
Thesis: *Circumstellar Dustshells of Long-Period Variables as Dynamic Systems*
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## EMPLOYMENT

- Since 2018        *UNIVERSITY OF CALIFORNIA, SANTA BARBARA, USA*  
Professor in Industrial Ecology and Pollution Prevention
- 2011-2018        Associate Professor in Industrial Ecology and Pollution Prevention
- 2003-2011        Assistant Professor in Industrial Ecology and Pollution Prevention
- 2000-2003        *UNIVERSITY OF SURREY, GUILDFORD, UK*  
Research Fellow in Environmental Strategy
- 1998-2000        *INSEAD, FONTAINEBLEAU, FRANCE*  
Research Associate in Environmental and Technology Management
- 1997-1998        *AMS MANAGEMENT SYSTEMS, MUNICH, GERMANY*  
Consultant in Financial Risk Management
- 1992-1996        *TECHNICAL UNIVERSITY BERLIN, BERLIN, GERMANY*  
Course Tutor in Theoretical and Applied Mathematics
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## AWARDS & HONORS

- 2018            Winner – International Statistic of the Year 2018, Royal Statistical Society, UK
- 2018            Winner – 2017 Graedel Prize, Journal of Industrial Ecology Best Paper Prize
- 2017            Altmetric Top 100 Articles 2017 (#29)
- 2015            Altmetric Top 100 Articles 2015 (#27)
- 2015            Outstanding Paper Award, 7th Annual ARCS Research Conference
- 2014            Distinguished Teaching Award, Bren School, UCSB
- 2010            Professor-in-Residence/Study Leader, Toyota International Teachers Program
- 2009            Athena Chair in Life Cycle Assessment, University of Calgary (declined)
- 2008            Life Cycle Assessment Certified Professional, ACLCA
- 2007            Industrial Ecology Faculty Fellow of the AT&T Foundation
- 2002            Best Paper Award, 10<sup>th</sup> LCA Case Studies Symposium, SETAC Europe
- 2000 & 2001    Doctoral Scholarship of the German Academic Exchange Service (DAAD)

## GRANTS & GIFTS

- 2019-2020 Fisheries Interactions & Carbon Offsets: Assessing Existing and Potential Seaweed Aquaculture, NOAA, \$220,225, with Steve Gaines and Charles Lester.
- 2019-2020 Life Cycle Assessment of Chemical Recycling of Retired Fishing Gear Patagonia, \$31,800.
- 2019-2020 Ocean-Based Sources of Plastic Marine Debris The Nature Conservancy, \$108,619, with Brandon Kuczenski.
- 2019-2020 Seaweed Aquaculture: A Climate Mitigation Strategy Worth Pursuing? The Grantham Foundation, \$188,075 with Steve Gaines and Ben Halpern.
- 2018-2020 Global Material Flow Analysis of Synthetic Fibers Ocean Conservancy, Outdoor Industry Association, Purnell, \$100,000, with Sangwon Suh.
- 2017-2018 Comparative Life Cycle Assessment of Almond Milk Califia, \$48,000, with Alissa Kendall, UC Davis.
- 2017-2020 Increased Energy Efficiency via Programmable Irrigation and Fertigation California Energy Commission, \$2,992,660, with PowWow Energy and West Hill Community College.
- 2017 Comprehensive Life Cycle Impact Assessment of Automotive Material Substitution World Steel Association, \$39,500.
- 2015-2017 Electronic Waste: The Thermodynamic Perspective for Recycling Valuable Metals Consejo Nacional de Ciencia y Tecnología (CONACYT), \$50,000.
- 2015-2017 Irrigation Optimization & Well Pump Monitoring to Reduce Energy & Water Consumption California Energy Commission, \$2,292,829, with PowWow Energy and UC Davis.
- 2016 Consequential Life Cycle Assessment (CLCA) of Steel vs. Aluminum in Vehicles American Iron and Steel Institute, \$26,658.
- 2013-2017 Displaced Production Due to Reuse and Recycling: Theory Development and Case Studies NSF, \$328,741, with Richard Startz.
- 2015-2017 Assessing the Ecosystem and Human Health Impacts and Implications of Aquaculture University of California Office of the President, \$29,340, with Hunter Lenihan.
- 2015-2016 Alternatives Analysis Pilot Study: Alternatives to Methylene Chloride in Paint Stripper California EPA, \$93,500, with Arturo Keller.
- 2014-2015 Evaluation of LCA Recycling Methodologies for North American Steel Products American Iron and Steel Institute, \$25,000.
- 2013-2015 Development of a Parsimonious Vehicle Energy Demand Calculation Method World Steel Association, \$50,000, with Don Malen, University of Michigan.
- 2013-2014 Potential Rooftop Photovoltaic Electricity for Sustainable Transportation in California California Energy Commission, PIER, EISG, \$49,898.
- 2012-2013 Development of a Life Cycle Greenhouse Gas and Energy Model for Passenger Vehicles World Steel Association, \$24,000.

- 2011-2013 Life Cycle Assessment of Used Oil Generated in California  
California Natural Resources Agency, \$764,668.
- 2010-2012 Extended Producer Responsibility Evaluation of GHG Emissions associated with Products  
California Natural Resources Agency, \$110,000.
- 2010-2013 Spatially-Explicit Life Cycle Assessment Tools for Environmental Sustainability  
NSF, \$218,120, with David Stoms and Frank Davis.
- 2010 Life Cycle Assessment of Yogurt Cups made from PS and Ingeo PLA  
Stonyfield Farms, \$6,000.
- 2010 Summer School: Assessing the Loss of Biodiversity and Ecosystem Services  
Bavaria California Technology Center, \$14,000, with Thomas Koellner, Uni Bayreuth.
- 2010 Greenhouse Gas Assessment of the Calera Process  
Calera Corporation, \$12,000.
- 2009-2010 Alternatives Analysis for California's Green Chemistry Initiative  
California EPA, \$70,000.
- 2009-2010 Life Cycle Assessment of PET Bottles  
California EPA, \$25,000.
- 2009 The First Symposium on Industrial Ecology for Young Professionals  
NSF, \$37,886, with Braden Allenby, Eric Williams, Xu Ming, and Vered Doctori Blass.
- 2009 The Rebound Effect: State of the Debate and Implications for Energy Efficiency Research  
UCSB Institute for Energy Efficiency, \$10,000.
- 2008-2010 Development of commercially viable recycled polyethylene terephthalate (RPET)  
California Natural Resources Agency, \$500,000, with Jay Singh and Rafael Auras.
- 2008 Life Cycle Assessments of Various Glass Packaging Designs  
Glass Packaging Institute, \$228,980, with Marc Binder and Liila Woods.
- 2008 Biodiversity and biofuels: A winning combination in the San Joaquin Valley?  
University of California Energy Institute, \$28,600, with David Stoms and Frank Davis.
- 2007 Environmental life cycle impacts of light-weighting vehicle front ends  
American Iron and Steel Institute, \$4,500.
- 2007 Greenhouse gas emission study of automotive materials– Phase II  
International Iron and Steel Institute, \$27,604.
- 2006-2007 The role and value of information and ICT for supply loop management  
AT&T Foundation, \$25,000, with Vered Doctori Blass.
- 2005-2006 The impact of material choice on life cycle greenhouse gas emissions of vehicles  
International Iron and Steel Institute, \$39,634.
- 2005-Date Total Amount: \$8,820,867**
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## PEER-REVIEWED JOURNAL ARTICLES

- (37) Ren Y, Shi L, Bardow A, Geyer R, Suh S (2020) *Life-cycle environmental implications of China's ban on post-consumer plastics import*, **Resources, Conservation and Recycling**, DOI 10.1016/j.resconrec.2020.104699.
- (36) Winans K, Macadam-Somer I, Kendall A, Geyer R, Marvinney E (2020) *Life Cycle Assessment of California Unsweetened Almond Milk*, **International Journal of Life Cycle Assessment**, DOI 10.1007/s11367-019-01716-5.
- (35) Palazzo J, Geyer R, Suh S (2020) *A review of methods for characterizing the environmental consequences of actions in life cycle assessment*, **Journal of Industrial Ecology**, DOI 10.1111/jiec.12983.
- (34) Couture J, Geyer R, Øvrum J, Kuczenski B, Øverland M, Palazzo J, Sahlmann C, Lenihan H (2019) *Environmental benefits of novel non-human food inputs to salmon feeds*, **Environmental Science and Technology**, 53(4), 1967-1975.
- (33) Palazzo J, Geyer R (2019) *Consequential Life Cycle Assessment of Automotive Material Substitution: Replacing Steel with Aluminum in North American Vehicle Production*, **Environmental Impact Assessment Research**, 75(2019), 47-58.
- (32) Palazzo J, Geyer R, Startz R, Steigerwald D (2019) *Causal Inference for Quantifying Displaced Primary Production from Recycling*, **Journal of Cleaner Production**, 210(2019), 1076-1084.
- (31) Dominguez A, Geyer R (2019) *Photovoltaic Waste Assessment of Major Photovoltaic Installations in the USA*, **Renewable Energy**, 133(April 2019), 1188-1200.
- (30) Zink T, Geyer R (2019) *Recycling and the Myth of Landfill Diversion*, **Journal of Industrial Ecology**, 23(3), 541-548.
- (29) Zink T, Geyer R, Startz R (2018) *Toward Estimating Displaced Production from Recycling: A Case Study of U.S. Aluminum*, **Journal of Industrial Ecology**, 22(2), 314-326.
- (28) Dominguez A, Geyer R (2017) *Photovoltaic Waste Assessment in Mexico*, **Resources, Conservation and Recycling**, 127(2017), 29-41.
- (27) Geyer R, Jambeck J, Lavender Law K (2017) *Production, Use, and Fate of all Plastics ever made*, **Science Advances**, 3(7), e1700782.
- (26) Bilich A, Langham K, Geyer R, Goyal L, Hansen J, Krishnan A, Bergesen J, Sinha P (2017) *Life Cycle Assessment of Solar Photovoltaic Microgrid Systems in Off-Grid Communities*, **Environmental Science and Technology**, 51(2), 1043-1052.
- (25) Zink T, Geyer R (2017) *Circular Economy Rebound*, **Journal of Industrial Ecology**, 21(3), 593-602.
- (24) Fournier E, Keller A, Geyer R, Frew J (2016) *Investigating the Energy-Water Usage Efficiency of the Reuse of Treated Municipal Wastewater for Artificial Groundwater Recharge*, **Environmental Science and Technology**, 50(4), 2044-2053.
- (23) Zink T, Geyer R (2016) *There is no such Thing as a Green Product*, **Stanford Social Innovation Review**, 14(2), 26-31.

- (22) Geyer R, Kuczenski B, Zink T, Henderson A (2016) *Common Misconceptions about Recycling*, **Journal of Industrial Ecology**, 20(5), 1010-1017.
- (21) Zink T, Geyer R, Startz R (2016) *A Market-Based Framework for Quantifying Displaced Production from Recycling or Reuse*, **Journal of Industrial Ecology**, 20(4), 719-729.
- (20) Geyer R, Kuczenski B, Trujillo M (2016) *Assessing the Greenhouse Gas Savings Potential of Extended Producer Responsibility for Mattresses and Boxsprings in the U.S.*, **Journal of Industrial Ecology**, 20(4), 917-928.
- (19) Jambeck J, Geyer R, Wilcox C, Siegler T, Perryman M, Andrady A, Narayan R, Lavender Law K (2015) *Plastic waste inputs from land into the ocean*, **Science**, 347(6223), 768-771.
- (18) Kuczenski B, Geyer R, Zink T, Henderson A (2014) *Material Flow Analysis of Lubricating Oil Use in California*, **Resources, Conservation and Recycling**, 93(2014), 59-66.
- (17) Zink T, Maker F, Geyer R, Amirtharajah R, Akella V (2014) *Comparative Life Cycle Assessment of Smartphone Reuse: Repurposing vs. Refurbishment*, **International Journal of Life Cycle Assessment**, 19(5), 1099-1109.
- (16) Geyer R, Stoms D, Kallaios J (2013), *Spatially-Explicit Life Cycle Assessment of Sun-to-Wheels Transportation Pathways in the U.S.*, **Environmental Science and Technology**, 47(2), 1170-1176.
- (15) Kuczenski B, Geyer R (2013) *PET Bottle Reverse Logistics – Environmental Performance of California’s CRV program*, **International Journal of Life Cycle Assessment**, 18(2), 456-471.
- (14) Kuczenski B, Geyer R, Boughton R (2011), *Tracking Toxicants: Toward a life cycle aware risk assessment*, **Environmental Science and Technology**, Special Issue *Environmental Policy: Past, Present, and Future*, 45(1), 45-50.
- (13) Bumby S, Druzhinina E, Feraldi R, Werthman D, Geyer R, Sahl J (2010), *Life cycle assessment of overhead and underground primary power distribution*, **Environmental Science and Technology**, 44(14), 5587–5593.
- (12) Kuczenski B, Geyer R (2010) *Material flow analysis of polyethylene terephthalate in the US, 1996-2007*, **Resources, Conservation and Recycling**, 54(12), 1161-1169.
- (11) Geyer R, Stoms D, Lindner J, Davis F, Wittstock B (2010), *Coupling LCA and GIS for biodiversity assessments of land use: Part 2 – Impact assessment*, **International Journal of Life Cycle Assessment**, 15(7), 692-703.
- (10) Geyer R, Lindner J, Stoms D, Davis F, Wittstock B (2010) *Coupling LCA and GIS for biodiversity assessments of land use: Part 1 - Inventory analysis*, **International Journal of Life Cycle Assessment**, 15(5), 454-467.
- (9) Oliver J Y, Geyer R, Savage A, Chong F T, Amirtharajah R, Akella V (2010) *Experiences with Life-cycle Aware Computer Architecture*, **International Journal of Engineering Education**, 26(2), 297-304.
- (8) Geyer R, Doctori Blass V (2010) *The economics of cell phone reuse and recycling*, **Journal of Advanced Manufacturing Technology**, 47(5-8), 515-525.

- (7) Early C, Kidman T, Menvielle M, Geyer R, McMullan R (2009) *Informing packaging design decisions at Toyota Motor Sales using life cycle assessment and costing*, **Journal of Industrial Ecology**, 13(4), 592-606.
- (6) Geyer R (2008) *Parametric assessment of climate change impacts of automotive material substitution*, **Environmental Science and Technology**, 42(18), 6973-6979.
- (5) Oliver J Y, Amirtharajah R, Akella V , Geyer R, Chong F T (2007) *Life-cycle Aware Computing: Reusing Silicon Technology*, **Computer**, 40(12), 56-61.
- (4) Davis J, Geyer R, Ley J, He J, Jackson T, Clift R, Kwan A, Sansom M (2007) *Time-dependent material flow analysis of iron & steel in the UK – Part 2: Scrap generation & recycling*, **Resources, Conservation and Recycling**, 51(1), 118-140.
- (3) Geyer R, Davis J, Ley J, He J, Jackson T, Clift R, Kwan A, Sansom M (2007) *Time-dependent material flow analysis of iron & steel in the UK – Part 1: Production & consumption trends 1970-2000*, **Resources, Conservation and Recycling**, 51(1), 101-117.
- (2) Geyer R, Van Wassenhove L N, Atasu A (2007) *The economics of remanufacturing under limited component durability and finite product life cycles*, **Management Science**, 53(1), 88-100.
- (1) Geyer R, Jackson T (2004) *Supply Loops and Their Constraints: The Industrial Ecology of Recycling and Reuse*, **California Management Review**, 40(2), 55-73.

## BOOK CHAPTERS

- (B9) Geyer R (2020) *Earth and Plastic*, in: **Planet Earth 2020: An insider's guide to a rapidly changing planet**, Tortell P D (Ed.), Open Book Publishers, Cambridge, UK.
- (B8) Geyer R (2020) *A Brief History of Plastics*, in: **Mare Plasticum – The Plastic Sea**, Streit-Bianchi M, Cimadevila M & Trettnak W (Eds.), Springer, Berlin, Germany.
- (B7) Maier J, Geyer R, Zink T (2020) *Circular Economy Rebound*, in: **Handbook of the Circular Economy**, Brandão M, David Lazarevic D & Finnveden G (Eds.), Edward Elgar Publishing, Cheltenham, UK.
- (B6) Geyer R (2020) *Production, Use, and Fate of Synthetic Polymers*, in: **Plastic Waste and Recycling**, Letcher T M (Ed.), Academic Press, Cambridge, MA, USA.
- (B5) Geyer R (2016) *The Industrial Ecology of the Automobile*, in: **Taking Stock of Industrial Ecology**, Clift R & Druckman A (Eds.), Springer, Berlin, Germany.
- (B4) Koffler C, Geyer R, Volz T (2014) *Life Cycle Inventory*, in: **Environmental Life Cycle Assessment**, Schenck R & White P (Eds.), ACLCA, Vashon, WA, USA.
- (B3) Geyer R, DuBuisson M (2009) *A Life Cycle-Based Framework for Environmental Assessments of Eco-Entrepreneurship*, 53-78 in: **Frontiers in Eco Entrepreneurship Research**, Libecap G D (Ed.), Advances in the Study of Entrepreneurship, Innovation and Economic Growth, Volume 20, Emerald, Bingley, UK.
- (B2) Geyer R, Van Wassenhove L N, Neeraj K (2005) *Reverse logistics in an electronics company: the NEC-CI case*, 33-39 in: **Managing Closed-Loop Supply Chains**, Flapper S D P, van Nunen J A E E, Van Wassenhove L N (Eds.), Springer, Berlin, Germany.

(B1) Geyer R, Van Wassenhove L N (2004) *The Impact of Constraints in Closed-loop Supply Chains: The Case of Reusing Components in Product Manufacturing*, 203-219 in: **Distribution Logistics: Advanced Solutions to Practical Problems**, Fleischmann B, Klose A (Eds.), Lecture Notes in Economics and Mathematical Systems, Volume 544, Springer, Berlin, Germany.

## REPORTS

- (R35) Zink T, Geyer R (2019) *Estimating Displacement of Basic Oxygen Production by Electric Arc Furnace Production in the U.S. Steel Industry*, for the American Iron and Steel Institute, Pittsburgh, PA.
- (R34) Kendall A, Geyer R, Winans K, Macadam-Somer I (2019) *Cradle-to-Gate Life Cycle Assessment of Califia Farms Unsweetened Almond Milk*, for Califia, Los Angeles, CA.
- (R33) Ettelson D, Geyer R (2018) *Increased Energy Efficiency via Programmable Irrigation and Fertilization, Sub Task 6.1, LCA Protocol for the Measuring the Impact of Optimized Irrigation and Fertilization Scheduling*, EPIC Program, California Energy Commission, Sacramento, CA.
- (R32) Geyer R, Macadam-Somer I (2018) *Comprehensive Life Cycle Impact Assessment of Automotive Material Substitution*, for the World Steel Association, Brussels, Belgium.
- (R31) Langham K, Geyer R (2017) *Irrigation Optimization and Well Pump Monitoring to Reduce Energy and Water Consumption, Sub Task 7.3, LCA Model for Water Measurement*, EPIC Program, California Energy Commission, Sacramento, CA.
- (R30) Langham K, Geyer R (2017) *Irrigation Optimization and Well Pump Monitoring to Reduce Energy and Water Consumption, Sub Task 7.1, LCA Protocol for Measuring the Impact of Optimized Irrigation Scheduling*, EPIC Program, California Energy Commission, Sacramento, CA.
- (R29) Geyer R (2017) *Life Cycle Energy and Greenhouse Gas (GHG) Assessments of Automotive Material Substitution: User Guide for Version 5 of UCSB Automotive Energy and GHG Model*, for the World Steel Association, Brussels, Belgium.
- (R28) Zink T, Geyer R (2016) *Quantifying the Elasticities of Supply and Demand for the North American Steel Scrap Market*, for the American Iron and Steel Institute, Pittsburgh, PA.
- (R27) Malen D E, Geyer R (2016) *Extensions for Internal Combustion Powertrain Model*, for the World Steel Association, Brussels, Belgium.
- (R26) Geyer R (2016) *Consequential Life Cycle Assessment (CLCA) of Replacing Steel with Aluminum in Vehicles*, for the American Iron and Steel Institute, Pittsburgh, PA.
- (R25) Burns L, Magnuson K, Geyer R, Keller A (2016) *Pilot Study to support Alternatives Analysis: Evaluating Alternatives to Methylene Chloride in Paint Stripper*, for the Department of Toxic Substances Control, California EPA, Sacramento, CA.
- (R24) Geyer R (2015) *Evaluation of life cycle assessment end-of-life recycling methodologies for steel products produced in North America*, for the American Iron and Steel Institute, Pittsburgh, PA.
- (R23) Geyer R, Malen D E (2015) *Development of a Parsimonious Tool for Prediction of Energy Consumption and Performance for PHEVs*, for the World Steel Association, Brussels, Belgium.
- (R22) Geyer R, Fournier E (2014) *Potential Rooftop Photovoltaic Electricity for Sustainable Transportation in California*, EISG Program, California Energy Commission, Sacramento, CA.



- (R21) Geyer R, Malen D E (2014) Development of a Parsimonious Tool for Prediction of Energy Consumption and Performance for BEVs, for the World Steel Association, Brussels, Belgium.
- (R20) Geyer R, Kuczenski B, Henderson A, Zink, T (2014) *CalRecycle's Used Oil Life Cycle Assessment Project pursuant to Senate Bill 546 (Lowenthal): Life Cycle Assessment of Used Oil Management in California*, California Natural Resources Agency, Sacramento, CA.
- (R19) Malen D E, Geyer R (2013) Development of a Parsimonious Tool for Prediction of Fuel Consumption and Performance for ICVs, for the World Steel Association, Brussels, Belgium.
- (R18) Geyer R (2013) *Life Cycle Energy and Greenhouse Gas (GHG) Assessments of Automotive Material Substitution: User Guide for Version 4 of the UCSB Automotive Energy and GHG Model*, for the World Steel Association, Brussels, Belgium.
- (R17) Geyer R, Kuczenski B, Trujillo M (2012) *The Impact of Extended Producer Responsibility (EPR) in California on Global Greenhouse Gas (GHG) Emissions: Mattress and Boxspring Case Study*, California Natural Resources Agency, Sacramento, CA.
- (R16) Kuczenski B, Geyer R, Trujillo M (2012) *The Impact of Extended Producer Responsibility (EPR) in California on Global Greenhouse Gas (GHG) Emissions: Plastic Clamshell Container Case Study*, California Natural Resources Agency, Sacramento, CA.
- (R15) Geyer R, Kuczenski B (2012) *The Impact of Extended Producer Responsibility (EPR) in California on Global Greenhouse Gas (GHG) Emissions: Recycled Content Guidelines for Plastic Products*, California Natural Resources Agency, Sacramento, CA.
- (R14) Kuczenski B, Geyer R, Singh J (2011) *Life Cycle Assessment of CRV PET Bottles*, Department of Resource Recovery and Recycling, CRV Market Development Program, Sacramento, CA.
- (R13) Kuczenski B, Geyer R, Singh J (2011) *Material Flow Analysis of PET*, Department of Resource Recovery and Recycling, CRV Market Development Program, Sacramento, CA.
- (R12) Kuczenski B, Geyer R (2011) *Life Cycle Assessment of Polyethylene Terephthalate (PET) Beverage Bottles Consumed in the State of California*, for the Department of Toxic Substances Control, California EPA, Sacramento, CA.
- (R11) Gavankar S, Geyer R (2010) *The Rebound Effect: State of the Debate and Implications for Energy Efficiency Research*, for the UCSB Institute for Energy Efficiency, Santa Barbara, CA.
- (R10) Kuczenski B, Geyer R (2010) *Alternatives Analysis: Methods, Models, and Tools*, for the Department of Toxic Substances Control, California EPA, Sacramento, CA.
- (R9) Kuczenski B, Geyer R (2010) *Life Cycle Assessment of Yogurt Cups made from PS and Ingeo PLA based on Existing Literature and Current Inventory Data*, for Stonyfield Farms, Londonderry, NH.
- (R8) Geyer R, Del Maestro C, Rohloff A (2010) *Greenhouse Gas Emission Analysis of Two Calera Process Implementation Scenarios at Yallourn Power Station*, for Calera Corporation, Los Gatos, CA.
- (R7) Geyer R, Kallaos J (2009) *Life Cycle Energy and Greenhouse Gas Assessments of Automotive Materials - Phase II: Final Report & User Manual for the Phase II Model*, for the World Steel Association, Brussels, Belgium.

- (R6) Geyer R (2008) *Methodology for Inventory Modeling of Glass Packaging End-of-Life Management*, for the Glass Packaging Institute, Washington, DC.
- (R5) Del Maestro C, Geyer R (2008) *Life Cycle Assessment of Henkel's Aquence Coating Technology*, for the Henkel Corporation, Irvine, CA.
- (R4) Geyer R (2007) *Life Cycle Greenhouse Gas Emission Assessments of Automotive Materials: Project Report*, for the International Iron and Steel Institute, Brussels, Belgium.
- (R3) Geyer R (2007) *Life Cycle Greenhouse Gas Emission Assessments of Automotive Materials: Methodology Report*, peer-reviewed, for the International Iron and Steel Institute, Brussels, Belgium.
- (R2) Elke M, Geyer R (2007) *A Critical Analysis of CanMet's Magnesium Front End Development*, for the American Iron and Steel Institute, Southfield, MI.
- (R1) Kallaos J, Geyer R (2007) *The Impact of Magnesium and Composites in Vehicle Design on Life Cycle Greenhouse Gas Emissions*, for the International Iron and Steel Institute, Brussels, Belgium.

## WORKING PAPERS

- (W3) Geyer R, Van Wassenhove L N (2003) *Remanufacturing products with limited component durability and finite life cycles*, **INSEAD working paper** 2003/54/TM.
- (W2) Geyer R, Van Wassenhove L N (2002) *Impact of constraints in closed-loop supply chains: the case of reusing components in durable goods*, **INSEAD working paper** 2002/131/TM.
- (W1) Geyer R, Van Wassenhove L N (2000) *Product Take-back and Component Reuse*, **INSEAD working paper** 2000/34/TM/CIMSO 12.

## OTHER PUBLICATIONS

- Geyer R (2019) *Upset about the plastic crisis? Stop trying so hard*, **The Guardian**, 24 June 2019, <https://www.theguardian.com/us-news/2019/jun/23/upset-about-the-plastic-crisis-stop-trying-so-hard>.
- Zink T, Geyer R, Startz R (2017) *Response to "Comment on 'Toward Estimating Displaced Primary Production from Recycling: A Case Study of U.S. Aluminum'"*, **Journal of Industrial Ecology**, 22(1), 211-212.
- Koellner T, Geyer R (2013) *Global land use impact assessment on biodiversity and ecosystem services in LCA*, **International Journal of Life Cycle Assessment**, 18(6), 1185-1187.
- Geyer R (2008) *Materials are only as green as their product life cycles*, **American Metals Market**, 117(5), 60.

## SOFTWARE TOOLS & MODELS

- Geyer R (2017-date) Production, use, and fate of all plastics ever made, partially funded by Ocean Conservancy.
- Geyer R (2009-17) Life Cycle Energy and Greenhouse Gas Emission Assessments of Automotive Materials: Versions 2-5, developed for the World Steel Association, Brussels, Belgium.

- Geyer R & Palazzo J (2016) Consequential Life Cycle Greenhouse Gas Assessment of Automotive Material Substitutions, developed for the American Iron and Steel Institute, Pittsburgh, PA.
- Malen D & Geyer R (2014-2016) Power Train Model for Internal Combustion Vehicles (ICVs), developed for the World Steel Association, Brussels, Belgium.
- Malen D & Geyer R (2014-2016) Power Train Model for Battery and Plug-in Hybrid Electric Vehicles (BEVs and PHEVs), developed for the World Steel Association, Brussels, Belgium.
- Early C, Kidman T, Menvielle M, Geyer R (2008) Environmental Packaging Impact Calculator (EPIC), developed for Toyota Motor Sales, Torrance, CA.
- Geyer R (2007) Life Cycle Greenhouse Gas Emission Assessments of Automotive Materials, developed for the International Iron and Steel Institute, Brussels, Belgium.

### **INVITED PRESENTATIONS**

- 7<sup>th</sup> Roland Clift Lecture, University of Surrey, Guildford, UK, 2020.
- Plastic's Tipping Point, Industrial Ecology and Sustainable Systems Research Seminar, Yale, CT, 2020.
- Keynote speech, Driscoll's Procurement Conference "Sustainability through Innovation", Monterey, CA, 2019.
- Avoiding Climate Catastrophe and Mass Extinction - What Works and What Doesn't, UCSB Parents & Family Weekend, Santa Barbara, CA, 2019.
- An Ocean of Plastic, General Meeting, Surfrider Foundation, Santa Barbara, CA, 2019.
- Plastic's Tipping Point, Critical Mass Inaugural Lecture, Interdisciplinary Humanities Center, UCSB, Santa Barbara, CA, 2019.
- Micro to Macro: Measuring the Scope of Marine Plastic Pollution, Surfrider National Summit, Irvine, CA, 2019.
- Methodological developments in consequential life cycle assessment, American Center for Life Cycle Assessment (ACLCA) Industry Committee, Webinar, 2019.
- Production, use, and fate of all plastics ever made, Global Challenges: Circular Economy, TU Darmstadt, Darmstadt, Germany, 2019.
- The Fate of Plastics, The Secret Lives of Plastics: Materials, Recycling, Oceans & Communication, UCSB, Santa Barbara, CA, 2019.
- Making Recycling Work, 2019 Recycling Update, Northern California Recycling Association, Berkeley, CA, 2019.
- Global Overview of Plastic Production, Use, and Waste Generation, Plastic Pollution and Rivers Summit, Benioff Ocean Initiative, UCSB, Santa Barbara, CA, 2018.
- Microfibers in Context: Global Plastic Emissions and Flows, Microfiber Leadership Summit, Bren School, UCSB, Santa Barbara, CA, 2017.
- Improving the Environmental Sustainability of Agricultural Production, Carlyle Impact Summit, Santa Barbara, CA, 2017.
- The Role of Energy Storage in Photovoltaic-based Electromobility and Microgrids, New Electronic Technologies for Sustainable Systems, University of Padua, Italy, 2017.

Life Cycle Assessment of PV-Battery Microgrids, Emerging Technologies Review, Institute for Energy Efficiency, UCSB, Santa Barbara, CA, 2017.

Common Misconception about Recycling, Distinguished Guest Speaker of Operations Management, Scheller College of Business, Georgia Institute of Technology, Atlanta, GA, 2017.

Plastic Marine Debris – Sources and Fates, Plastic Pollution Science Summit, Monterey Bay Aquarium & Benioff Ocean Initiative, University of Southern California, LA, CA, 2016.

Keeping the Circular Economy on Track (Keynote Speaker), 13th Cambridge Technology Ventures Conference, Cambridge, UK, 2016.

Consequential Life Cycle Assessment (CLCA) of Replacing Steel with Aluminum in North American Light Vehicles (Keynote Plenary Panel), Great Designs in Steel 2016, Livonia, MI, 2016.

Plastic Marine Debris – Sources and Solutions, Clean Technology Council, Thousand Oaks, CA, 2016.

Circular Economy: Some Notes on Closing the Loop, Industrial Ecology: Science, the Environment and the Circular Economy, Policy Briefing, Brussels, Belgium, 2016.

Plastic Marine Debris – Global Scope of Sources, Policy Briefing, California State Capitol, Sacramento, CA, 2016.

A Bright Green Future – A Discussion about Community (Keynote Plenary Panel), LCA XV, Vancouver, BC, Canada, 2015.

Industrial Ecology: From Normative Paradigm Shift to Descriptive Normal Science? (Keynote Plenary Panel) ISIE Conference 2015, 7 July 2015, Guildford, UK, 2015.

Life Cycle Assessment in the Automotive Sector: The Case of Light-Weight Materials, 2015 International Forum on Vehicle Eco-Design, CATARC, Beijing, PRC, 2015.

End-of-life Allocation Issues in Life Cycle Assessment, Pavement LCA 2014, UC Davis, CA, 2014.

Material, Fuel, and Power Train Selection for Low Carbon Vehicles, Research Seminar, University of Surrey, Guildford, UK, 2014.

Material, Fuel, and Power Train Selection for Low Carbon Vehicles, Research Seminar, TU Berlin, Berlin, Germany, 2014.

Attributional versus Consequential Life Cycle Assessment, Great Designs in Steel Seminar 2014, Livonia, MI, 2014.

Going all Solar: Displacing all Fossil Fuels with Solar Energy, Workshop on New Frontiers in Sustainable Fuels and Chemicals, UC Santa Barbara, CA, 2014.

Life Cycle Assessment of Used Oil Management in California, NORA Annual Conference and Trade Show, Carlsbad, CA, 2013.

Life Cycle Assessment of Steel, IEA, Hybrid and Electric Vehicle Implementing Agreement, Task 19, Argonne, IL, 2013.

Life Cycle Assessment Research: Overview & Recent Highlights, IEE Industry Partner Research Review, UCSB, CA, 2013

Spatially-Explicit Life Cycle Assessment of Fuel-Vehicle Systems, University of Southern California, Los Angeles, CA, 2013

Designing Sustainable Fuel-Vehicle Systems, Art Center College of Design, Pasadena, CA, 2013

The Role of Life Cycle Assessment in Environmental Product Design, Presidio School of Management, San Francisco, CA, 2012.

Some Thoughts on Reuse and Recycling, Presidio School of Management, San Francisco, CA, 2012

Introduction to Life Cycle Assessment, USDA, Forest Service, Sustainable Operations Summit, Sacramento, CA, 2012.

The Cost of Corporate and Public Environmental Policy without Life Cycle Thinking, WorldSteel-45, Paris, France, 2011.

Engineering Sustainable Fuel Vehicle Systems, Engineering Sustainability 2011, Pittsburgh, PA, 2011.

Coupling GIS and Life Cycle Assessment, University Bayreuth, Germany, 2010.

Environmental, Economic and Operational Challenges of Reuse & Recycling Strategies, Presidio School of Management, San Francisco, CA, 2010.

Life Cycle Thinking in Environmental Product Design, Presidio School of Management, San Francisco, CA, 2010.

Life Cycle Thinking in Environmental Footprint Calculations, Organic Exchange, Annual Conference, Seattle, WA, 2009.

Do Lightweight Materials Reduce Automotive Greenhouse Gas Emissions? And Is this an Engineering or a Social Science Question?, Institute for Energy Efficiency, UCSB, Santa Barbara, CA, 2009.

Coupling LCA and Geographic Information Systems: Geospatial Variability in LCA for Renewable Energy, LCA IX, Boston, MA, 2009.

Estimating, Measuring & Managing What Matters for the Greening of Media, 2nd Annual Business of Green Media Conference, Cal Poly, San Luis Obispo, CA, 2009.

Some thoughts on the role of reuse and recycling for energy and resource productivity, Int. Seminar on Energy and Resource Productivity, Bren School, Santa Barbara, CA, 2008.

Towards a Framework for Environmental Assessments of Eco-Entrepreneurship, Frontiers in Eco-Entrepreneurship Research Seminar, Bren School, Santa Barbara, CA, 2008.

Corporate Environmental Performance from a Life Cycle Perspective, Deckers Sustainable Footwear Forum, Bren School, Santa Barbara, CA, 2008.

Corporate Environmental Sustainability from a Life Cycle Perspective, Henkel Sustainability Symposium, Düsseldorf, Germany, 2008.

Using life cycle thinking in environmental product design, Art Center College of Design, Pasadena, CA, 2007.

Environmental packaging design with life cycle assessment, Poly Pack 2007, Cal Poly, San Luis Obispo, CA, 2007.

From Corporate Environmental Management to Green Business Models, Bren School Corporate Summit 2007, UCSB, Santa Barbara, CA, 2007.

The impact of material choice in vehicle design on life cycle greenhouse gas emissions, Materials Competition Symposium, MS&T'06, Cincinnati, OH, 2006.

Materials Competition and Environmental Performance, IISI-40, Buenos Aires, Argentina, 2006.

Relating economic and environmental performance in closed-loop supply chains, POMS, Boston, MA, 2006.

- The impact of material choice in vehicle design on greenhouse gas emissions, Great Designs in Steel Seminar 2006, Livonia, MI, 2006.
- Economics of remanufacturing under limited durability and finite life cycles, Innovation and Growth of the International Firm, Carnegie Bosch Institute, Stuttgart, Germany, 2005.
- Who is going to close the loop? The problem of agency in industrial ecology, Centre for Industrial Ecology, Yale, New Haven, CT, 2005.
- Creating economic and environmental benefits through reuse and recycling, Dean's Council, University Club of Santa Barbara, Santa Barbara, CA, 2004.
- Integrated Economic and Environmental Assessment of Supply Loops for Mobile Phones, Business Perspectives on Closed-Loop Supply Chains III, Penn State, State College, PA, 2003.

### CONFERENCE PRESENTATIONS/PROCEEDINGS

- Parikh S, Geyer R, *Environmental Impacts of Utility-Scale Battery Storage in California*, IEEE PVSC 46, Chicago, IL, 2019.
- Zink T, Geyer R, *Recycling and the Myth of Landfill Diversion*, LCA XVIII, Fort Collins, CO, 2018.
- Dominguez A, Geyer R, Heath G, Woodhouse M, *Techno-Economic Analysis (TEA) and Life Cycle Assessment (LCA) of CdTe PV Recycling*, ISSST 2018, Buffalo, NY, 2018.
- Palazzo J, Geyer R, *Causal Inference Strategies for Quantifying Displaced Production from Recycling*, LCA XVII, Portsmouth, NH, 2017.
- Geyer R, Sebastian, B, *Parametric LCA Modeling of Vehicles*, LCA XVII, Portsmouth, NH, 2017.
- Dominguez A, Geyer R, *Photovoltaic waste: the thermodynamic perspective for recycling valuable metals*, ECOS 2017, San Diego, 2017.
- Palazzo J, Geyer R, *Causal Inference Strategies for Quantifying Displaced Production from Recycling*, 2017 Joint Conference ISIE and ISSST, Chicago, IL, 2017.
- Palazzo J, Geyer R, Sebastian, B, Thimons M, *Consequential Life Cycle Assessment of Automotive Material Substitution*, LCA XVI, Charleston, SC, 2016.
- Sebastian, B, Thimons M, Geyer R, Palazzo J, Balzer R, *The Importance of Material Production Emissions in Vehicle LCA*, LCA XVI, Charleston, SC, 2016.
- Cerretani E, Dooley C, Rosenberg D, Fabris E, Middleton S, Geyer R, *Life Cycle Assessment of a Feature Film*, LCA XV, Vancouver, BC, Canada, 2015.
- Geyer R, Kuczenski B, Zink T, Henderson A, *Four Common Misconceptions about Recycling*, LCA XV, Vancouver, BC, Canada, 2015.
- Zink T, Geyer R, Startz D, *A Market-Based Framework for Quantifying Displaced Production from Recycling or Reuse*, 7th Annual ARCS Research Conference, Northwestern University, IL. 2015.
- Zink T, Geyer R, Startz D, *Quantifying Primary Production Displacement: Methodology Development and Aluminum Recycling Case Study*, LCA XIV, San Francisco, CA, 2014.
- Geyer R, Stoms D, Kallaos J, *Displacing all U.S. Gasoline Consumption with Sun-to-Wheels Transportation*, LCA XIII, Orlando, FL, 2013.
- Geyer R, Stoms D, Kallaos J, *Photovoltaics offers Low-Carbon Sun-to-Wheels Transportation without Energy Sprawl*, LCA X, Portland, OR, 2010.

- Kuczenski B, Geyer R, Boughton B, *Tracking Toxics: Using risk information to characterize intermediate flows in LCA*, LCA X, Portland, OR, 2010.
- Doctori Blass V, Geyer R, *The Economic and Environmental Value of Information for Product End-of-use Operations*, POMS, Vancouver, Canada, 2010.
- Stoms D, Geyer R, *Applying GIS to represent geospatial variability in LCA*, Workshop on Land Use & Geospatial Aspects of LCA for Renewable Energy, Boston, MA, 2009.
- Kuczenski B, Geyer R, *The role of LCA in recycling policy: a case study in plastic*, LCA IX, Boston, MA, 2009.
- Geyer R, Doctori Blass V, *The Role of Displaced Production for Reuse and Recycling*, 5<sup>th</sup> ISIE Conference, Lisbon, Portugal, 2009.
- Doctori Blass V, Geyer R, *Product End-of-Life Management Networks*, 5<sup>th</sup> ISIE Conference, Lisbon, Portugal, 2009.
- Bumby S, Druzhinina E, Feraldi R, Werthman D, Geyer R, Sahl J, *Comparative Life Cycle Assessment (LCA) of overhead and underground medium voltage power distribution*, ISSST, Tempe, AZ, 2009.
- Kuczenski B, Geyer R, *PET Beverage Bottle Recycling – an Integrated LCA and MFA*, Symposium on Industrial Ecology for Young Professionals, Tempe, AZ, 2009.
- Lindner J, Stoms D, Geyer R, Davis F, Wittstock B, *Coupling LCA and GIS for biodiversity assessments of biofuel production*, LCA VIII, Seattle, 2008.
- Del Maestro C, Geyer R, *LCA of Henkel's Aquence Coating Technology*, LCA VIII, Seattle, 2008.
- Geyer R, Oliver J Y, Amirtharajah R, Akella V , Chong F T, *Microchip Reuse: Environmental Rationale and Design Implications*, ISEE, San Francisco, 2008.
- Pflieger S, Geyer R, Thomas J-S, *End-of-Life Recycling in LCA*, 2<sup>nd</sup> International Seminar on Society and Materials, Nantes, France, 2008.
- Coleman N, Geyer R, *Sustainability, Global warming and a life cycle perspective on material selection in vehicle design*, Low Carbon Generation Conference, Bracknell, UK, 2008.
- Geyer R, Doctori Blass V, *The role of displaced production in LCA*, InLCA/LCM, Portland OR, 2007.
- Geyer R, *The impact of material choice in vehicle design on life cycle greenhouse gas emissions*, LCM, Zurich, Switzerland, 2007.
- Doctori Blass V, Geyer R, *The Role and Value of Information for Product End-of-Life Management*, LCM, Zurich, Switzerland, 2007.
- Geyer R, *Uncertainty analysis of greenhouse gas emissions changes due to vehicle light-weighting*, Ecobalance 7, Tsukuba, Japan, 2006.
- Oliver J, Amirtharajah R, Geyer R, Chong F T, *Life-Cycle Aware Computer Architecture: Reusing Silicon in the Technology Food Chain*, 12<sup>th</sup> ASPLOS, San Jose, CA, 2006.
- Geyer R, *The impact of material choice in vehicle design on life cycle greenhouse gas emissions*, InLCA/LCM, Washington, DC, 2006.
- Geyer R, *Integrated Economic and Environmental Assessment of Supply Loops for Mobile Phones*, 2<sup>nd</sup> ISIE Conference, Industrial Ecology for a Sustainable Future, Ann Arbor, MI, 2003.

## **CURRENT PH.D. STUDENTS**

Jason Maier, Committee Chair, 2016-present

Jessica Couture, Committee Member, 2016-present

Timnit Kefala, Committee Member, 2016-present

## **FORMER PH.D. STUDENTS**

Joe Palazzo (Chair), Graduation 2019, Senior Environmental Engineer, Apple, Cupertino, CA.

Eric Fournier (Member), Graduation 2015, Research Director, Center for Sustainable Urban Systems, UCLA. CA.

Trevor Zink (Chair), Graduation 2014, Assistant Professor, College of Business Administration, Loyola Marymount University, Los Angeles, CA.

Vered Doctor Blass (Chair), Graduation 2009, Lecturer, Alfred Akirov Institute for Business and the Environment, Recanati Graduate School of Business Administration, Tel Aviv University.

## **FORMER M.A. STUDENTS (COMMITTEE)**

Jennifer Bernstein, Geography, 2005

## **FORMER POSTDOCS**

Rosa Adriana Domínguez Vega, 2016-2019

Brandon Kuczenski, 2008-2013

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## **COURSES TAUGHT**

ESM288 – Energy, Technology, and the Environment (MESM elective)

ESM289 – Green Supply Chain Management (MESM elective)

ESM282 – Industrial Ecology / Pollution Prevention (MESM elective)

ESM273 – Life Cycle Assessment (MESM elective)

ESM209 – Financial Management (MESM core)

ESM596 – Directed Reading and Research. Topics: Life Cycle Assessment for Systems Approach to Organic Waste Management, Global Material Flow Analysis for Platinum Group Metals, Rare Metals and Technology: Issues towards Sustainable Resource Management, Environmental Impacts of Just-In-Time, Accounting Tools for Sustainable Development, Environmental Benchmarking of Eco-Entrepreneurship.

## **THESIS COMMITTEES (CHAIR)**

Cheung A, Fuller J, Fukuda T, Paterson A, Bui T (2020) Quantifying and Managing Microplastics From Footwear Use, M.E.S.M. Thesis, Bren School, UCSB.

Palazzo J (2019) Methodological Developments in Consequential Life Cycle Assessment, Ph.D. Thesis, Bren School, UCSB.



- Giovanna Davila, Camille Herrera, Derek Hunter, Caitlin Martin, Brianne Winkler (2019) Reducing Greenhouse Gas Emissions through Materials Innovation in the Apparel Industry, M.E.S.M. Thesis, Bren School, UCSB.
- Balakrishnan A, Brutsch E, Jamis A, Strutner M, Reyes W (2018) Consequential Life Cycle Assessment of Combining Solar PV with Utility-Scale Battery Storage to Improve Renewable Penetration and Grid Reliability, M.E.S.M. Thesis, Bren School, UCSB.
- Diamond C, Ritzinger E, Rudnick L, Tellez D, Waddington E (2017) Carbon Zero: Curbing climate change and driving energy efficiency at UCSB, M.E.S.M. Thesis, Bren School, UCSB.
- Bilich A, Goyal L, Hansen J, Krishnan A, Langham K (2016) Assessing the Life Cycle Environmental Impacts and Benefits of PV-Microgrid Systems in Off-Grid Communities, M.E.S.M. Thesis, Bren School, UCSB.
- Cerretani E, Dooley C, Fabris E, Middleton S, Rosenberg D (2015) Life Cycle Assessment of Two Hollywood Films, M.E.S.M. Thesis, Bren School, UCSB.
- Zink T (2014) Net Green: The Impact of Corporate Social Responsibility on the Natural Environment and Employee Satisfaction, Ph.D. Thesis, Bren School, UCSB.
- Egorova E, Perry H, Smythe L, Song R, Sorensen S (2014) Incorporating Land Use Impacts on Biodiversity into LCA: A Case Study of Four Patagonia T-shirts, M.E.S.M. Thesis, Bren School, UCSB.
- Choe J, Fujiwara K, Hakian J, Rafter J, Sultan J, Wiggam D (2013) Assessing On-Road Freight Emissions for Patagonia and Evaluating Low Carbon Fuel Alternatives, M.E.S.M. Thesis, Bren School, UCSB.
- Eaton S, Masuda E, Moin R, Thach G, Tomar S (2011) Estimating and Reducing the Carbon Footprint of Food served by Kaiser Permanente, M.E.S.M. Thesis, Bren School, UCSB.
- Cowan R, Edingfield H, Tannenbaum K, Vytla P (2010) Eco-Entrepreneurship: Marketainer: Closed-Loop Packaging Solutions, M.E.S.M. Thesis, Bren School, UCSB.
- Doctor Blass V (2009) Information, Decision-Making, and Corporate Eco-Efficiency: Three Essays, Ph.D. Thesis, Bren School, UCSB.
- Bumby S, Druzhinina E, Feraldi F, Werthmann D (2009) Life Cycle Assessment (LCA) of Overhead versus Underground Power Distribution in Southern California, M.E.S.M. Thesis, Bren School, UCSB.
- Corti M, Early C, Kidman T, Lee W-Y (2008) Informing Packaging Design Decisions at Toyota Motor Sales Using Life Cycle Assessment, M.E.S.M. Thesis, Bren School, UCSB.
- Fisher E, Herder S, Kordesch N, Kost B, Lafrenz R (2007) Visualizing California Transportation in 2030 Using Future Scenario Planning, M.E.S.M. Thesis, Bren School, UCSB.
- Doctori Blass V, Favret L, Fuji M, Mahdavi S, Miller B, Neira N (2006) End-of-Life Management of Cell Phones in the United States, M.E.S.M. Thesis, Bren School, UCSB.
- Kristina E, Koehn J, Levy C, Olsen T, Taylor C (2005) Reducing Greenhouse Gas Emissions with Hybrid-Electric Vehicles: An Environmental and Economic Analysis, M.E.S.M. Thesis, Bren School, UCSB.

#### **THESIS COMMITTEES (MEMBER)**

- Fournier E (2015) The Life-Cycle Energy-Water Usage Efficiency of the Reuse of Treated Wastewater for Artificial Groundwater Recharge, Ph.D. Thesis, Bren School, UCSB.

Bernstein J (2005) Buying Back the Environment: Supply and Demand in Contemporary Nature Advertising, M.A. Thesis, Department of Geography, UCSB.

### **INTERNAL PROFESSIONAL SERVICE**

W20 – Date Faculty Executive Committee, Bren School  
F18 – Date Review Panel Member, The Green Initiative Fund, UCSB  
F18 – S19 Group Project Selection Committee Member, Bren School  
F16 – Date Committee on the UC Code of Conduct for Trademark Licensees Member, UC  
F13 – Date CSC Subcommittee on Transportation Co-Chair, UCSB  
F12 – Date Chancellor’s Sustainability Committee (CSC) Member, UCSB  
F16 – S17 Recruitment, Admissions and Support (RAS) Committee Chair, Bren School  
F15 – S16 Recruitment, Admissions and Support (RAS) Committee Member, Bren School  
F15 – S16 Computing Committee Chair, Bren School  
F14 Group Project Selection Committee Member, Bren School  
F12 – S14 MESM Committee Member, Bren School  
F08 – S10 PhD Committee Member, Bren School  
F06 – S07 Faculty Legislature Member, UCSB  
F05 – S06 Computing Committee Member, Bren School  
F03 – F08 Group Project Selection Committee Member, Bren School  
F03 – S06 MESM Committee Member, Bren School

### **EXTERNAL PROFESSIONAL SERVICE**

2020 Member, Ocean Protection Council Science Advisory Team (OPC-SAT) Microplastics Working Group  
2019-Date Member, Project Advisory Committee, LabX, National Academy of Sciences, USA  
2019 Panel Member, Statistic of the Year and Decade, Royal Statistical Society, UK  
2019 Member of Organizing Committee, SPS19, AiChE & ACLCA  
2019 Reviewer, Environmental Sustainability, CBET, NSF  
2019 Review Panel Chair, Otter Liviri Vino LCA, Otter Products  
2019 Review Panel Chair, Otter Liviri Fresh LCA, Otter Products  
2018 Review Panel Chair, Beyond Burger LCA, Beyond Meat  
2018 Member of Technical Committee of Advances in Circular Economy at ISSST 2018  
2018 Review Panel Member, Environmental Sustainability, CBET, NSF  
2017 Review Panel Member, LCA Update for Bio-PDO and Sorona Polymer, Du Pont  
2016 Review Panel Member, Environmental Sustainability, CBET, NSF  
2016 Review Panel Chair, Capri Sun Packaging LCA, Kraft Heinz  
2015 Review Panel Member, Environmental Sustainability, CBET, NSF  
2015 Member of the Technical Committee, ISIE 2015, Guildford, UK  
2014 Member of the Technical Committee, LCA XIV, San Francisco, CA  
2014 Review Panel Member, Environmental Sustainability, CBET, NSF  
2013 Review of 2 Energy Efficiency Methodology Documents for the Environmental Defense Fund (EDF)

2013 Review Panel Chair, 6 different Product Category Rules (PCR) of the Sustainable Apparel Coalition (SAC)

2013 Review of the Product Category Rules (PCR) Guidance Document of the Sustainable Apparel Coalition (SAC)

2013-2014 Member, Stakeholder Committee for Decker Corporation's CERES Company Network Stakeholder Engagement Process

2013 Member of the Technical Committee, 2013 ISIE Conference, Ulsan, Korea

2012-2013 Guest Editor, International Journal of Life Cycle Assessment, Special Issue: Global Land Use Impacts on Biodiversity and Ecosystem Services in LCA, 18(6), July 2013

2012 Review Panel Member, Sustainable Energy Pathways (SEP), Science, Engineering and Education for Sustainability (SEES), NSF

2011-2012 Member, Technical Review Committee of Nike's Materials Sustainability Index (MSI)

2011 Review Panel Chair, Life Cycle Assessment of Kraft YESpack, Kraft Foods

2011 Review Panel Chair, Life Cycle Assessment of the Use of Polymers in Automotive Design, American Chemistry Council

2011 Member, Project Advisory Committee of the CEC PIER Life Cycle of Public Transit Infrastructure Project

2011 Member, Technical Committee, ISSST 2011, Chicago, IL

2011 – 2014 Nominating Committee Member, ISIE

2011 Technical Committee Member, Int. Conference on Remanufacturing, Glasgow, UK

2010 – Date Editorial Board Member, Journal of Remanufacturing, Springer

2010 Co-Organizer, Summer School on 'Assessing and Communicating the Loss of Biodiversity and Ecosystem Services', Thurnau, Germany

2010 Session Moderator, 2010 IE Gordon Research Conference, New London, NH

2010 Technical Committee Member, IFIP TC9 HCC9, Brisbane, Australia

2010 Technical Committee Member, 2010 IEEE ISSST, Washington, DC

2010 Proposal Reviewer for the Energy Biosciences Institute, UC Berkeley

2009 CAREER Proposal Review Panel Member, NSF, CBET, Environmental Sustainability

2009 – 2014 U.S. LCI Database Stakeholder Committee Member

2009 Conference Track Organizer & Rapporteur, Land Use & Geospatial LCA for Renewable Energy Workshop, Boston, MA

2009 – 2014 Membership Committee Member, ISIE

2009 Review Panel Member, Life Cycle Assessment of Re-refined Oil, Pegasus Capitol Advisors

2009 Technical Committee Member, Session Chair, ISIE 2009, Lisbon, Portugal

2009 Technical Committee Member, 1<sup>st</sup> SIEYP, Tempe, AZ

2008 Symposium Organizer, 'LCA and Corporate Environmental Sustainability', Henkel Düsseldorf, Germany

2008 Technical Committee Chair, LCA VIII, Seattle, WA

2008 Organizer, Instructor, 2-day LCA Workshop for Cal EPA

2008 ACLCA LCA Certification Committee Member

2007 Technical Committee Member, InLCA/LCM 2007, Portland, OR

2007 – 2016 ACLCA Advisory Council Member (now Board of Directors)

2006 Technical Committee Member, InLCA/LCM 2006, Washington, DC

- 2006 Conference Track Organizer, 'Industrial Ecology and Production & Operations Management' POMS 2006, Boston, MA
- 2004 Proposal Review Panel Member, NSF, DMII, Benign Manufacturing Technologies and Systems
- Reviews for Environmental and Resource Economics, Environmental Research Letters, Environmental Science and Technology, European Journal for Operational Research, Human Ecology Review, Journal of Advanced Manufacturing Technologies, Journal of Business & Society, Journal of Cleaner Production, Journal of Ecological Economics, Journal of Environmental Assessment Policy and Management, Journal of Environmental Management, Journal of Industrial Ecology, Journal of Life Cycle Assessment, Production and Operations Management, Management Science, Nature, Nature Communications, Palgrave Communications, Proceedings of the National Academy of Sciences, Resources Conservation & Recycling, Science, SpringerPlus, Sustainable Chemistry & Engineering.