RECRUITING PH.D., MASTER’S AND POST-DOCTORAL POSITIONS IN:
LOW-CARBON VEHICLE TECHNOLOGY, DEMAND, AND POLICY
(POSTED JUNE 8TH, 2015)

We invite applications for graduate students and post-doctoral positions for interdisciplinary research relating to low-carbon vehicle technology, demand and policy. Successful applicants will join Drs. Erik Kjeang (School of Mechatronic Systems Engineering), Elicia Maine (Beedie School of Business) and Jonn Axsen (School of Resource and Environmental Management) in a multi-year (2015-2020), interdisciplinary project seeking to develop affordable low-carbon vehicle technologies to meet climate goals. The overall project crosses three Faculties at SFU (Applied Sciences, Environment and Business) integrating social, economic and technical analyses of alternative fuel vehicles such as hydrogen fuel cell and battery electric vehicles.

About Simon Fraser University: Established in 1965, SFU has become Canada’s leading comprehensive university with vibrant campuses in British Columbia’s largest municipalities — Vancouver, Burnaby and Surrey — and deep roots in partner communities throughout the province and around the world.

The interdisciplinary project: This research program will evaluate the potential of vehicle technologies to reduce GHG emissions in the transportation sector. The research will utilize an interdisciplinary approach that leverages engineering, physical and environmental science, social science and technology management to simulate and predict the effectiveness of future low-carbon transportation systems. The technological focus includes electric drive (fuel cell, battery electric, plug-in hybrid, and hybrid electric) systems for light duty passenger vehicles, as well as natural gas vehicles for medium and heavy duty applications including public transit and freight. A socio-technical perspective will be followed to integrate insights into the technical, social, economic, and political opportunities and constraints in the emerging low-carbon emission vehicle market. Outcomes will inform policy design and industry strategies that enable the deployment of environmentally effective and economically efficient vehicle technologies.

For all positions: All candidates should demonstrate a strong academic background, including a competitive grade point average (or equivalent), and excellent skills in communication (writing, presenting, etc.), project organization, and working both collaboratively and independently. Ideal candidates will be eager to conduct novel, applied research in the interdisciplinary field of low-carbon vehicles, and to publish results in top-level academic journals. In some cases, successful candidates will also advise and mentor graduate students, and manage research projects. Applications will be directed to one of the three senior supervisors detailed below (Drs. Kjeang, Maine, or Axsen) based on their experience and expression of interest. Given the interdisciplinary nature of these positions, we ask that candidates provide a short explanation of their ability to collaborate across disciplines, specifically those related to this project. All qualified candidates are encouraged to apply.
Instructions for application: Please include a concise cover letter, CV, up to three publications or writing samples and a list of at least three academic references. The first paragraph of the cover letter (and email) should clearly indicate:

- If the application is for a Ph.D., Master’s or Post-doctoral position
- The targeted senior supervisor (Dr. Kjeang, Dr. Maine or Dr. Axsen)
- How the applicant’s research skills and interests align with the overall project, and with the specific needs of the targeted senior supervisor
- Experience, ability and/or willingness to collaborate across disciplines (e.g. business, engineering, natural sciences, social sciences, economics, public policy)

Applications will be accepted until the positions are filled. Review of applications will start late June 2015. Only short-listed candidates will be contacted. Please send all applications electronically to:

Suzanne Goldberg, Adjunct Professor, School of Resource and Environmental Management, Simon Fraser University, TEL: 778-558-3617; e-mail: sgoldber@sfu.ca

SENIOR SUPERVISORS

About Dr. Jonn Axsen and the School of Resource and Environmental Management:
Dr. Jonn Axsen is an Assistant Professor in the School of Resource and Environmental Management (REM) at Simon Fraser University, a dynamic graduate school in which both social and natural scientists apply multi-disciplinary approaches to research in resource and environmental management. Master’s and Ph.D. applicants to Dr. Axsen should look closely at the REM program’s requirements. Dr. Axsen seeks to fill Masters, Ph.D. and post-doctoral positions in the Energy and Materials Research Group’s (EMRG) sustainable transportation team, specializing in the social and policy aspects of low-carbon vehicle technologies.

Ideal candidates will have skills in one or more of the following:

- Market analysis for alternative fuels or low-carbon technology
- Consumer survey and interview methods
- Valuation methods and discrete choice modeling
- Energy-economy modeling (e.g. optimization, CGE or simulation models),
- Climate policy and technological change (e.g. ZEV mandate, low-carbon fuel standard)
- Statistical analysis of consumer and market data

For more info, visit: the REM web site: http://www.rem.sfu.ca/, Dr. Axsen’s webpage http://www.rem.sfu.ca/people/faculty/jaxsen/
About Dr. Erik Kjeang and the School of Mechatronic Systems Engineering:

Dr. Erik Kjeang is an Associate Professor in the School of Mechatronic Systems Engineering (MSE) at Simon Fraser University, a multi-disciplinary engineering graduate school that uniquely focuses on research and technology development at the intersection of mechanical, electrical and software engineering. Ph.D. and M.A.Sc. applicants to Dr. Kjeang should look closely at the MSE graduate program requirements. Dr. Kjeang seeks to fill graduate student and post-doctoral positions in the Fuel Cell Research Laboratory (FCReL) team, specializing in engineering solutions for electrochemical energy conversion and storage systems, including zero- and low-emission vehicle technologies.

Ideal candidates will have experience with one or more of the following:
- Electrochemical engineering
- Vehicle systems
- Life-cycle assessment (LCA)
- Multi-physics modeling and simulation
- Fuel cell and battery technologies
- Advanced materials and manufacturing processes

For more info, visit: the MSE web site: [http://www.sfu.ca/mechatronics](http://www.sfu.ca/mechatronics)
Dr. Kjeang’s webpage: [http://www.sfu.ca/~ekjeang](http://www.sfu.ca/~ekjeang)

About Dr. Elicia Maine and the Beedie School of Business

Dr. Elicia Maine is an Associate Professor in the Beedie School of Business at Simon Fraser University, and Academic Director of Beedie’s Science & Technology Commercialization program. Prof. Maine has an interdisciplinary background, including Materials Engineering, Technology Management, and Technology Policy, and welcomes interdisciplinary applicants, with the potential to be co-supervised through business, mechatronics, and/or REM. Ph.D. applicants to Dr. Maine should look closely at the Beedie Ph.D. program requirements. Dr. Maine seeks to fill interdisciplinary graduate and post-doctoral positions, with a focus on production scale-up and other technology management aspects of the adoption of low-carbon vehicle technologies.

Ideal candidates may have experience with two or more of the following:
- Technical-Economic Cost Modeling / Process Cost Modeling
- Innovation Management / Science Commercialization
- Advanced Materials and Manufacturing Processes
- Market analysis for alternative fuels or low-carbon technology
- Life-Cycle Assessment (LCA)
- Statistical analysis
- Primary data gathering through interviews

For more info, visit: Beedie’s Sci & Tech Commercialization program: [http://beedie.sfu.ca/commercialization-certificate/about/](http://beedie.sfu.ca/commercialization-certificate/about/)
Beedie’s PhD program website: [http://beedie.sfu.ca/phd/](http://beedie.sfu.ca/phd/)
Dr. Maine’s webpage: [http://beedie.sfu.ca/profiles/EliciaMaine](http://beedie.sfu.ca/profiles/EliciaMaine)