

LIANNE M. LEFSRUD, Ph.D., P.Eng.

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EDUCATION

PhD, Strategic Management and Organization, Alberta School of Business, 2014.
PEng, Association of Professional Engineers and Geoscientists of Alberta, since 1997.
MSc, Interdisciplinary Civil & Environmental Engineering and Sociology, 1996, University of Alberta.
BSc, Civil Engineering, Cooperative Program, 1994, University of Alberta.

ACADEMIC APPOINTMENTS

University of Alberta

Assistant Professor, Engineering Safety and Risk Management, May 2015 –
Director of Equity, Diversity and Inclusion, Department of Chemical and Materials, Faculty of Engineering

University of Michigan

Erb Post-Doctoral Fellowship and concurrent Dow Sustainability Research Fellowship, Erb Institute for Global Sustainable Enterprise, Ross School of Business/School of Natural Resources and Environment, September 2013 – May 2015.

My research:

Society is demanding ever more complex and integrated systems. Beyond technical design, as engineers, we also have a professional, ethical, and legal responsibility to ensure that the operations and maintenance of these systems includes risk management (broadly defined) that protects people and the environment. Since most losses have human (individual and organizational) failures as the latent cause, if we focus exclusively on technical design, we cannot foresee, know and understand, or prevent these failures. This motivates my multidisciplinary research: *How can risk management systems be enhanced so that organizations are better equipped to recognize, adapt to and absorb unforeseen events and manage the resulting risks?*

HONOURS, AWARDS, AND GRANTS

- 2019**
- Transport Canada research grant, *Risk Tolerance Strategy for Rail Transport of Dangerous Goods*, \$150,000. PIs: Renato Macciotta & Lianne Lefsrud.
 - APEGA Summit Award winner, *Women in Engineering and Geoscience Champion Award*, for co-chairing Canadian Coalition of Women in Engineering Science, Trades and Technology (CCWESTT) 2018, Biennial Conference.
 - KIAS Cluster Grant, *New Approaches to Communities, Communication and Consultation through the Lens of Geothermal Energy Development on the Traditional Lands of the Alexis Nakota Sioux Nation*, \$35,000. PIs: Lianne Lefsrud & Andie Palmer.
- 2018**
- Alberta Innovates Research Grant, *Geothermal Power from co-produced fluids and hydrocarbon reservoirs throughout the Western Canadian Sedimentary Basin*, \$950,000. PI: Jonathan Banks, Collaborator: Lianne Lefsrud.
 - APEGA Volunteer Appreciation Award for five years of dedicated service.
 - NSERC Connect Grant, *Tailings Safety Symposium*, \$7500, PI: Lianne Lefsrud.

- Best Article by the Canadian Association for the Study of Discourse and Writing (CASDW) published in 2017 for *Dirty Oil or Ethical Oil? Visual Rhetoric in Legitimation Struggles*
- NSERC Discovery Grant, *Developing Safety Management System Models*, \$142,500. PI: Lianne Lefsrud.
- SSHRC Partnership Development Grant, *Enhancing Regulatory Effectiveness and Corporate Performance*, \$135,708. PIs: Lianne Lefsrud, Heather Eckert and Joel Gehman. VP Research, University of Alberta and Faculty of Engineering \$37,500.
- University of Alberta Award for *Outstanding Mentorship in Undergraduate Research & Creative Activities*, Nominee.
- Kule Institute of Advanced Studies (KIAS), cluster grant *Advancing Environmental Impact Assessment for Canada's Socio-Ecological Systems*, \$70,000. PIs: Debra Davidson & Ian Stewart. Collaborators: Brenda Parlee, Kevin Jones, Lianne Lefsrud.
- Invited Speaker and Lecturer on Sustainability, Jerusalem School of Business Administration, Hebrew University of Jerusalem. \$10,000. Asper Foundation.
- 2017**
 - MITACS, IBM Canada, Cerebri AI, Canada's Oil Sands Innovation Alliance (COSIA), *Multi-Perspective Text Analysis of Social Knowledge Networks*. \$195,119. PIs: Kelly Lyons, Eleni Stroulia, Lianne Lefsrud.
 - Alberta OHS Futures Research Funding Program, *Improving OHS Performance with OHS and Environmental Creative Sentencing Spillovers*. \$37,700. PIs: Heather Eckert & Lianne Lefsrud.
 - Confederation of Alberta Faculty Associations (CAFA) Distinguished Academic Early Career Award, \$2000.
 - Railway Association of Canada, *Role of Safety Management Systems (SMS) in the railway industry and potential for enhancement of the Railway Safety Act (RSA)*, \$16,800. PI: Lianne Lefsrud, co-PI : Renato Macciotta Pulisci.
 - Construction Owners Association of Alberta and Mitacs, *Creating a Positive Safety Culture and Continuous Improvement in Alberta's Construction Industry*, research grant, \$15,000. PI: Lianne Lefsrud.
 - Creative sentencing research grant, *Protecting Worker Safety in Alberta by Enhancing Field Level Hazard Assessments and Training for Ground Hazards Associated with Tailings Facilities, Dams, and Systems*, \$285,000. PIs: Lianne Lefsrud & Michael Hendry.
 - *Future Energy Systems*, Co-investigator in Geothermal (\$277,000) and Community and Aboriginal (\$375,000) themes.
 - Undergraduate Research Initiative stipend: *Workplace Culture: Diversity in Engineering*. \$5000.
- 2016**
 - Seeding Food Innovation 2016 program, Weston Foods, *Social dimensions of climate change mitigation in Alberta agriculture*, \$140,801. PIs: Debra Davidson, Andreas Hamann & Lianne Lefsrud.
 - Genome Canada, Large-Scale Applied Research Project Competition, Natural Resources and the Environment: Sector Challenges, *Managing Microbial Corrosion in Canadian Offshore & Onshore Oil Production Operations*, \$7,850,739. PIs: Lisa Gieg, Faisal Khan, John Wolodko. Collaborator: Lianne Lefsrud (\$140,000).
 - Data Grant, Alberta Workers Compensation Board, *Assessing Partners' OHS Tools for Improving Alberta Workplace Safety*. PIs: Lianne Lefsrud & Joel Gehman.
 - Centre for Teaching and Learning (CTL) Blended Learning Award - ENGG404: *Engineering Safety and Risk Management – Leadership in Risk Management*, \$22,000. PIs: John Cocchio and Lianne Lefsrud.
 - Centre for Teaching and Learning (CTL) Summer Student Employment Award, \$7,000, PIs: Lianne Lefsrud and John Cocchio.

- 2015**
 - Research Grant, *Creating a Basis for Genuine Dialogue: Developing a Science-Based Understanding of Public/Industry Communication*, Alberta Chamber of Resources, \$35,000. PIs: Lianne Lefsrud and Chris Westbury.
 - NSERC Engage Grant, *Using first- and second-order lexical co-occurrence to assess temporal changes in media valence and content*, \$25,000. PI: Chris Westbury, collaborator: Lianne Lefsrud.
- 2013-2018** - Most read paper, *Organization Studies* (FT45 journal), every month February 2013 – present (except in February 2015, #2 to a paper on Game Theory by Greece's finance minister)
- 2013 -2015**
 - Dow Sustainability Research Fellowship and Erb Research Fellowship, \$175,000
 - Best Paper Award, European Group of Organizational Studies, 2000 €
 - Best Practice Paper 2013, Academy of Management ONE Division & Network for Business Sustainability (NBS), finalist
 - TEDx speaker
 - SSHRC Partnership Development Grant, *Engendering Engineering Success*, \$194,000, collaborator
- 2012**
 - Best International Paper, Organization and Management Theory (OMT) Division, Academy of Management, finalist
 - Dissertation Award, Kule Institute for Advanced Studies (KIAS), \$7,000
- 2011** - Best Reviewer, Social Issues in Management (SIM) Division, Academy of Management
- 2011-2009**
 - Izaak Walton Killam Scholarship, Killam Trust, National level scholarship, \$54,000
 - Social Sciences and Humanities Research Council of Canada (SSHRC) Doctoral Fellowship, \$40,000
 - President's Doctoral Prize of Distinction, University of Alberta, \$20,000
- 2010** - Research Grant, Energy and Environment Solutions, Alberta Innovates, \$46,000
- 2009**
 - Doctoral Exchange Program Fellowship, \$25,000
 - Persons Case Scholarship, Province of Alberta, \$5,000
- 2008**
 - Engineers Canada TD Insurance Meloche Monnex National Scholarship, \$7,500
 - Dr. Alice E. Wilson Award, Canadian Federation of University Women, \$6,000
 - Provost Doctoral Awards, University of Alberta, \$4,400
 - Queen Elizabeth II Scholarship (Doctoral), Province of Alberta, \$15,000

Given my interdisciplinary research, I work with scholars in engineering, computer science, geoscience, cognitive psychology, business, economics, anthropology, and environmental sociology. For all publications, the order of authors is determined by the scientific contribution of the researcher, with the principal investigator/ corresponding author listed first. I strive to communicate my research in high-impact, interdisciplinary journals and in public presentations, interviews, and policy and industry reports to reach the broadest possible audiences.

RESEARCH PUBLICATIONS

Refereed Articles

25. Silva, V., Herman, A., Mirzaei, M., Du, E., Hu, B., Sawchyn, M., **Lefsrud, L.M.**, Sander, J. & Stroulia, E. 2019. Analyzing and Visualizing the Canadian Research Landscape. *CASCON Proceedings*.
24. Boswell, J., Rentz, A., Cavanagh, P., Staples, L., & **Lefsrud, L.M.** 2019. Preliminary Work by the Dam Integrity Advisory Committee Towards Thinking Clearly and Communicating Effectively About Risk. *Proceedings of the Canadian Dam Association*.
23. **Lefsrud, L.M.** & Oberg, A. 2019. Heated Atmosphere: Organizational Emotions and Field Structuring in Online Climate Change Debates. *Academy of Management Proceedings*, 2019 (1), 12132.

22. **Lefsrud L.M.**, Macciotta Pulisci, R., and Nkoro, A.* 2019. Role of Safety Management Systems (SMS) in the railway industry and potential for enhancement of the Railway Safety Act (RSA). *Canadian Journal of Civil Engineering*, forthcoming. DOI: 10.1139/cjce-2018-0513
21. Davidson, D., Rollins, C.*, **Lefsrud, L.M.**, Anders, S. & Hamman, A. 2019. Just don't call it climate change: Climate-skeptic farmer adoption of climate mitigative practices. *Environmental Research Letters*, 14, 034015.
20. **Lefsrud, L.M.** & Vaara. E. 2019. Framing Fairness: Meta-Frames and the Dynamics of Frame Containment and Expansion in the Case of Alberta's Oil Sands. *Research in the Sociology of Organizations*, volume on micro-foundations of institutions, forthcoming.
19. **Lefsrud, L.M.**, Graves, H. & Phillips, N. 2019. Giant toxic lakes you can see from space: A theory of multimodal messages and emotionality in legitimacy work. *Organization Studies*, 0170840619835575.
18. **Lefsrud, L.M.** 2018. Book Review: Rosling, H., Rosling, O. & Rosling-Rönnlund, A. Factfulness: Ten Reasons We're Wrong About the World – and Why Things Are Better Than You Think. *Organization Studies*, forthcoming. Includes video abstract as part of the supplementary materials: <https://journals.sagepub.com/doi/abs/10.1177/0170840618813918>
17. Hoffman, A.J. ... **Lefsrud, L.M.**... 2018. Environmental Purchasing: A framework for theory development. *Business and the Natural Environment: A Research Overview*, 32(3): 1-6.
16. Macciotta, R. & **Lefsrud, L.M.** 2018. Framework for Developing Risk Evaluation Criteria. *Geoenvironmental Disasters*, 5(1): 10.
15. Anderson, N.*, Watson, E., Cocchio, J., Watson, E., Li, L. & **Lefsrud, L.** 2018. Fostering “Soft-Skill” Graduate Attribute Development using Multifaceted Instructional Strategies in an Undergraduate Engineering Course. *Journal of Online Engineering Education*.
14. Hashemi, S.J.*, Bak, N.*, Khan, F., Hawboldt, K., **Lefsrud, L.M.**, & Wolodko, J. 2018. Bibliometric Analysis of Microbiologically Influenced Corrosion (MIC) of Engineering Systems. *Corrosion*, 74(4): 468-486.
 - ✓ Feature article on cover of *Corrosion*. Second most read article in *Corrosion* in 2018.
13. **Lefsrud, L.M.** Graves, H. & Phillips, N. 2018. Dirty Oil or Ethical Oil? Visual rhetoric in legitimization struggles. *Research in the Sociology of Organizations*, 54(B): 125-166.
 - ✓ Best Article 2017 by the Canadian Association for the Study of Discourse and Writing (CASDW)
 - ✓ Best Paper, European Group of Organizational Studies 2012, presented July 2013.
12. Anderson, N.*, Cocchio, J., Watson, E., **Lefsrud, L.**, & Li, L. 2017. Employing multifaceted teaching and learning components to foster CEAB graduate attribute development. Proceedings of the 2017 Canadian Engineering Education Association 8th Annual Conference, Toronto, Ontario: University of Toronto. More information at: <https://ceea.ca/en/publications/>
11. Dong, C.*, Dong, X., Gehman, G. & **Lefsrud, L.** 2017. Using BP Neural Networks to Prioritize Risk Management Approaches for China's Unconventional Shale Gas Industry. *Sustainability*, 9: 979; doi:10.3390/su9060979.
10. Gehman, J., **Lefsrud, L.M.** & Fast, S. 2017. Social License to Operate: Legitimacy by Another Name? *Canadian Public Administration*, 60(2): 293-317.
9. Hollis, G., Westbury, C. & **Lefsrud, L.M.** 2017. Extrapolating Human Judgments from Skip-gram Vector Representations of Word Meaning. *Quarterly Journal of Experimental Psychology*, 70(8): 1603-1619.
8. Gehman, J., **Lefsrud, L.M.**, Lounsbury, M. Lu, C.* 2016. Perspectives on Energy and Environment Risks: With Implications for Canadian Energy Development. *Bulletin of Canadian Petroleum Geology*, 64(2): 384-388.
7. **Lefsrud, L.M.** & Vaara, E. 2015. What Is Fair and How Do We Know? Penn Program on Regulation, Regblog. July 20, 2015. Practitioners' version of our paper 'Framing Fairness'. Available at: <http://www.regblog.org/2015/07/20/lefsrud-vaara-fairness/>
6. **Lefsrud, L.M.** * & Meyer, R.E. 2012. Science or Science Fiction? Professionals' Discursive Construction of Climate Change. *Organization Studies. Special Issue: Climate Change and the Emergence of New Organizational Landscapes*, 33: 1477-1506.

[2fNC7REMR0Tn9Vaz2%2bEWBvHCM790YxDHFpvxD5izOHmw8Gnw%02fYy1VHUZ8sk2ndVMI6TswIJdjPWdEl3dITU94vqAIeN7ndMZLPVK%02bNaCMaz8WgpXzaaSoc%03d](https://www.youtube.com/watch?v=BOSs5GzKBn8&feature=youtu.be)

21. *What will drive energy transition in Alberta?* UAlberta Sustainability, <https://www.youtube.com/watch?v=BOSs5GzKBn8&feature=youtu.be>
20. Out of the Box. *OHS Canada magazine*, November/December 2017 edition. [https://www.mydigitalpublication.com/publication/?i=456870#{"issue_id":456870,"page":0}](https://www.mydigitalpublication.com/publication/?i=456870#{)
19. From vulnerable to transformational. *BuildForce Magazine*, Fall 2017.
18. Stastny, R.P. 2017. Maturing to safety. *Oilweek*, August, pp. 26-27.
17. Stastny, R.P. 2017. There's still ample room for improvement in Alberta's heavy construction safety culture. *JWN Energy*, 20 July 2017. Available URL: <http://www.jwnenergy.com/article/2017/7/despite-some-good-news-theres-still-ample-room-improvement-albertas-heavy-construction-safety-culture/>
16. Protecting worker safety by enhancing field level hazard assessments. MIX 103.7 & 100.5 CRUZ FM, Fort McMurray, AB, 18 July 2017.
15. U of A begins oilsands tailings ground hazard safety research funded through Suncor fatality sentence. *JWN Energy*, 17 July 2017. Available URL: <http://www.jwnenergy.com/article/2017/7/u-begins-oilsands-tailings-ground-hazard-safety-research-funded-through-suncor-fatality-sentence/>
14. Suncor ignored safety problems before operator plunged to death in tailings pond: court documents. CBC News, 7 July 2017. Available URL: <http://www.cbc.ca/news/canada/edmonton/suncor-ignored-safety-problems-before-operator-plunged-to-death-in-tailings-pond-court-documents-1.4194054>
13. Creative sentencing project will enhance worker safety. University of Alberta, Faculty of Engineering, 26 June, 2017. Available URL: <https://www.engineering.ualberta.ca/NewsEvents/Engineering%20News/2017/June/CreativesentencingprojectattheUAlbertaEngineeringwillenhanceworkersafety.aspx>
12. Why Canadians' climate concerns don't always line up with the evidence: We're relatively less worried than we were in 2007 and our beliefs split sharply along political lines. CBC News, 5 March 2017. Available URL: <http://www.cbc.ca/news/canada/calgary/climate-beliefs-canada-alberta-ekos-1.4007632>
11. Risk Management #397, on "Science for the People", a syndicated radio show and podcast that broadcasts weekly across North America on over 30 radio stations, including Science 360 Radio a project of the National Science Foundation. November 25, 2016. Available URL: <http://www.scienceforthepeople.ca/episodes/risk-management>
10. Clinton can't seem to emulate the Obama Two-Step on U.S. oil and gas production. *Financial Post*. August 31, 2016. Available URL: <http://business.financialpost.com/fp-comment/hillary-clintons-fossil-fuel-shuffle>
9. Science finally proves just how badly energy CEOs (and boosters) suck at politics, communications. *American Energy News*. August 16, 2016. Available URL: <http://theamericanenergynews.com/markham-on-energy/science-finally-proves-just-badly-energy-ceos-boosters-suck-politics-communications>
8. Providing more facts won't sway public opinion on controversial issues: Measuring emotional language in media can help companies, researcher tells Enbridge Research in Action seminar. University of Calgary, *UToday*. March 28, 2016. Available URL: <https://www.ucalgary.ca/utoday/issue/2016-03-28/providing-more-facts-wont-sway-public-opinion-controversial-issues>
7. What is Fair and How Do We Know? *University of Pennsylvania Program on Regulation*, July 20, 2015. Available URL: <http://www.regblog.org/2015/07/20/lefsrud-vaara-fairness/>
6. University of Alberta professors find 'tarsands' is more negative than 'oilsands'. *Edmonton Sun*, September 14, 2015. Available URL: <http://www.edmontonsun.com/2015/09/14/university-of-alberta-professors-find-tarsands-is-more-negative-than-oilsands>

5. Need to Know: Lianne Lefsrud. University of Alberta alumna Lianne Lefsrud tries to bridge the gap between the oil industry and environmentalists. *Alberta Venture Magazine*. February 2014. Available URL: <http://albertaventure.com/2014/02/lianne-lefsrud-oil-industry/>
4. Being Entrepreneurial in your Storytelling. *Ross School of Business*, University of Michigan. December 16, 2013. Available URL: <http://www.ns.umich.edu/new/releases/21872-what-s-your-story-sixstrategies-for-entrepreneurs>
3. The power of storytelling and how it affects the environmental field. WCBM 88.3 FM Ann Arbor. November 15, 2013. Available URL: <http://www.hotinhere.us/2013/11/>
2. People & achievements in the greater Ann Arbor area, including Comerica and Humantech. *Ann Arbor News*. June 27, 2013. Available URL: <http://www.annarbor.com/business-review/people-achievements-in-the-greater-ann-arbor-area-including-comerica-and-humantech/>
1. Risk Management Approaches Could Motivate Climate Change Action, Profiled by Sage Publishers Social Science Space. March 19, 2013. Available URL: <http://www.socialsciencespace.com/2013/03/riskmanagement-approach-could-motivate-climate-change-action/>

Papers under Review and Working Papers

- McRory, S., McRory, T., Jefferies, C., Stock, H, Welsh, D., Brooymans, H. Tait, A. & **Lefsrud, L.M.** Creative Sentencing: A Tool to Influence Corporate Behaviour. Revise and resubmit with *Alberta Law Review*.
- Baker, K.E.*, Macciotta, R. & **Lefsrud, L.M.** How can we see the unforeseeable? Enhancements to hazard identification, safety culture, and risk communication for preventing man-made incidents. Revise and resubmit with the *International Journal of Risk Assessment and Management*.
- Watson, E.*, White, L, Macciotta, R. & **Lefsrud, L.M.** Blended Learning in an Upper Year Engineering Course: The Impact of Students' Maturity on Online Engagement. Revise and resubmit with *Canadian Journal for the Scholarship of Teaching and Learning (CJSOTL)*.
- Lefsrud, L.M.** & Vaara, E. Framing Fairness: Meta-Frames and the Dynamics of Frame Containment and Expansion in the Case of Alberta's Oil Sands. Revise and Resubmit with *Organization Studies*.
- Lefsrud, L.M.**, Fox, K., Cooper, D., & Taminiau, Y. Veils of Ambiguity: Professionals' Categorization of Oil and Gas Reserves. Preparing to submit to *Organization Studies*.
- Lefsrud, L.M.** Oberg, A. & Meyer, R. Organizational emotions in online climate change debate. Preparing to submit to *Administrative Science Quarterly*.
- Baker, K.E.* & **Lefsrud, L.M.** Organizational Myopia: How organizations create complexity, ambiguity, and uncertainty to blind their risk management efforts. Preparing to submit to the *Journal of Management*.
- Lefsrud, L.M.**, Gellatly, I., & McLarnon, M. Determinants of safety culture maturity in the construction industry. Preparing to submit to *Safety Science*.
- Lefsrud, L.M.** Gehman, J. & Eckert, H, & Munira, U.* How Creative Sentencing motivates industry-wide improvements in safety performance. Preparing to submit to *Scandinavian Journal of Work, Environment and Health*.

Dissertation

Lefsrud, L.M. 2014. *When Worlds Collide: The intersection of meaning-making between hearings and media for Alberta's oil sands*, University of Alberta. My dissertation is an extended case study from 1960 to 2010 of the Alberta oil sands, using network analysis to visualize evolving vocabularies and rhetorical analysis of contestations of meaning. Actors shift discussion from technical, economic meanings to morally transcendent values. Even those excluded from the regulatory process, such as aboriginal communities and ENGOS, are able to leverage themselves and their criticisms into hearings, and the hearings into the media, making these hearings field reflecting (rather than configuring) events. Besides the logical argumentation and normative credibility, emotional appeals are fundamental for creating resonance across audiences.

- ✓ My dissertation forms the basis of my TEDx talk. Available URL:
http://www.youtube.com/watch?v=t5LZ9MNC_Ts

Policy Statements, Practice Standards and Guidelines

Developed and revised – under the auspices of APEGA’s Practice Standards Committee and Environment Committee – policy statements, practice standards, and guidelines to establish the standard of care expected of professional engineers and geoscientists. My role varied from being the sole author of original documents and incorporating reviewers’ comments to the technical editor of a subcommittee revising existing documents. Most of these remain in force, unchanged since my departure from APEGA. Of these, several have become adopted (in whole or part) as national engineering guidelines by Engineers Canada, the national organization of the 12 engineering regulators that license the country's 280,000 members of the profession.

- Practice Standard for Professional Members Environmental Responsibilities.* APEGA. Revising.
- Guideline for Management of Risk in Professional Practice.* APEGA, Sep. 2006. 43 pages.
- Determining the Need for Professional Involvement in Outsourced Engineering.* APEGA, v. 1.0, May 2009, 9 pages.
- Professional Members as Contract Employees and Independent Contractors.* APEGA, Sep. 2007. 20 pages.
- Development of Consulting Rate Structures and Contracts V1.0.* APEGA, Feb. 2005. 38 pages. This document is an update and replacement of four APEGA practice standards and guidelines.
- Guidelines for Considerations for Establishing a Consulting Practice V1.0.* APEGA, Sep. 2005. 14 pages.
- Concepts of Professionalism V1.0.* APEGA, Sep. 2004. 10 pages. Adapted as national guideline by Engineers Canada.
- Guideline for Environmental Practice V1.0.* APEGA, Feb. 2004. 15 pages. Adapted as national guideline by Engineers Canada.
- Determining the Need for Professional Involvement in Outsourced Engineering.* APEGA, v. 1.0, May 2009, 9 pages.
- Professional Responsibilities in the Completion and Assurance of Reclamation and Remediation Work in Alberta.* Joint Practice Standard by APEGA, Alberta Institute of Agrologists, Alberta Society of Professional Biologists, Alberta Chemical Professionals of Alberta, College of Alberta Professional Foresters, and College of Alberta Professional Foresters Technologists, September 2007. 37 pages. Forms the basis of a national guideline being developed by Engineers Canada.
- Guideline for Selecting Engineering, Geological and Geophysical Consultants.* APEGA, September 2006. 24 pages.
- Continuing Professional Development - A Guideline for Professional Members.* APEGA, June 2006. 29 pages.
- Guideline for Professional Responsibilities in Developing Software V1.0.* APEGA, February 2006. 17 pages.
- Guideline for Copying and Use of Computer Software V1.1.* APEGA, November 2005. 4 pages.
- Guideline for Human Rights Issues in Professional Practice V1.1.* APEGA, November 2005. 10 pages.
- Guideline for Advertising of Professional Services V2.0.* APEGA, April 2005. 14 pages.
- Guideline for Professional Practice Management Plans V1.2.* APEGA, June 2004. 15 pages.
- Guideline for Professional Member as a Witness V1.0.* APEGA, October 2003. 16 pages.
- Guideline for Relying on Work Prepared by Others V1.0.* APEGA, June 2003. 13 pages.

Research Reports

18. Macciotta, R., Lefsrud, L.M. & Hendry, M. 2019. *Risk Tolerance Strategy for Rail Transport of Dangerous Goods. Task 1: Review of Rail Occurrence Databases.* Railway Research Advisory Board.
17. Baker, K.E.*, **Lefsrud, L.M.**, Hendry, M.T., Macciotta Pulisci, R. 2019. *Final Report for Creative Sentencing: Protecting Worker Safety in Alberta by Enhancing Field Level Hazard Assessments and*

- Training for Ground Hazards Associated with Tailings Facilities, Dams, and Systems*. March 23, 2018 for Investigations, Alberta Labour. 78 pp.
16. Baker, K.E.*, Giang, V.* and **Lefsrud, L.M.** 2018. *Risk Communication Teaching Module*. Minerva Canada: Mississauga, ON.
 15. Lefsrud, L., Balaberda, A-L.*, Cossey, H. *, Chakraborty, R. *, Davis, J. *, Ghaneei, M. *, Mercier, R. *, Moghaddam, R. *, Palat, A. *, Sharma, M. *, Valupadas, M. * & Vestrum, S. * 2018. Canadian Centre for Women in Science, Engineering, Trades and Technology (CCWESTT) 2018 Policy Forum Report.
 14. Baker, K.E.*, Zettl, J.D.*, **Lefsrud, L.M.**, Hendry, M.T., Macciotta Pulisci, R. 2018. *Interim Report for Creative Sentencing: Protecting Worker Safety in Alberta by Enhancing Field Level Hazard Assessments and Training for Ground Hazards Associated with Tailings Facilities, Dams, and Systems*. March 23, 2018 for Investigations, Alberta Labour. 78 pp.
 13. **Lefsrud, L.M.**, Macciotta Pulisci, R., and Nkoro, A.* 2017. Railway Association of Canada, *Role of Safety Management Systems (SMS) in the railway industry and potential for enhancement of the Railway Safety Act (RSA)*, August 2017.
 12. **Lefsrud, L.M.**, Farjoo, A*., Pennetta de Oliveira, L.* , Caldera, A.* and Esmaeli, N.* 2017. *Creating a Positive Safety Culture and Continuous Improvement in Alberta's Construction Industry*. Reports to the Construction Owners Association Board of Directors and Participating Companies. May, 2017.
 11. **Lefsrud, L.M.**, Westbury, C., Keith, J.* & Hollis, G. 2015. *A Basis for Genuine Dialogue: Developing a Science-Based Understanding of Public/Industry Communication*. Phase I Report Prepared for the Alberta Chamber of Resources. October 2015. 81 pp.
 10. **Lefsrud, L.M.**,* Luchkow, R. & Wilson, M. 2014. *Enhancing the Common Language for Risk Management and Performance Measures*. Report for the Alberta Department of Energy, Policy and Regulatory Alignment Branch and Policy Management Office. Government of Alberta, May 2014.
 9. *Alberta Environment and Sustainable Resource Development (AESRD) Joint Task Force on Engagements to Provide Reasonable Assurance on Greenhouse Gas (GHG) Emissions: Accreditation Related to the Verification of GHG Emissions Information*. Government of Alberta, August 2014.
 8. *Academic Engagement in Public and Political Discourse*. University of Michigan, January 2014. *Technical Guidance for Greenhouse Gas Verification at a Reasonable Level of Assurance*. Government of Alberta, January 2013.
 7. *Member Consultation on Climate Change - Report to Council*. A Survey by APEGA's Environment Committee, Feb. 2008. Completed research and wrote report on behalf of the Environment Committee.
 6. *Outsourced Engineering in Alberta's Major Projects*. 2006. An Inquiry by APEGA's Practice Review Board, May 2006. Completed research and wrote report on behalf of the Practice Review Board.
 5. Zeiss, C. & **Lefsrud, L.M.*** 1995. *Property Value Effects and Property Value Protection Programs for Waste Facilities in Host Communities*, prepared for the Siting Task Force on Low-Level Radioactive Waste Management.
 4. Zeiss, C. & **Lefsrud, L.M.*** 1995. *Waste Facility Siting Framework: Development and Validation*, prepared for Office of the U.S. Nuclear Waste Negotiator.
 3. Zeiss, C. & **Lefsrud, L.M.*** 1994. *Review Report of Host Community Incentives Packages for the Siting Task Force on Low-Level Radioactive Waste Management*, prepared for Health and Welfare Canada.
 2. Zeiss, C. & **Lefsrud, L.M.*** 1994. *Class Assessment Method and Framework for Nursing Stations in Northern Communities*, prepared for Health and Welfare Canada.
 1. Hicks, F., Gerard, R., Chen, X.* & **Lefsrud, L.M.*** 1992. *A Preliminary Investigation of Break Up Processes on the Mackenzie River at the Ft. Providence Ferry Crossing*, Water Resources Engineering Report No. 92-2, Department of Civil Engineering, University of Alberta, Edmonton, Alberta.

PRESENTATIONS AND INVITED PARTICIPATIONS

Refereed Conference Papers

1. Lefsrud, L.M., Mullick, A., Pederson, A., Jensen-Fontaine, M., Asiedu, E.*, Miles, S.*, Baker, K.E. 2019. *Spanning Boundaries Through Conferences: Engaging Diverse EDI Stakeholders to Promote Change*. 1st Annual Intersections of Gender Conference (Working the Intersections of Gender), Edmonton, October 2019.
2. Lefsrud, L.M., Mullick, A., Vandenberghe, J., & Burgart, D. 2019. *Becoming an EDI Activist in Engineering: Motivations, Inspiration, and Learnings*. 1st Annual Intersections of Gender Conference (Working the Intersections of Gender), Edmonton, October 2019.
3. Lefsrud, L.M., Oberg, A. & Meyer, R.E. 2019. *Heated Atmosphere: Organizational Emotions and Field Structuring in Online Climate Change Debates*. Academy of Management, Boston, August 2019.
4. Baker, K.E.,* & **Lefsrud, L.M.** 2019. *Organizational myopia: How organizations create complexity, ambiguity, and uncertainty to blind their risk management efforts*. 35th Colloquium, European Group of Organizational Studies (EGOS) Sub-theme 17: Enlightening the Future through Riskwork. University of Edinburgh, July 2019.
5. Baker, K.E.,* & **Lefsrud, L.M.** 2019. *Using Process Safety Management tools to identify and assess oil sands tailings hazards*. Society for Risk Analysis, University of Luxembourg, March 2019.
6. Baker, K.E.,* & **Lefsrud, L.M.** 2019. *Communicating risks across organizations and to contractors in the oil sands tailings operations*. Society for Risk Analysis, University of Luxembourg, March 2019.
7. Baker, K.E.,* & **Lefsrud, L.M.** 2019. *“Deviance? Wrongdoing? Myopia?”* Society for Risk Analysis, University of Luxembourg, March 2019.
8. Pope, G., **Lefsrud, L.M.** & Oliver, M. 2018. *Canadian Workplace Culture: Human Rights Issue or Essential Competency?* Canadian Network of Association Regulators (CNAR) Annual Conference, Banff, October 2018.
9. Baker, K.E.,* Zetl, J.,* Macciotta, R., Hendry, M., **Lefsrud, L.M.** 2018. *Protecting workers exposed to ground hazards through enhanced hazard identification and management tools*. GeoEdmonton Conference, September 2018.
10. **Lefsrud, L.M.**, Fox, K., Cooper, D., & Taminiou, Y. 2018. *Inter- professional categorization in accounting regulation*. Organizations and Management Theory Division, Academy of Management Annual meeting, Chicago, August, 2018.
11. **Lefsrud, L.M.**, Fox, K., Cooper, D., & Taminiou, Y. 2018. *Inter- professional relations and categorization in accounting regulation: The case of Modernizing Oil and Gas Reserve Reporting*. 12th Interdisciplinary Perspectives on Accounting Conference, University of Edinburgh Business School, 11-13 July 2018.
12. Davidson, D.J. & **Lefsrud, L.M.** 2018. *Can Farmers be Climate Leaders*. RC24 Session, “Climate change mitigation and adaptation: Progress and pitfalls in low-carbon transition,” at the World Congress of Sociology, Toronto, July 2018.
13. Baker, K.E.,* Zetl, J.,* Macciotta, R., Hendry, M., **Lefsrud, L.M.** 2018. *Using Process Safety Management tools to identify and assess tailings hazards*. Canadian Institute of Mining (CIM), Vancouver, May 2018.
14. Baker, K.E.,* Zetl, J.,* Macciotta, R., Hendry, M., **Lefsrud, L.M.** 2018. *Communicating risks across organizations and to contractor*. Canadian Institute of Mining (CIM), Vancouver, May 2018.
15. Baker, K.E.,* Zetl, J.,* Macciotta, R., Hendry, M., **Lefsrud, L.M.** 2018. *Protecting workers exposed to ground hazards through enhanced Field Level Hazard Assessment tools*, Geohazards 7 Conference - Engineering Resiliency in a Changing Climate, Canmore, June 3-6.

16. McRory, S., Walsh, D., Tait, A., **Lefsrud, L.M.** 2017. Our journey with creative sentencing, Canadian Society of Safety Engineers, Annual Conference, September 17, Halifax.
17. Farjoo, A.*, Pennetta de Oliveira, L.*, Caldera, A.*, Esmaeeli, N.*, and **Lefsrud, L.M.** 2017. Creating a Positive Safety Culture and Continuous Improvement in Alberta's Construction Industry. XXI World Congress on Safety and Health at Work 2017. 3-6 September, 2017, Singapore.
18. **Lefsrud, L.M.** Oberg, A. & Meyer, R. 2017. Organizational emotions in online climate change debate. 33rd EGOS Colloquium, Copenhagen, July 6-8, 2017.
19. **Lefsrud, L.M.** & Gieg, L.M. 2017. 'Managing Microbial Corrosion in Canadian Offshore & Onshore Oil Production Operations', CORROSION 2017 (NACE). Project presentation to Technology Exchange Group (TEG) 187X (Microbiologically-Influenced Corrosion technical group), New Orleans, LA, March 28.
20. Bak, N.*; **Lefsrud, L.M.**; Wolodko, J. 2017. Determining the scope of MIC in the research literature and in industry. Abstract (poster presentation), CORROSION 2017 (NACE), New Orleans, LA, March 26- 30.
21. **Lefsrud, L.M.**, Fox, K., Cooper, D., & Taminiau, Y. 2016. *Maintaining Oil and Gas Reserves Accounting: The Limits of Commensuration*. Accounting, Organizations, and Society Conference, London School of Economics, December 14, 2016.
22. Umme, M.* & **Lefsrud, L.M.** 2016. *How Can Regulatory Prosecution Improve Workplace Safety?* 66th Canadian Chemical Engineering Conference, Quebec City, October 16-19, 2016.
23. **Lefsrud, L.M.**, Gehman, J. & Jamieson, M.J. 2016. *Revisiting How 'Acceptable Risk' and 'Social License to Operate' Become Defined: An Incorporation of Social-psychological Processes into Technical Risk Management*. 66th Canadian Chemical Engineering Conference, Quebec City, October 16-19, 2016.
24. Jamieson, M.J. & **Lefsrud, L.M.** 2016. *Using Hazard Identification, Risk Assessment, and the Sustainable Design Process to Evolve Environmental Regulations*. 66th Canadian Chemical Engineering Conference, Quebec City, October 16-19, 2016.
25. **Lefsrud, L.M.** Graves, H. & Phillips, N. "*Giant Toxic Lakes You Can See from Space*": *A Theory of Multimodal Messages and Emotionality in Legitimacy Work*. Copenhagen Business School conference on visibility, materiality, multimodality on September 22-23, 2016.
26. **Lefsrud, L.M.**, Jamieson, M. & Gehman, J. 2016. *Revisiting how Acceptable Risk and Social License to Operate Become Defined*. Congreso Colombiano de Minería. Medellín Colombia, May 24, 2016.
27. Baker, K.E.* & **Lefsrud, L.M.** 2016. *Hazard Control Implementation for Contaminated Water Recycling in the Mining & Energy Sectors / Aplicación de control de riesgo para el agua contaminada de reciclaje en los sectores de minería y energía*. Congreso Colombiano de Minería. Medellín Colombia, May 24, 2016.
28. Jamieson, M. & **Lefsrud, L.M.** 2016. *Evolving Regulations to Support Sustainable Design / Evolución de las reglamentaciones para apoyar el diseño sostenible*. Congreso Colombiano de Minería. Medellín Colombia, May 23, 2016.
29. **Lefsrud, L.M.** Oberg, A. & Meyer, R. 2016. Organizational Emotionality in the Discursive Field of Climate Change. 12th Workshop on New Institutionalism in Organization Theory, Lucerne, March 31-April 01, 2016.
30. Hoffman, A.J., & **Lefsrud, L.M.** *Paradox and Sustainability: Moving Beyond the Business Case. ONE Research and Practice in the Era of the Anthropocene*. Academy of Management Annual meeting, Vancouver, August 10, 2015.
31. Hoffman, A.J., Jennings, D.J., & **Lefsrud, L.M.** *Climate change in the era of the Anthropocene – An institutional analysis*. Subtheme 23: Climate (In)action: Understanding Corporate and Institutional Inertia, 31st EGOS Colloquium, Athens, July 2-4, 2015.
32. **Lefsrud, L.M.** Phillips, N. & Westbury, C. *Categorization and Framing as Legitimacy Work: the Struggle over the Canadian Oil Sands*. Sub-theme 62: Take a Walk on the Wild

- Side: Social Ontologies and Post-Legitimacy Theorizing about Social Structure, 31st EGOS Colloquium, Athens, July 2-4, 2015.
33. **Lefsrud, L.M.** Graves, H. & Phillips, N. Picture the Feeling: Theorizing the Role of Emotion in Legitimacy Work. European Theory Development Workshop, Cardiff UK, June 25-26, 2015.
 34. **Lefsrud, L.M.** & Vaara, E. *Framing Fairness: The Case of Alberta Oil Sands*. Alberta Institutions Conference, Banff, June 12-14, 2015.
 35. **Lefsrud, L.M.** *When Worlds Collide?* In Showcase Symposium: *Bridging Institutional Analysis with Cultural Dynamics in Explaining Environmental Sustainability*. Academy of Management, ONE, SIM and OMT Divisions, Philadelphia, August 1-5, 2014.
 36. **Lefsrud, L.M.** Graves, H. & Phillips, N. A Theory of Visual Rhetoric in Legitimacy Struggles. Sub-theme 07: (SWG) Visualizing Institutions and Knowledge, 30th EGOS Colloquium, Jul. 3–5, 2014, Rotterdam.
 37. Gehman, J. **Lefsrud, L.**, Lounsbury, M. & Lu, C. 2014. Perspectives on Energy and Environment Risks. Helmholtz-Alberta Initiative Energy and Environment (HAI-E&E) Annual Science Forum. Edmonton, AB, Canada, September 29, 2014, Edmonton.
 38. **Lefsrud, L.M.**, & Vaara, E. 2014 *Relational Legitimacy through Justice: The Case of Alberta Oil Sands*. 3rd European Theory Development Workshop, Jun. 27-28, 2014, Amsterdam.
 39. **Lefsrud, L.M.**, Graves, H. & Phillips, N. 2014 *Dirty Oil, Ethical Oil, Legitimate or Not? The Struggle to Categorize the Alberta Oil Sands*. Alliance for Research on Corporate Sustainability (ARCS) Conference, Cornell University, May 7-9, 2014, Ithaca.
 40. **Lefsrud, L.M.**, Graves, H. & Phillips, N. 2013 *Dirty Oil, Ethical Oil: Categorical Illegitimacy and the Struggle over the Alberta Oil Sands*. Emotions and Institutions Workshop, York University, Dec. 11-12, 2013, Toronto.
 41. **Lefsrud, L.M.**, Graves, H. & Phillips, N. 2013 *Dirty Oil, Ethical Oil: Categorical Illegitimacy and the Struggle over the Alberta Oil Sands*. Sub-theme 48: The Emergence of Categories, Identities, Fields and Organizational Forms, 29th EGOS Colloquium, Jul. 4–6, 2013, Montreal.
 42. **Lefsrud, L.M.**, Fox, K.A., Cooper, D.J. & Taminiau, Y. 2013. *Veils of Ambiguity: Professionals' Categorization of Oil and Gas Reserves*. Sub-theme 30: Strategic and Institutional Environments. Sub-theme 48: The Emergence of Categories, Identities, Fields and Organizational Forms, 29th EGOS Colloquium, Jul. 4-6, 2013, Montreal.
 43. Misutka, P. & **Lefsrud, L.M.** 2013. *At the Gateway of Social Injustice? An International Conference on Inequality, Institutions and Organizations*, June 6-8, 2013, Segal Graduate School of Business, Simon Fraser University, Vancouver.
 44. **Lefsrud, L.M.** & Suddaby, R. 2013 Golden Goose or Ugly Duckling. *Connecting Rigor and Relevance in Institutional Analysis*, Doctoral Consortium, Harvard University, June 2-4, 2013.
 45. **Lefsrud, L.M.**, Graves, H. & Phillips, N. 2013 *Dirty Oil, Ethical Oil: Categorical Illegitimacy and the Struggle over the Alberta Oil Sands*. Sustainability, Ethics, and Entrepreneurship (SEE) Conference, Apr. 11-12, 2013, University of Denver, Colorado.
 46. **Lefsrud, L.M.** & Meyer, R.E. 2012. *Science or Science Fiction? Experts' Discursive Construction of Climate Change*. Academy of Management, OMT Division, Boston, Aug. 3-7, 2012. Finalist for Best International Paper, OMT.

47. **Lefsrud, L.M.** Graves, H. & Phillips, N. 2012. *Dirty Oil, Snake Oil: The Categorical Illegitimacy of Alberta's Oilsands*. Sub-theme 24: Organizations as Phenomena of Language Use: Interconnecting Discourse and Communication, 28th EGOS Colloquium, Jul. 5–7, 2012, Helsinki. Awarded *Best Paper* of the Conference.
48. Graves, H., **Lefsrud, L.M.** & Phillips, N. 2012. *Dirty Oil/Ethical Oil/Snake Oil: Discursive Positioning in Environmental Rhetoric*. Canadian Association for the Study of Discourse & Writing, Wilfred Laurier University, May 26-28, 2012, Kitchener-Waterloo.
49. **Lefsrud, L.M.**, Graves, H. & Phillips, N. 2012. *Dirty Oil, Snake Oil: Illegitimacy of Alberta's Oilsands*. 8th New Institutionalism Workshop, 15 - 16 Mar. 2012, ESADE Ramon Llull University, Barcelona.
50. **Lefsrud, L.M.** & Suddaby, R. 2011. *Co-Constructing the Meaning of Oil: Stakeholders' Definition and Valuation of Resources in Alberta's Oil Sands*. Energy, Organizations, and Society (EOS) workshop, Oct. 14-15, 2011, University of California, Davis.
51. **Lefsrud, L.M.** & Suddaby, R. 2011. *Co-Constructing the Meaning of Oil: Stakeholders' Definition and Valuation of Resources in Alberta's Oil Sands*. Organizing Institutions: Studying the Emergence of New Practices, Sep. 30-Oct. 1, 2011, Harvard Business School, Boston.
52. **Lefsrud, L.M.** & Emerson, C.J. 2011. *Putting Fuel in the Tank: Best Practices in Promoting Diversity and Innovation*. Fueling the Future: International Conference for Women in Oil & Gas, Mar. 8-9, 2011, St. John's, Newfoundland and Labrador.
53. **Lefsrud, L.M.** & Meyer, R.E. 2011. *Science or Science Fiction? Experts' Discursive Construction of Climate Change*. ETH PhD-Academy on Sustainability and Technology: Climate Change Mitigation and Adaptation: An Organizational Science Perspective, Jan. 16-21, 2011, ETH Zurich Centro Stefano Franscini.
54. **Lefsrud, L.M.** & Suddaby, R. 2010. *Oil & Water: Stakeholders' Framing of Resources in Alberta's Oil Sands*, Unwrap the Research Conference, Oct. 22-24, 2010, Ft McMurray.
55. **Lefsrud, L.M.** & Suddaby, R. 2010. *Oil & Water: Framing of Resources in Alberta's Oil Sands*. OCIS: PDW on Materiality in Organizational Studies: Mapping the Territory, Aug. 6-10, 2010, Academy of Management, Montreal.
56. **Lefsrud, L.M.** & Suddaby, R. 2010. *After the Gold Rush: The Role of Professionals in Emergence/Configuration of Organizational Fields*. Symposium on Entrepreneurship in Professional Services, Aug. 6-10, 2010 Academy of Management, Montreal.
57. **Lefsrud, L.M.** & Meyer, R.E. 2010. *Science or Science Fiction? Experts' Discursive Construction of Climate Change*. Sub-theme 46: Global Fears – Local Consequences: Discourses, Disguises and Productive Change, EGOS, Jun. 28-Jul. 3, 2010, Lisbon.
58. **Lefsrud, L.M.** & Suddaby, R. 2010. *During the Gold Rush: Field-Level Regulation of Alberta's Oil Sands in Definition and Valuation of Resources*. Organizing Institutions: Agency and Interpretive Approaches, May 21-22, 2010, Copenhagen Business School, Copenhagen.
59. **Lefsrud, L.M.** & Suddaby, R. 2010. *Oil & Water: Stakeholders' Framing of Resources in Alberta's Oil Sands*. Annual conference for International Association for Business and Society, Banff, Mar. 25-28, 2010.
60. **Lefsrud, L.M.** & Meyer, R.E. 2009. *Considering the Materiality of Climate Change through Professionals' Logics, Framing and Agency*. EGOS, Sub-theme 08: Institutions and knowledge: The role of materiality, Jul. 2-4, 2009, Barcelona.
61. Taminiou, Y., **Lefsrud, L.M.**, & Suddaby, R. 2009. *Mind the Gap: Exploring the Regulator-Profession Interface in the Oil and Gas Industry*. EGOS, Sub-theme 09:

- Energizing energy markets: Institutions, devices and experiments, Jul. 2-4, 2009, Barcelona.
62. **Lefsrud, L.M.** 2009. *After the Goldrush: Creating Order from Chaos. Three studies on professionals' expertise claims, definition of resources, and agency.* EGOS, PhD Pre-Colloquium Workshop, Jun. 29 – Jul. 1, 2009, Barcelona.
 63. **Lefsrud, L.M.** & Hughes, K. 2009. *Maintaining the Iron Cage: Reinforcing Professional Self-Regulation to Enable Innovation.* 5th Workshop on New Institutionalism in Organization Theory, Mar. 26-27, 2009, Naples.
 64. **Lefsrud, L.M.** 2008. *Convenient Truths? Multiple Logics in the Petroleum Industry.* PhD Sustainability Academy - Building Sustainable Value Cross-Enterprise Leadership Centre, Ivey School of Business, University of Western Ontario, Sept. 26-30, 2008, London.
 65. **Lefsrud, L.M.** & Suddaby, R. 2008. *Changing Logics of Self-Regulation in Professional Fields.* EGOS, Sub-theme 22 Institutional Work: Understanding How Actors Create, Maintain and Disrupt Institutions, Jul. 10-12, 2008, Amsterdam.
 66. **Lefsrud, L.M.** & Suddaby, R. 2008. *Who Is Regulating Whom and How? Establishing Sites of Regulation for Outsourced Engineering.* Offshoring & Outsourcing: The Organizational and Geographical Relocation of High-Value Company Functions, SDA Bocconi School of Management, Apr. 23-24, 2008, Milan.
 67. **Lefsrud, L.M.** 2008. *Convenient Truths? Multiple Logics in the Petroleum Industry.* 5th Annual Sprott Doctoral Symposium, Carleton University, Apr. 10-11, 2008, Ottawa. Runner-up best paper.

SELECT EXECUTIVE, PRACTITIONER AND PUBLIC PRESENTATIONS

1. **Lefsrud, L.M.** 2019. *Communicating Risks.* Keynote, National Conference of the Canadian Dam Association, Calgary, October 2019.
2. **Lefsrud, L.M.** 2019. *Cutting-Edge Linguistic Methods.* Academy of Management, invited panelist Paper Development Workshop, Boston, August 12, 2019.
3. **Lefsrud, L.M.** 2019. *Creative Sentencing: My Experience with Companies.* Alberta Justice Senior Leadership Retreat, Edmonton, June 25, 2019.
4. **Lefsrud, L.M.** 2019. *Safety Moment.* Suncor Senior Management Contractor Safety Roundtable, Ft. McMurray, May 27, 2019.
5. **Lefsrud, L.M.** 2019. *Hidden Hazards and Blind Spots.* Workshop, Construction Owners' Association of Alberta (COAA) Best Practices Conference, Edmonton, May 9-10, 2019.
6. **Lefsrud, L.M.** 2019. *Role of AI in Humanities and Ethics,* Invited Panelist, Canadian Conference in Electrical and Computer Engineering, Edmonton, May 6, 2019.
7. **Lefsrud, L.M.** 2019. *Communicating Risks to Support Sustainability Discussions: Challenges in a Post-Truth Era.* Dow Elements of Sustainability Series. Available online at: <https://consumer.dow.com/en-us/who-we-are/sustainability/elements-of-sustainability-2019.html>
8. **Lefsrud, L.M.** 2019. *Just don't call it climate change.* Keynote, Alberta Institute of Agrologists, Annual Conference, Banff Centre for Leadership, March 29, 2019.
9. **Lefsrud, L.M.** 2019. *The Information Environment: Media framing of agriculture and climate change.* A Workshop on Climate Change Mitigation in Canadian Agriculture: Integrating recent farm behaviour research into policy, Canadian Agricultural Economists Society, Ottawa, February 13, 2019.
10. **Lefsrud, L.M.** 2019. *Keynote.* Student Sustainability Summit, University of Alberta, Edmonton, February 2, 2019.
11. **Lefsrud, L.M.** 2019. *The Diversity Challenge.* Consulting Engineers of Alberta Executive Meeting, Edmonton, January 23, 2019.

12. **Lefsrud, L.M.** 2019. *How can we better equip organizations to 'see', prioritize, and proactively manage risks?* University of Alberta Risk Symposium, Lister Hall, University of Alberta, Edmonton, January 15, 2018.
13. **Lefsrud, L.M.** 2018. *The Diversity Challenge*. University of Alberta Alumni Association, Lister Hall, University of Alberta, Edmonton, December 12, 2018.
14. Pope, G., **Lefsrud, L.M.** & Oliver, M. 2018. *Canadian Workplace Culture: Human Rights Issue or Essential Competency?* APEGA Board of Examiners meeting, Edmonton, December 7, 2018.
15. **Lefsrud, L.M.** 2018. Panel speaker, *NextGen Speaker Series - Women at Work: How to Get In and Stay Ahead*. Edmonton City Hall, November 3, 2018.
16. **Lefsrud, L.M.**, Baker, K., Zettl, J., Macciotta, R., & Hendry, R. 2018 Communicating risks across organizations and to contractors. Environment, Health & Safety, Risk Management Services, University of Alberta. 26 September 2018.
17. **Lefsrud, L.M.**,* Baker, K.E.,* Zettl, J.,* 2018. *Protecting workers From Ground Hazards by Enhancing Hazard Identification and Management tools*. Enform Petroleum Safety Conference, Banff, May 1-3, 2018.
18. **Lefsrud, L.M.**, 2017. *Re-focusing on risk. How can we better equip companies to 'see', prioritize, and proactively manage risks?* Confederation of Alberta Faculty Associations (CAFA) Distinguished Academic Early Career Award, Gala Presentation, September 14, Edmonton.
19. Meyer, R.M., Oberg, A., and **Lefsrud, L.M.** 2017. *Heated Atmosphere: Organizational Emotions and Field Structuring in Online Climate Change Debates*. Scandinavian Consortium for Organizational Research (SCANCOR) / Stanford University Symposium on Institutional Analysis 2017, Public Morning Lectures, September 11, Vienna.
20. **Lefsrud, L.M.**, Farjoo, A*, Pennetta de Oliveira, L.*, Caldera, A.,* and Esmaeeli, N.* 2017. *Safety Maturity Curve: Findings from Industry Perception Survey*. Construction Owners Association of Alberta, Best Practices Conference, Edmonton Alberta, May 9-10, 2017.
21. **Lefsrud, L.M.** 2017. *Re-imagining Energy: How emotion has shifted energy conversations*. Keynote speaker, Fuse Collective Gala student fundraiser, Calgary Alberta, January 26, 2017.
22. **Lefsrud, L.M.** & Winkel, G. 2016. *Risk Management in a large industrial work place: Occupational health and safety in the oil sands*. National Research Council and Transport Canada Risk Engineering Workshop, Application of Risk Engineering for Transportation and Industries Managing Linear Infrastructure. National Research Council Canada, November 8, 2016.
23. **Lefsrud, L.M.**, Gehman, J., & Umme, M.* 2016. *Analyzing WCB data to assess the effectiveness of education initiatives and financial incentives in reducing future claims rates*. Safety Committee Meeting, Construction Owners Association of Alberta. Edmonton, October 5, 2016.
24. **Lefsrud, L.M.**, Gehman, J., & Umme, M.* 2016. *The value of shame: Research that supports the concept of shaming and the need to include a rehabilitation story*. Creative Sentencing Workshop, Alberta Justice. Edmonton, September 29, 2016.
25. **Lefsrud, L.M.** & Gehman, J. 2016. *Risk Worth Taking? Revisiting how 'Acceptable Risk' Becomes Defined*. Oil Sands & Heavy-Oil Workshop: Furthering the Collaborations & Sharing the Learnings. CSPG/AAPG, Calgary, June 19, 2016.
26. **Lefsrud, L.M.**, Westbury, C. & Hollis, G. 2016. *Acceptable risks? The role of traditional and social media in resource conversations*. Consulting Engineers of Alberta AGM, Calgary, May 18, 2016.
27. **Lefsrud, L.M.**, Westbury, C. & Hollis, G. 2016. *Acceptable risks? The role of traditional and social media in resource conversations*. Association of Alberta Forest Management Professionals, Rocky Mountain House and Edmonton, April 11 & 13, 2016.
28. **Lefsrud, L.M.**, Westbury, C. & Hollis, G. 2016. *Acceptable risks? The role of traditional and social media in resource conversations*. Strategy and Market Access, Alberta Energy, February 25, 2016.

29. **Lefsrud, L.M.**, Westbury, C. & Hollis, G. 2016. *Acceptable risks? The role of traditional and social media in resource conversations*. Enbridge Research in Action Seminar, Calgary, April 7, 2016.
30. **Lefsrud, L.M.**, Westbury, C. & Hollis, G. 2016. *Creating a Basis for Genuine Dialogue: Phase I Report*. Guest Speaker, Alberta Chamber of Resources, Board of Directors meeting, Calgary, October 15, 2015.
31. **Lefsrud, L.M.**, Westbury, C. & Hollis, G. 2015. *A basis for genuine dialogue: Developing a Science-Based Understanding of Public/Industry Communication*. Alberta Chamber of Resources, Semi-Annual General Meeting, Calgary, June 18, 2015.
32. **Lefsrud, L.M.**, Westbury, C. Hollis, G., Keith, J.* 2015. *Creating a Basis for Genuine Dialogue*. Guest Speaker, Alberta Chamber of Resources, Board of Directors meeting, Edmonton, April. 14, 2015.
33. **Lefsrud, L.M.**, 2013. *Ugly Duckling or Golden Goose? Knowledge to Succeed in a Changing Dialog*. Guest Speaker, Alberta Innovates and Climate Change Emissions Management Corporation, Board of Directors meeting, Edmonton, Feb. 19, 2013.
34. **Lefsrud, L.M.**, 2012. *Ugly Duckling or Golden Goose? Knowledge to Succeed in a Changing Dialog*. Keynote Speaker, Syncrude Research Conference, Edmonton and Ft. McMurray, Nov. 7 & 14, 2012.
35. **Lefsrud, L.M.**, 2012. *Graduate Student Panel Discussion*, Student Sustainability Summit, Sustain SU and the Office of Sustainability, University of Alberta, Jan. 28, 2012.
36. **Lefsrud, L.M.**, 2011. *Redefining the Bottom Line: Corporate Social Responsibility*. Invited panel member with Tyler Wry, Assistant Professor, Wharton School of Business, and Gord Winkel, Professor Industrial Safety and Loss Management and previous VP Syncrude. Engineers Without Borders, University of Alberta Chapter, Edmonton, Mar. 3, 2011.

TEACHING

- CME 481 Colloquium – Fourth year course, winter term 2019 (24 students). Chemical and Materials Engineering.
- CME 483 Colloquium – Technical presentations. Fourth year course, winter term 2019 (21 students). Chemical and Materials Engineering.
- CHE 312 Fluid Mechanics, third year undergraduate course, fall term 2018 (24 students). Chemical and Materials Engineering. (Overall the instructor was excellent 4.0/5.0).
- CME 694 Advanced Topics in Engineering Safety and Risk Management. Graduate Course, winter term 2018 (32 students). Chemical and Materials Engineering. (Overall the instructor was excellent 4.8/5.0).
- CME 481 Colloquium – Fourth year course, fall term 2017 (24 students). Chemical and Materials Engineering. (Overall the instructor was excellent 4.8/5.0).
- ENGG 404 Engineering Safety and Risk Management. Fourth year course. Co-instructor, fall term 2017 (220 students in three sections), Chemical and Materials Engineering.
- CME 694 Advanced Topics in Engineering Safety and Risk Management. Graduate Course, fall term 2016 (25 students). Chemical and Materials Engineering. (Overall the instructor was excellent 4.8/5.0).
- Sustainable Mining Workshop, Congreso Colombiano de Minería. Medellin, Colombia, 23-24 May 2016.
- CME 483 Colloquium – Technical presentations. Fourth year course, winter term 2016 (25 students). Chemical and Materials Engineering. (Overall the instructor was excellent 4.8/5.0).
- ENGG 404 Engineering Safety and Risk Management. Fourth year course. Co-instructor, fall term 2015 (186 students in two sections), Chemical and Materials Engineering.
- SMO 441 Strategy: Cooperation and Competition, fourth year strategy capstone course. Lecturer, fall term 2011 (16 students), Alberta School of Business. (Overall the instructor was excellent 4.6/5.0).

SMO 301 Introduction to Strategic Management and Organization Design, third year undergraduate course. Lecturer, winter term 2010 (36 students), Alberta School of Business. (Overall the instructor was excellent 4.5/5.0).

STUDENT SUPERVISION

Fereshteh Sattari, September 2019–, Post Doc in Chemical Engineering

Tian Tang, September 2019–, PhD in Strategic Management and Organization, co-supervised with Joel Gehman.

Sanah Dar, May-October 2019, Masters in Engineering, Chemical Engineering.

Kabir Nadkarni, May-August 2019, 5th year undergrad in Engineering Physics.

Michelle Naef, January 2019 –, PhD in Chemical Engineering.

Amanda Sistilli, January 2019 –, Masters of Science, Chemical Engineering.

Hadis Ebrahimi, January 2019 –, PhD in Chemical Engineering, co-supervised with Renato Macciotta.

Nafiseh Esmaeeli, January 2019 –, Masters of Science, co-supervised with Renato Macciotta. Chemical Engineering. April-December 2017, BSc/Research Assistant, COAA Safety Culture Survey.

Vivian Giang, September 2018 –, PhD in Anthropology, co-supervised with Andie Palmer.

Daniel Schiffner, September 2018 –, MSc in Community Resilience, Agriculture Life and Environmental Sciences, co-supervised with Vic Adamowicz.

Daniel Kurian, September 2018 –, Masters of Science in Engineering, Engineering Management, co-supervised with Youngshen Ma.

Honey Bhatia, January-August 2018, Masters in Engineering, Engineering Management, co-supervised with Stanislav Karapetrovic.

Abhishek Karole, January-August 2018, Masters in Engineering, Chemical Engineering. Now with Process Ecology.

Ifema Odeluga, January-December 2017, Masters in Engineering, Chemical Engineering. Now with the City of Edmonton.

Anne Nkoro, January 2018 – April 2019, Masters in Engineering, Chemical Engineering. Continued as a GRA for Transport Canada Research

Dhaval Shah, January-May 2017, Masters in Engineering, Chemical and Materials Engineering. Now with Saudi Aramco.

Yu Zhu, May -August 2017, Undergraduate in Computer Science.

Andrea Miller, May-Sept 2018. Undergraduate in Agriculture Life and Environmental Studies. Doing her MSc with John Parkins.

Varun Sharma, May-August 2017, Masters in Engineering, Engineering Management, co-supervised with John Doucette. Now with CN Rail.

Afroz Farjoo, January-April 2017, PDF/Research Associate, COAA Safety Culture Survey. Now with Alberta Energy.

Aysha Hannan, January-December 2017, Masters in Engineering, Chemical Engineering.

Anuar Caldera, January-May 2017, MSc/Research Assistant, COAA Safety Culture Survey. Now with Grace International.

Leonardo Pennetta de Oliviera, January-August, 2017, MSc/Research Assistant, COAA Safety Culture Survey.

Cindy Dong, May-June 2017, Visiting PhD student, co-supervised with Joel Gehman.

Nicholas Bak, September 2016-, PhD in Science, Engineering Safety and Risk Management, co-supervised with John Wolodko

Kathleen Baker, September 2016-March 2019, Masters in Science, Engineering Safety and Risk Management. Now with Suncor.

Yuanyuan Ning, April-August 2016, Research Assistant. 5th year PhD in Economics. Withdrew from the program.

Munira Umme, January 2016-October 2018, Masters in Science, Engineering Safety and Risk Management.

Daanish Hamid, May 2017 – May 2018, BSc Research Assistant, Chemical Engineering. Now with Worley Parsons.

Megha Sharma, Sept-Dec 2017, Undergraduate Research Initiative, BSc Chemical Engineering. Now with Suncor.

Juliana Dobbie, January-April 2017, Deans Research Award.

Natasha Pye, January-April 2017, Deans Research Award.

Kostyantyn Guzhva, January 2015, BSc Research Assistant, Computer Science, co-supervised with Chris Westbury (Psych) and Deb Davidson (ALES)

Amélie Shawcross, January-August 2016, Masters in Engineering, Chemical and Materials Engineering (Completed). Now doing her PhD in Civil Engineering, University of Ottawa.

Neil Anderson, May 2016-August 2018, Research Assistant. Bachelors in Science, Chemical and Materials Engineering (Completed).

Jeff Keith, May-September 2015, Masters of Science, Psychology (Completed). Now consulting in Calgary.

Udey Rishi, November 2015-April 2016, 5th year undergraduate in Computer Engineering. Now on Co-op work term with Shopify. He is interested in working with us again, when he returns to UofA.

Allison Moore, November 2015-September 2016, 3rd year Bachelors in Psychology. Continuing as Research Assistant.

Ana Kovic, November 2015-September 2016, 4th year Bachelors in Psychology, applying for medical school. In the meantime, she is continuing as Research Assistant.

Janel Comeau May-August 2015, Bachelors (Honours) in Psychology (Completed). Now in Grad School at Columbia University.

EXAMINING COMMITTEES

Laura Lucier, PhD Mechanical Engineering, University of Calgary, Final Defense Committee, October 2019.

Huanan Li, MSc Civil Engineering, University of Alberta, Final Defense Committee, 13 September 2019.

Eder Villa Coronel, MSc Mechanical Engineering, University of Alberta, Final Defense Committee, 27 August 2019

Fereshteh Sattari, PhD Chemical Engineering, University of Alberta, Final Defense Committee, 4 June 2018.

Fereshteh Sattari, PhD Chemical Engineering, University of Alberta, Candidacy Committee, 22 January 2018.

Mohammad Raoufi, PhD Construction Management, University of Alberta, Final Defense Committee, 16 January 2018.

Sally Mattar, MSc Engineering Management, University of Alberta, Final Defense Committee, 28 August 2017.

Lina Yanez, PhD Chemical and Materials Engineering, University of Alberta, Candidacy Exam, 9 May 2017.

Ozgur Bozan, MSc Rural Sociology, University of Alberta, Final Defense Committee. 16 January 2017.

Rosalynn Loerke, MSc Chemical and Materials Engineering, Final Defense Committee. 29 November 2016.

Lawrence Ejike, MSc Chemical and Materials Engineering, University of Alberta, Final Defense Committee, 31 August 2016.

Christina Seidel, PhD Engineering Management, University of Alberta, Final Defense Committee, 14 December 2015.

Andrew Herbst, PhD Engineering Management, University of Alberta, Candidacy Committee, 5 November 2015.

ACADEMIC ASSOCIATIONS AND ACTIVITIES

Department Representative: Faculty of Engineering Executive Coordinating Committee (members of this committee also sit on the Engineering Academic Appeals Committee), July 1 2019 - June 30, 2022

Member: University of Alberta Sustainability Council's Research Steering Committee, June 30 2019 onwards

Reviewer: United States National Science Foundation, 2019-

Co-Organizer: Geothermal Resources in Sedimentary Basins Conference 2020, Edmonton, September 19-20, 2020.

Co-Chair: International Sociology Association, XIX World Congress of Sociology, RC24 Environment and Society Session, July 15-25, 2018, Toronto.

Chair: Canadian Society of Chemical Engineers (CSChE) and Canadian Institute of Chemistry (CIC) Annual Conference, Process Safety and Risk Management Division, Edmonton, October 22-25, 2017.

Member: Canadian Society of Chemical Engineers (CSChE) and American Society of Engineering Educators (ASEE), 2016-, Canadian Institute of Mining.

Member: Association of Academic Staff University of Alberta, Equity Committee, August 2016-

Organizer: Academy of Management Annual Meeting 2014, "Visuality: Beyond the Power of Words" Paper Development Workshop, OMT and CMS Divisions; and "Researching the Organization of Energy: Dirty, Clean and In-Between" Paper Development Workshop, ONE, OMT and BPS Divisions, Philadelphia, Aug. 1-5, 2014.

Member: Academy of Management (AOM) since 2007. Organization and Management Theory (OMT) Division, Business Policy and Strategy (BPS), and Organizations and Natural Environment (ONE) Division. European Group of Organizational Studies (EGOS), since 2007. Administrative Sciences Association of Canada (ASAC), since 2007. Network for Business Sustainability (NBS), Society of Business Ethics (SBE), and Academy of International Business (AIB).

Reviewer: Administrative Science Quarterly, Academy of Management Journal, Academy of Management Review, Organization Studies, Organization, Journal of Management Studies, since 2010.

Reviewer: Academy of Management conference for Organization and Management Theory (OMT) Division, Organizations and Natural Environment (ONE) Division, and Social Issues in Management (SIM) Division since 2007. Awarded 'Best Reviewer' in SIM Division for 2011.

Reviewer: ASAC Organizational Theory (OT) Division.

Advisor: Recognized opportunity and assisted the Alberta School of Business' executive education team with the development of *Business Leadership for Technical Professionals* programme in 2010.

School of Business Nominee: Organizational Management Theory and Management and Organizational Cognition Doctoral Consortium, San Antonio, Aug. 11-12, 2011; Social Issues in Management Doctoral Consortium, Academy of Management Conference, Montreal, Aug. 5-6, 2010; Organizations and Natural Environment Doctoral Consortium, Academy of Management Conference, Aug. 8-9, 2008, Anaheim.

Selected Participant: ETH PhD-Academy on *Sustainability and Technology, Climate Change Mitigation and Adaptation: An Organizational Science Perspective*, Zurich, Jan. 16-21, 2011 (only 16 doctoral students chosen internationally).

Selected Participant: PhD Sustainability Academy - Building Sustainable Value Cross-Enterprise Leadership Centre, Ivey School of Business, University of Western Ontario, Sept. 26-30, 2008.

PROFESSIONAL ACTIVITIES AND GOVERNANCE

Regulation of the Professions

Public Member: Registration Committee for the Institute of Chartered Accountants of Alberta (ICAA), two terms, 2005-2009.

Professional Engineer with the Association of Professional Engineers and Geoscientists of Alberta (APEGA) since 1997. Co-chairing task force to rewrite *Environmental Practice Guideline*.

Sustainability and Diversity

Advisor: Giant Mine Oversight Board. Advisor: Alberta Chamber of Resources, Dam Integrity Advisory Committee.

Member: Construction Owners Association of Alberta, Safety Committee.

Co-chair: Canadian Coalition of Women in Engineering Science, Trades and Technology (CCWESTT) 2018, Biennial Conference, Edmonton, May 31-June 2, 2018. The conference brought together national and international experts, employers, CEOs/presidents, government representatives, and women in STEM at all phases of their career lifecycle to share knowledge and experience around diversity and inclusion. We had a total of 579 conference attendees, which includes 120 workshop attendees, 50 sponsor attendees, and 73 university students (men and women in science and engineering). Additionally, in our concurrent DiscoverE youth program, we had 54 urban Indigenous girls (grades 9-12) and 47 children (grades 1-9).

Task Force Member: Alberta Environment, Institute of Chartered Accountants of Alberta, and APEGA – to review the Specified Gas Emitter Regulations (that regulate greenhouse gas emissions in Alberta) to improve rigour of emission verification and auditing, report recommendations in December 2011, revise guidance document in 2012, and consider specialist certification in 2013.

Advisor: Diversity in Engineering – student led task force 2016-.

Invited Participant: Trottier Energy Transformation Project, July 2016, Calgary. Defining Regulatory Excellence, Alberta Energy Regulator, May-November 2015. Oilsands Metrics Thought Leader Forum on Oilsands Performance Metrics: Audiences and Design Principles, May 2-3, 2011, Calgary, Alberta.

Advisor: Engineers Canada (national accreditor of engineering) to develop a national senior undergraduate/ graduate level course in climate change adaptation and mitigation. By changing the emphasis, this course can be adapted for undergraduate/graduate students in other technical professions and in business. Advisor: APEGA to manage the Environment Committee and the Climate Change Adaptation Subcommittee, 2010-2011.

Member: Women's Executive Network (WXN) and Alberta Women Entrepreneurs (AWE), 2007-2015. Executive Member: Association of Women in Engineering and Science (AWES) Edmonton Chapter, 1993-2002. Alberta Women's Science Network (AWSN) 1997-2002.

Invited Participant: Pembina Institute's Thought Leader Forum on Environmental NGO-Industry Collaboration, Nov. 14, 2006, Kananaskis, Alberta.

Vice-President: Canadian Coalition of Women in Engineering Science, Trades, and Technology (CCWESTT) 2008-2012, representing 20,000 individuals and 27 member organizations, regular board member since 2012. Vice President Canadian Centre for Women in Science Engineering Trades and Technology (WinSETT) 2010-2013. Received \$100,000 in federal and provincial funding in 2008, \$30,000 industry funding in 2009, \$180,000 in federal funding in 2010, \$60,000 industry funding and \$42,000 Killam Cornerstone Research Grant in 2012, and \$194,000 SSHRC partnership development grant in 2013. The WinSETT Centre is working in partnership with industry, government, academe, and community organizations to attract, retain, and promote women in SETT.

Chair: Public and Professional Affairs Committee, Women in Scholarship Engineering, Science and Technology (WISEST) and Advisory Board Member, 2007-2009. Led science experiments and activities at WISEST conferences for school girls 1991-2008.

Organizing Committee Member: 11th National Conference for the Advancement of Women in Engineering, Science, Trades and Technology, June 2006, Calgary.

Representative: APEGA at national meetings of Engineers Canada's Women in Engineering Advisory Group (WIEAG) and CCWESTT, 2002-2007.

ADDITIONAL PROFESSIONAL EXPERIENCE

Jan. 2003 – **Assistant Director Professional Practice, Regulatory Affairs**, Association of Professional Engineers and Geoscientists of Alberta (APEGA), which regulates 70,000 individuals and 4000 companies practicing engineering and geoscience in Alberta. Managed Environment Committee, Continuing Professional Development, Practice Review Board, and Practice Standards Committee. Provided ethics advice.

- May 1996 – **Various positions, Canadian National Railways** Worked in Engineering and
Jan. 2003 Environmental Services (cleaned up contaminated and derailment sites, risk management for rockfalls and avalanches), Transportation Supervisor (supervised running trades, trained as locomotive engineer and conductor), Manager Network Operations (managed train operations), Market Manager (coal, sulphur & fertilizers), Senior Manager Support Services (chief of staff for Sr. VP Operations), and Director Guaranteed Car Order Program (implemented system-wide railcar distribution system).
- Jan. 1994 – **Consultant, Zirkon Consulting**, Edmonton, AB. Environmental risk assessment /
Jul. 1995 management consulting for the design of industrial facilities.
- May 1993 – **Environmental Engineering Research Assistant**, Department of Civil and
Sep. 1994 Environmental Engineering, University of Alberta. Completed risk perception and environmental impact assessment/management research.