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EDUCATION

University

PhD (Geography), Environmental Studies, University of Waterloo, 2006
Dissertation: Remote Sensing for Large-area, Multi-jurisdictional Habitat Mapping

MSc (Geography), Remote Sensing, University of Calgary, 1993
Thesis: Remote Sensing of Slope Processes

BSc (Honours Geography), University of Calgary, 1991
Focus: Physical Geography

Awards and Recognition

Faculty Award, Geography Graduate Students Association, 2016
Research Fellow, Alberta Biodiversity Monitoring Institute, 2013-present
Distinguished Academic Early Career Award, Confederation of Alberta Faculty Associations, 2012
Distinguished Research Award, Faculty of Arts, University of Calgary, 2011
ERDAS Best Scientific Paper in Remote Sensing (3rd place), American Society for Photogrammetry and Remote Sensing, 2010
Offer of Employment for Tenure-track Position, Department of Geography, University of Iowa (declined), 2005
Emerald Award for Research and Innovation (team award, Foothills Model Forest Grizzly Bear Research Project), Alberta Emerald Foundation, 2004

ACADEMIC APPOINTMENTS

Professor of Geography, University of Calgary, 2017-present
Graduate Program Director, Geography, University of Calgary, 2015-2017
Associate Professor of Geography, University of Calgary, 2011-2017
Adjunct Associate Professor of Geography, University of Waterloo, 2016-2020

Assistant Professor of Geography, University of Calgary, 2005-2011
 Sessional Lecturer, Department of Geography, University of Calgary, 2003-2005

STUDENT SUPERVISION AND TEACHING

Supervisor, Co-supervisor (C), or Mentor (M)

Student	Program, Research Area, Year Completed
Taylor McKeeman ¹	MSc, UAV thermography, continuing
Annie He	MSc, Biomass mapping, continuing
Man Fai Wu,	PhD, Human disturbance mapping, continuing
Sarah Cole ²³	MSc Human disturbance mapping, continuing
Shannon Blackadder ⁴	MSc Ecosystem monitoring, continuing
Lucy Poley ⁵	PhD Ecological applications of UAVs, continuing
Kirandeep Basran	MGIS Point cloud processing, continuing
Julie Lovitt	MSc Peatland microtopography and methane flux, 2017
Shijuan Chen	MSc UAV photogrammetry, 2017
David Laskin ^{6 7}	PhD Remote sensing of understory plant phenology, 2016
Corey Feduck	MGIS UAV seedling mapping, 2016
Adam McLane ⁸	PhD Agent-based modelling of Clark's nutcracker, 2015
Tania Garcia Bravo (C)	MSc Peatland restoration, 2015
Tariq Munir (C)	PhD Peatland functioning, 2014
Nils Kaplan ⁹ (C)	MSc Habitat modelling of bull and cutthroat trout, 2014
Raul Wood ¹⁰ (C)	MSc Climate change impacts on hydrology, 2014

¹ NSERC CGS Scholar

² NSERC Queen Elizabeth II Scholar

³ Alberta Innovates-Technology Futures Scholar

⁴ NSERC Alexander Graham Bell Scholar

⁵ NSERC Queen Elizabeth II Scholar

⁶ Vanier Canada Scholar

⁷ Alberta Ingenuity / Alberta Innovates, Technology Futures Scholar

⁸ NSERC Post Graduate (PGS) Scholar

⁹ Alberta-Bavaria Research Network (ABBY-NET) student from Ludwig-Maximilians-Universität München

Brent Smith	MSc Grasslands mapping, 2013
Allison Zimmer	MGIS Habitat modelling of cattle, 2013
Chunhua Zhang	MGIS Object-based accuracy assessment, 2012
Jeff Wielki	MGIS Fire severity mapping, 2012
William McInnis	MGIS Native grasslands mapping, 2012
Adrian Faraguna	MSc Mountain pine beetle susceptibility, 2011
David Birkigt	MGIS Aquatic biomass estimation, 2011
Andrea Ram	MGIS Changes in Alberta grizzly bear habitat, 2011
Julia Linke ^{11 12 13}	PhD Grizzly bear habitat monitoring, 2010
Erin Latham	MGIS Changes in Sierra-Nevada sheep habitat, 2010
Aleksandra Sobol	MGIS Grizzly bear home range delineation, 2009
Ben Curry	MGIS Forest disturbance mapping and detection, 2008
Shadan Sanii	MGIS LiDAR data processing, 2008
Jennifer Hird ^{14 15}	MSc Analysis of NDVI time series for phenology, 2008
Iain Smith	MGIS Mapping whitebark pine in Waterton Lakes, 2007
Sarah Miall	MGIS Knowledge formulation: pixels vs objects, 2007
Adam McLane	MGIS Processing LiDAR data for canopy closure, 2007
Katie Yalte	MGIS Relative change detection, 2007
David Laskin (M)	MGIS Marine GIS: Grey whale habitat modeling, 2007
Sangeeta Guha (C)	MGIS Quantification of depression storage, 2007
Dan Austin	MGIS Object and pixel-based classification, 2006
Prasanna Man Shrestha	MGIS Spatial modeling of vegetation structure, 2006

Post-doctoral Fellows and Research Associates

Dr. Julia Linke Science Coordinator, BERA¹⁶, 2016-present

¹⁰ Alberta-Bavaria Research Network (ABBY-NET) student from Ludwig-Maximilians-Universität München

¹¹ NSERC Post Graduate (PGS) Scholar

¹² Alberta Ingenuity / Alberta Innovates, Technology Futures Scholar

¹³ Canadian Remote Sensing Society Best PhD Thesis Award, 2010

¹⁴ NSERC Post Graduate (PGS) Scholar

¹⁵ Alberta Ingenuity / Alberta Innovates, Technology Futures Scholar

¹⁶ BERA (Boreal Ecosystem Recovery and Assessment) is an NSERC-funded CRD project

Dr. Jordan Eamer	Research associate, CloudUAV ¹⁷ , 2016-present
Dr. Mustafizur Rahman	Research associate, biodiversity monitoring, 2014-present
Shannon Blackadder	Research associate, ecological indicators, 2013-present
Jennifer Hird	Research associate, biodiversity monitoring, 2009-present
Alessandro Montagni ¹⁸	Post-doctoral fellow, LiDAR remote sensing, 2014-2016
Dr. Guillermo Castilla	Post-doctoral fellow, biodiversity monitoring, 2009-2014
Will McInnes	Research associate, ecological indicators, 2012-2013
Deep Mazumdar	Research associate, biodiversity monitoring, 2011-2012
Tracy Timmins	Research associate, ecological indicators, 2011-2012
Dr. Anna Hernando	Post-doctoral fellow, object-based analysis, 2011
David Laskin	Research associate, bear habitat modelling, 2006-2009
Adam McLane	Research associate, caribou habitat modelling, 2007-2009

International and Visiting Students

M. Kumari Heenkenda	PhD, Charles Darwin University, Australia, 2015
Nils Kaplan	MSc, Ludwig Maximilians University of Munich, 2014
Raul Wood	MSc, Ludwig Maximilians University of Munich, 2014
Gustavo Quieroz-Lopes ¹⁹	BSc Universidade Federal do Paraná, Brazil, 2014
Inacio Bueno ²⁰	BSc Federal University of Lavras, Brazil, 2012
Martina Folkers	MSc Leibniz University of Hanover, Germany, 2010
Antonio Couto ²¹	MSc Universidade Federal de Lavras, Brazil, 2010

Honours Students and Senior Undergraduate Research Assistants

Michael Wrubleski ²²	BSc Geography, 2017
Marieke Maas	BSc Geography, 2017
Jorden Fanson	BSc Environmental Science, 2017

¹⁷ CloudUAV is a CANARIE-funded Research Software Development project

¹⁸ Eyes High Postdoctoral Fellow

¹⁹ Science Without Borders Scholar

²⁰ Science Without Borders Scholar

²¹ Emerging Leaders in the Americas Scholar

²² University of Calgary Program for Undergraduate Research Experience (PURE) Scholar

Brett Collins	BSc Geography, 2017
Ben Arlt	BSc Geography, 2017
Jaren Koning	BSc Geography, 2016
Vince Zafra	BSc Environmental Science, 2016
Christina Braybrook ^{23,24}	BSc Geography, 2015-2016
Jessica Theoret ²⁵	BSc Environmental Science, 2015
Jessica Zawalykut	BSc Biological Sciences, 2015
Taylor McKeeman ²⁶	BSc Geography, 2014-2015
Shea Gouthro	BSc Geography, 2013-2014
Riley Iwamoto	BSc Urban Studies, 2012-2013
Lauren Peters	BA Geography, 2012
Ben Ference	BSc Geography, 2012
Morgan Ostrander	BSc Geography, 2011
Andrew Foster	BSc Geography, 2011
Graham Pendray	BSc Geography, 2011
Jill Rajewicz ²⁷	BSc Geography, 2010
Jackie Puff	BSc Geography, 2007
Nivea DeOliveira	BSc Honours Geography, University of Sherbrooke, 2005
Carrie Spavor	BSc Environmental Science, 2005
Andrew Befus	BSc Geography, 2004-2005
Alysha Pape (M)	BSc Honours Geography, 2003
David Couroux (M)	BSc Honours Environmental Science, 2003

Examiner and Committee Member

Internal

Mallik Mahmud	PhD Geography, 2017
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²³ University of Calgary Program for Undergraduate Research Experience (PURE) Scholar

²⁴ NSERC Undergraduate Student Research Award Scholar

²⁵ University of Calgary Program for Undergraduate Research Experience (PURE) Scholar

²⁶ NSERC Undergraduate Student Research Award Scholar

²⁷ NSERC Undergraduate Student Research Award Scholar

Wenyu Wang	MGIS Geography, 2017
Jesse Fraser	MGIS Geography, 2016
Malinee Kongwongthai	MGIS Geography, 2016
Gary Mason	PhD Geography, 2016
Eleanor Bash	PhD Geography, 2015
Justin Bumstead	MGIS Geography, 2015
Ben McWilliams	MSc Geography, 2015
Laurie Hamilton	MSc Geography, 2014
Melissa Peters	MSc Geography, 2013
Yilong (Billy) Zhang	MGIS Geography, 2013
Golnoush Hassanpour	MSc Geography, 2012
Narendra Adhikari	MGIS Geography, 2012
Sulakshmi Das	MGIS Geography, 2012
Ahmed Yousif	MGIS Geography, 2012
Karl Zimmer	MGIS Geography, 2012
Gary Mason	PhD Geography, 2012
Stephanie Lapka	MSc Geography, 2012
Gang Chen	PhD Geography, 2011
Allison Robbins	MSc Geography, 2011
Shantel Koenig	MGIS Geography, 2011
John Statham	MGIS Geography, 2010
Nidhi Bishnoi	MGIS Geography, 2010
Yoseph Zuback	MSc Geography, 2010
Duan Lian	MGIS Geography, 2010
Douglas Hagedorn	MSc Geography, 2009
JinHong Li	MGIS Geography, 2009
Teresa Chung	MGIS Geography, 2009
Terry Beaulieu	MGIS Geography, 2009
Christopher Kyle	MGIS Geography, 2009
Gary Mason	PhD Geography, 2008
Kate McAnally	MGIS Geography, 2008
Tony Viveiros	MGIS Geography, 2007
Nick Manklow	MGIS Geography, 2007
David Laskin	MGIS Geography, 2007
Joshua Ben-Arie	MGIS Geography, 2007
Jason Kang	MGIS Geography, 2007
Davor Gugolj	MGIS Geography, 2007
Man-ha Au	MGIS Geography, 2006
Tony Viveiros	MGIS Geography, 2006
Heather Rudd	MGIS Geography, 2006
Carmen ReMartinez	MGIS Geography, 2006
Erin Baird	MGIS Geography, 2006
Nick Hauk	MGIS Geography, 2005

External

Rianne Diepstraten	MSc Environmental Design, University of Calgary, 2017
Saraswati Saraswati	PhD Geography, University of Waterloo, 2016
Chris Stockdale	PhD Natural Resource Management, University of Alberta, 2016
Tyler Jessen	PhD Veterinary Medicine, University of Calgary, 2017
L. Amundsen-Meyers	PhD Archaeology, University of Calgary, 2014
Han-Fang Tsai	MSc Geomatics Engineering, University of Calgary, 2014
Brian Kopach	PhD Biological Sciences, University of Calgary, 2014
Fiona Stanners	MSc Geoscience, University of Calgary, 2013
Janna So	MEDS Environmental Design, University of Calgary, 2013
Benn Edwards	MSc Biological Sciences, University of Calgary, 2013
Madison Kobryn	MSc Biological Sciences, University of Calgary, 2013
Dale Paton	MSc Environmental Design, University of Calgary, 2012
Cora Shea	PhD Geoscience, University of Calgary, 2011
Kai Wang	PhD Geography, University of Saskatchewan, 2011
Tyler Muhly	PhD Environmental Design, University of Calgary, 2010
Morshed Anwar	PhD Geomatics Engineering, University of Calgary, 2010
Chengqian Zhang	PhD Geomatics Engineering, University of Calgary, 2010
Bianca Wohlfarht	PhD Biology, University of Calgary, 2010
John Jackson	MSc Environmental Design, 2008
Andrew Teucher	MSc Biology, University of Calgary, 2007
Alex Zeller	MSc Biology, Lakehead University, 2006
Ramona Maraj	PhD Environmental Design, University of Calgary, 2006
Wen Ya Chiu	MSc Geomatics Engineering, University of Calgary, 2005

Neutral Chair

Elena Favaro	PhD Geography, University of Calgary, 2017
Samaneh Ebrahimi	PhD Geography, University of Calgary, 2016
Chris Fuller	PhD Geography, University of Calgary, 2015
Adam LeClair	MSc Geography, University of Calgary, 2015
Wendy Wood	PhD Geography, University of Calgary, 2014
Bastoki, Rishi	PhD Geography, University of Calgary, 2013
Douglas Hagedorn	MSc Geography, University of Calgary, 2012
Tariq Munir	PhD Geography, University of Calgary, 2012
Tara Moran	PhD Geography, University of Calgary, 2011
Nicole Shaffer	MSc Geography, University of Calgary, 2010
Cora Shea	PhD Geoscience, University of Calgary, 2010

Courses Taught

Undergraduate Courses (Number of Offerings)

- Geog 231: Introduction to Geospatial Methods (6)
- Geog 333: Remote Sensing I (6)

Geog 339: Analytical Methods in Geography I (3)

Geog 357: Concepts of GIS (7)

Geog 433: Remote Sensing II (3)

Graduate Courses (Number of Offerings)

Geog 601: Graduate Research Seminar (4)

Geog 603: Remote Sensing – Basics and Beyond (3)

Geog 607: GIS – Basics and Beyond (2)

Geog 633: Research and Applications in Remote Sensing (5)

Geog 699.33: Remote Sensing and Image Processing (1)

Field Courses (Number of Offerings)

Geog 391: Geographic Field Studies (2)

Geog 531: Remote Sensing in Forest Ecology (4)

Geog 537: GIS in Forest Ecology (5)

SCHOLARSHIP

h-index: 21; i10-index: 35; citations: 2282.

Students and other HQP underlined.

Refereed Journal Publications

52. Lovitt, J., M. Rahman, S. Saraswati, G.J. McDermid, M. Strack, and B. Xu, 2018: UAV remote sensing can reveal the effect of low-impact seismic lines on methane release in a forested Boreal bog. *Journal of Geophysical Research: Biogeosciences*, 123, 1117–1129.
51. Hird, J.N., E. R. DeLancey, G.J. McDermid, and J. Kariyeva, 2017: Cloud computing, open-access satellite data, and machine learning in support of large-area, probabilistic wetland mapping in Alberta, Canada. *Remote Sensing* 9(12): 1315.
50. Chen, S., G. J. McDermid, G. Castilla, and J. Linke, 2017: Measuring vegetation height in linear disturbances in the Boreal forest with UAV photogrammetry. *Remote Sensing*, 9(12): 1257.
49. Rahman, M.M., G.J. McDermid, M. Strack, J. Lovitt, 2017: A new method to map groundwater table in peatlands using unmanned aerial vehicles. *Remote Sensing*, 9(10): 1057.
48. Lovitt, J., M.M. Rahman, and G.J. McDermid, 2017: Assessing the value of UAV photogrammetry for characterizing terrain in complex peatlands. *Remote Sensing*, 9(7): 715.
47. McLane, A.J., C Semeniuk, G.J. McDermid, D.F. Tomback, T. Lorenz, and D.J. Marceau, 2017: Energetic behavioural-strategy prioritization of Clark's Nutcrackers in Whitebark Pine communities: An agent-based modelling approach. *Ecological Modelling*, 354:123-139.

46. Hird, J.N., A. Montaghi, G.J. McDermid, J. Kariyeva, B Moorman, and A. McIntosh, 2017: Use of unmanned aerial vehicles for monitoring recovery of forest vegetation on petroleum well sites. *Remote Sensing*, 9(5), 413.
45. Laskin, D.N., A. Montaghi, and G.J McDermid, 2017: An open-source method of constructing cloud-free composites of forest understory temperature using MODIS. *Remote Sensing Letters*, 8(2): 165-174.
44. Laskin, D.N., A. Montaghi, Scott Nielsen, and G.J McDermid, 2016: Estimating understory temperatures using MODIS LST in mixed cordilleran forests. *Remote Sensing*, 8(8), 658.
43. Laskin, D.N. and G.J McDermid, 2016: Evaluating the level of agreement between human and time-lapse camera observations of understory plant phenology at multiple scales. *Ecological Informatics*, 33, 1-9.
42. Hird, J.N., G. Castilla, G.J. McDermid, and I.T. Bueno, 2016: A simple transformation for visualizing non-seasonal landscape change from dense time series of satellite data. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 9(8): 3372-3383.
41. McInnes, W., B. Smith, and G.J. McDermid, 2015: Discriminating native and non-native grasses in the Dry Mixedgrass prairie with MODIS NDVI time series. *IEEE Journal on Selected Topics in Applied Earth Observation and Remote Sensing*, 8(4): 1395-1403.
40. Piwowar, J.M., Y. Ban, G.J. McDermid, and L. Bruzzone, 2014: Forward to the special issue on the analysis of remote sensing images. *IEEE Journal of Selected Topics in Applied Earth Observation and Remote Sensing*, 7(8), 3187-3189.
39. Castilla, G., A. Hernando, C. Zhang, F. Mauro, G.J. McDermid, 2014: POLS: A versatile tool for sampling polygon GIS layers. *Computers & Geosciences* 67, 139-149.
38. Smith, B. and G.J. McDermid, 2014: Examination of fire-related succession within the Dry Mixed-Grass subregion of Alberta with the use of MODIS and Landsat. *Rangeland Ecology and Management*, 67 (3), 307-317.
37. Castilla, G., J. Hird, R.J. Hall, J. Schieck, G.J. McDermid, 2014: Completion and updating of a Landsat-based land cover polygon layer for Alberta, Canada. *Canadian Journal of Remote Sensing*, 40 (2), 92-109.
36. Castilla, G., A. Hernando, C. Zhang, and G.J. McDermid, 2014: The impact of object size on the thematic accuracy of landcover maps. *International Journal of Remote Sensing*, 35 (3), 1029-1037.

35. Linke, J., G.J. McDermid, M.J. Fortin, and G.B. Stenhouse, 2013: Relationships between grizzly bears and human disturbances in a rapidly changing multi-use forest landscape. *Biological Conservation* 166, 54-63.
34. Castilla, G., J. Hird, B. Maynes, D. Crane, J. Cosco, J. Schieck, and G.J. McDermid, 2013: Broadening modern resource inventories: A new protocol for mapping natural and anthropogenic features. *The Forestry Chronicle*, 89 (5), 681-689.
33. Nielsen, S.E., M. Cattet, J. Boulanger, J. Cranston, and G.J. McDermid, 2013: Environmental, biological and anthropogenic effects on grizzly bear body size: temporal and spatial considerations. *BMC Ecology*, 13(31), 1-12.
32. Nijland, W., N.C. Coops, S. Coogan, S.E. Nielsen, G.J. McDermid, and G.B. Stenhouse, 2013: Vegetation phenology can be captured with digital repeat photography and linked to variability of root nutrition in *Hedysarum alpinum*. *Applied Vegetation Science*, 16(2): 317-324.
31. Linke, J., and G.J. McDermid, 2012: Monitoring landscape change in a multi-use forest area in west-central Alberta, Canada using the disturbance-inventory framework. *Remote Sensing of Environment*, 125: 112-124.
30. DeCesare, N.J., M. Hebblewhite, F. Schmiegelow, D. Hervieux, G.J. McDermid, L. Neufeld, M. Bradley, J. Whittington, K. Smith, L.E. Morgantini, M. Wheatley, and M. Musiani, 2012. Transcending scale-dependence in identifying habitat with resource selection functions. *Ecological Applications*, 22(4): 1068-1083.
29. Chen, G., K. Zhao, G.J. McDermid, and G.J. Hay, 2012. The influence of sampling density on geographically weighted regression: a case study using forest canopy height and optical data. *International Journal of Remote Sensing*, 33(9): 2909-2924.
28. Coops, N.C., T. Hilker, C.W. Bater, M.A. Wulder, S. Nielsen, G.J. McDermid, and G. Stenhouse, 2012: Linking ground-based to satellite-derived phenological metrics in support of habitat assessment. *Remote Sensing Letters*, 3(3): 191-200.
27. Castilla, G., J. Linke, A.J. McLane, and G.J. McDermid, 2011. Quantifying bias in pattern indices extracted from spatially offset landscape samples. *Canadian Journal of Forest Research*, 41(10): 2090-2096.
26. Bater, C.W., N.C. Coops, M.A. Wulder, S.E. Nielsen, G.J. McDermid, and G.B. Stenhouse, 2011: Design and installation of a camera network across an elevation gradient for habitat assessment. *Instrumentation Science and Technology*, 39(3): 231-247.
25. Franklin, S.E., Y. He, A.D. Pape, X. Guo, and G.J. McDermid, 2011: Landsat-comparable land cover maps using the ASTER and SPOT images: a case study for large-area mapping programmes. *International Journal of Remote Sensing*, 32(8): 2185-2205.

24. McLane, A.J., C. Semeniuk, G.J. McDermid, and D. Marceau, 2011: The role of agent-based models in wildlife ecology and management. *Ecological Modelling*, 222(8): 1544-1556.
23. Bater, C.W., N.C. Coops, M. A. Wulder, T. Hilker, S.E. Nielsen, G.J. McDermid, G.J., G.B. Stenhouse, 2011. Using digital time-lapse cameras to monitor species-specific understorey and overstorey phenology in support of wildlife habitat assessment. *Environmental Monitoring and Assessment*, 180: 1-13.
22. Linke, J. and G.J. McDermid, 2011: A conceptual model for multi-temporal landscape monitoring in an object-based environment. *Journal of Selected Topics in Applied Earth Observation and Remote Sensing*, 4(2): 265-271.
21. Musiani, M., M. Anwar, G.J. McDermid, M. Hebblewhite, and D. Marceau, 2010: How humans shape wolf behavior in Banff and Kootenay National Parks, Canada. *Ecological Modelling*, 221(19): 2374-2387.
20. Nielsen, S.E., G.J. McDermid, G.B. Stenhouse, and M.S. Boyce, 2010: Dynamic wildlife habitat models: Seasonal foods and mortality risk predict occupancy-abundance and habitat selection in grizzly bears. *Biological Conservation*, 143(7): 1623-1634.
19. Stewart, B.P., M.A. Wulder, G.J. McDermid, and T. Nelson, 2009: Disturbance capture and attribution through the integration of Landsat and IRS-1C imagery. *Canadian Journal of Remote Sensing*, 35(6): 523-533.
18. Wang, K., S.E. Franklin, X. Guo, Y. He, and G.J. McDermid, 2009: Problems in remote sensing of landscapes and habitats. *Progress in Physical Geography*, 33(6): 747-768.
17. McLane, A.J., G.J. McDermid, and M.A. Wulder, 2009: Processing discrete-return profiling LiDAR data to estimate canopy closure for large-area forest mapping and management. *Canadian Journal of Remote Sensing*, 35(3): 217-229.

16. Hilker, T., M.A. Wulder, N.C. Coops, J. Linke, G.J. McDermid, J.G. Masek, F. Gao, and J.C. White, 2009: A new data fusion model for high spatial- and temporal-resolution mapping of forest disturbance based on Landsat and MODIS. *Remote Sensing of Environment*, 113(8): 1613–1627.
15. Linke, J., G.J. McDermid, D.N. Laskin, A.J. McLane, A.D. Pape, J. Cranston, M. Hall-Beyer, and S.E. Franklin, 2009: A disturbance-inventory framework for flexible and reliable landscape monitoring. *Photogrammetric Engineering and Remote Sensing*, 75(8): 981-996.²⁸
14. McDermid, G.J., R.J. Hall, G.A. Sanchez-Azofeifa, S.E. Franklin, G.B. Stenhouse, T. Kobliuk, and E.F. LeDrew, 2009: Remote sensing and forest inventory for wildlife habitat assessment. *Forest Ecology and Management*, 257(11): 2262-2269.
13. Hird, J. and G.J. McDermid, 2009: Noise reduction of NDVI time series: An empirical comparison of selected techniques. *Remote Sensing of Environment*, 113(1): 248-258.
12. Linke, J., G.J. McDermid, A.D. Pape, A.J. McLane, D.N. Laskin, M. Hall-Beyer, and S.E. Franklin, 2009: The influence of patch delineation mismatches on multi-temporal landscape pattern analysis. *Landscape Ecology*, 24(2): 157-170.
11. McDermid, G.J., J. Linke, A.D. Pape, D.N. Laskin, A.J. McLane, and S.E. Franklin, 2008: Object-based approaches to change analysis and thematic map update: challenges and limitations. *Canadian Journal of Remote Sensing*, 34(5): 462-466.
10. McDermid, G.J. and I.U. Smith, 2008: Mapping the distribution of whitebark pine (*Pinus albicaulis*) in Waterton Lakes National Park using logistic regression and classification tree analysis. *Canadian Journal of Remote Sensing*, 34(4): 356-366.
9. Hebblewhite, M., E. Merrill, and G.J. McDermid, 2008: A multi-scale test of the forage maturation hypothesis in a partially migratory ungulate population, *Ecological Monographs*, 78(2): 141-166.

²⁸ ERDAS Best Scientific Paper in Remote Sensing (3rd place), 2010

8. McDermid, G.J., S.E. Franklin, and E.F. LeDrew, 2005: Remote sensing for large-area habitat mapping. *Progress in Physical Geography*, 29(4): 449-474.
7. Harris, S.A. and G.J. McDermid, 1998: Frequency of debris flows on the sheep mountain fan, Kluane Lake, Yukon Territory. *Zeitschrift für Geomorphologie*, 42: 159-175.
6. Miller, J.R., H.P. White, J.M. Chen, G.J. McDermid, D.R. Peddle, R. Fournier, P. Sheperd, I. Rubenstein, J. Freemantle, R. Soffer, and E.F. LeDrew, 1997: Seasonal change in understory reflectance for boreal forests and influence on canopy vegetation indices. *Journal of Geophysical Research*, 102(29): 475-482.
5. McDermid, G.J. and S.E. Franklin, 1995: Remote sensing and geomorphometric discriminators of slope processes. *Zeitschrift für Geomorphologie*, 101: 165-185.
4. Franklin, S.E., M.B. Lavigne, B.A. Wilson, E.R. Hunt, D.R. Peddle, G.J. McDermid, and P.T. Giles, 1995: Topographic dependence of synthetic aperture radar imagery. *Computers and Geoscience*, 21(4): 521-532.
3. McDermid, G.J. and S.E. Franklin, 1994: Spectral, spatial and geomorphometric variables for the remote sensing of slope processes. *Remote Sensing of Environment*, 24: 1-15.
2. Bowers, W., S.E. Franklin, J. Hudak, and G.J. McDermid, 1994: Separation of structural damage classes in balsam fir stands using SPOT satellite panchromatic and multispectral image patterns and semivariance. *Canadian Journal of Remote Sensing* 48(1): 28-36.
1. Franklin, S.E. and G.J. McDermid, 1993: Empirical relations between digital SPOT HRV and CASI imagery and lodgepole pine forest stand parameters. *International Journal of Remote Sensing* 14(12): 2331-2348.

Book Chapters

1. McDermid, G.J., N.C. Coops, M.A. Wulder, S.E. Franklin, and N. Seitz, 2010: Critical Remote Sensing Data Contributions to Spatial Wildlife Ecological Knowledge and Management, invited chapter in S. Cushman and F. Huettmann (Eds.), *Spatial Complexity, Informatics, and Wildlife Conservation*, pp 193-221, Springer, Tokyo

Publications Pending

1. Rahman, M.M., G.J. McDermid, T. McKeeman, J. Lovitt. A simple workflow for minimizing shadows in UAV-based orthomosaics. *Remote Sensing*, in review.
2. Laskin, D.N., G.J. McDermid, S.E. Nielsen, S.J. Marshall, D.R. Roberts, and A. Montaghi. Advances in phenology are conserved across scale in present and future climates. *Nature Climate Change*, in review.

3. Feduck, C., G.J. McDermid, and G. Castilla. Detection of coniferous seedlings in UAV imagery: an object-based machine learning approach. *Remote Sensing*, in review.

Conference Papers and Abstracts

110. Strack, M., A. Saraswati, M. Rahman, J. Lovitt, G.J. McDermid, M. Brummell, A. Engering, B. Xu. 2017. Land-use change greenhouse gas emissions related to resource extraction in boreal Canada. Carbon Cycling in Boreal Peatlands and Climate Change II Workshop. Hyttiälä, Finland.
109. McDermid, G.J., B. Else, M.M. Rahman, T. McKeeman, and G. Castilla, 2017: The Role of UAVs in the Early Detection of Mountain Pine Beetle Mortality. Earth Observation Summit 2017, Montreal, Quebec.
108. Hird, J., E. DeLancey, G.J. McDermid, and J. Kariyeva, 2017: Toward the Use of Topographic, RADAR, and Optical Inputs for a Probabilistic Wetland Classification Model in Northeastern Alberta, Canada. Earth Observation Summit 2017, Montreal, Quebec.
107. Chen, S., G.J. McDermid, G. Castilla, and J. Linke, 2017: Estimating Vegetation Parameters on Seismic Lines with UAV-based Point Clouds. Earth Observation Summit 2017, Montreal, Quebec.
106. Rahman, M.M., J. Lovitt, G.J. McDermid, M. Strack and B. Xu, 2017: Mapping Peat Groundwater Table Dynamics using Unmanned Aerial Vehicles and Photogrammetric Techniques. Earth Observation Summit 2017, Montreal, Quebec.
105. Lovitt, J., M.M. Rahman, G.J. McDermid, M. Strack and B. Xu, 2017: Mapping Micro-Topography of Peatlands within Alberta: Applications for Unmanned Aerial Vehicle (UAV) Technology. Earth Observation Summit 2017, Montreal, Quebec.
104. Eamer, J., G.J. McDermid, and S. Liang, 2017: CloudUAV: a new CANARIE Network-enabled Cloud-based Open-Source Software Platform for UAV Researchers. Earth Observation Summit 2017, Montreal, Quebec.
103. McDermid, G.J., S. Chen, C. Feduck, M.F. Wu, J. Hird, T. Tan, S.E. Nielsen, J. Linke, and G. Castilla, 2016: The Role of UAVs in Linear Disturbance Restoration and Monitoring, Contributions from the BERA Project. 11th North American Forest Ecology Workshop, Edmonton, Alberta.
102. Eamer, J., G.J. McDermid, and S. Liang, 2017: CloudUAV: a new CANARIE Network-enabled Cloud-based Open-Source Software Platform for UAV Researchers. 2017 COSIA Oil Sands Innovation Summit, Calgary, Alberta.
101. McDermid, G.J., G. Castilla, S. Liang, E. Bayne, S. Nielsen, and S.E. Franklin, 2016: The Boreal Ecosystem Recovery and Assessment (BERA) Project: Developing Geospatial

Tools for Monitoring Vegetation Recovery on Human Disturbance Features in Alberta's Boreal Forest. 2016 Oil Sand Science Symposium, Calgary, Alberta.

100. Chen, S., G.J. McDermid, G. Castilla, J. Linke, J. Hird, C. Feduck, 2016. Characterizing vegetation structure on anthropogenic features in Alberta's Boreal Forest with UAVs. Unmanned Systems Canada, Edmonton, Alberta.
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98. Feduck, C. and G.J. McDermid, 2016. Object oriented classification of high resolution true-color and near-infrared unmanned aerial vehicle imagery. American Association of Geographers Annual Meeting, San Francisco, California.
99. Hird, J., A. Montagni, G.J. McDermid, A. McIntosh, and J. Kariyeva, 2016. Assessing the Use of Unmanned Aerial Vehicles for Surveying Vegetation Recovery at Reclaimed Wellsites in Canada's Western Boreal Forests. American Association of Geographers Annual Meeting, San Francisco, California.
96. Cole, S., G.J. McDermid, J. Cranston, M. Palmer, J. Tigner, and M. Hall-Beyer, 2016. The Development of Remote Sensing Tools for Mapping Linear Disturbances in the Sahtu Region of the Northwest Territories. American Association of Geographers Annual Meeting, San Francisco, California.
95. Strack, M., S. Saraswati, B. Xu, M. Rahman, and G.J. McDermid, 2016. Road-induced greenhouse gas emissions from boreal peatlands and potential for mitigation. Alberta Soil Science Workshop, Peace River, Alberta.
94. Jessen, T., F. Diepstraten, P. Galpern, A. Massolo, G. McDermid, M. Musiani, 2015. Spatiotemporal features of tundra ecosystems influencing the abundance of grizzly bears inhabiting the barren-grounds of the Canadian Central Arctic. 22nd International Conference of the Wildlife Society, Winnipeg, Manitoba, Canada.
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88. Laskin, D.N. and G.J. McDermid, 2014: Proposed impacts of climate change on grizzly bear habitat in Canada. Proceedings, International Conference on Climate Change: Impacts and Responses. University of Reykjavik, Iceland.
87. Blackadder, S., G.J. McDermid, and E. Sexton 2014. Multi-species habitat connectivity in the Crown of the Continent Ecosystem. Proceedings, Society for Conservation Biology North America Congress for Conservation Biology, Missoula, Montana.
86. Castilla, G., J.N. Hird, and G.J. McDermid 2014. Visualizing and quantifying landscape change at broad spatio-temporal scales with the CAT Transform. Proceedings, International Geoscience and Remote Sensing Symposium/35th Canadian Symposium on Remote Sensing, Quebec.
85. Hird, J.N., G. Castilla, and I. Bueno 2014. A New Multi-Temporal Transform for the Broad-Scale Analysis and Visualization of Landscape Dynamics. Spatial Knowledge and Information, Banff, Alberta.

84. Smith, B. and G.J. McDermid. 2013. Examination of fire-related plant succession within the dry mixedgrass subregion of Alberta using MODIS and LandSat imagery. Proceedings, 7th International Conference on the Analysis of Multi-temporal Remote Sensing Images, Banff, Alberta.²⁹
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82. Bueno, I., J.N. Hird, G. Castilla, and G.J. McDermid. 2013. Applying a new decadal change product in the monitoring of urban expansion around Calgary, Alberta. Proceedings, 7th International Conference on the Analysis of Multi-temporal Remote Sensing Images, Banff, Alberta.
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²⁹ Winner, Best Student Paper/Presentation

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76. Smith, B. and G.J. McDermid. 2012. Range health assessment of Dry Mixedgrass prairie using multitemporal MODIS imagery. Proceedings, 33rd. Canadian Symposium on Remote Sensing, Ottawa, Ontario.
75. Castilla, G., A. Hernando, D. Muzamdar, C. Zhang, and G.J. McDermid. 2012. An integrated framework for assessing the accuracy of landcover polygon layers. Proceedings, 33rd. Canadian Symposium on Remote Sensing, Ottawa, Ontario.
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71. Semeniuk, C.A.D., D. Birkigt, M. Musiani, G.J. McDermid, M. Hebblewhite, S. Grindal, and D.J. Marceau, 2012. A scenario-planning model to forecast the impact of different degrees of land-use intensification on Albertan woodland caribou. Joint GSDI World Conference, GEOIDE Annual Scientific Conference, and Canadian Geomatics Conference, Quebec City, Québec, Canada.
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65. Timmins, T., G.J. McDermid, and E. Sexton, 2012: Examining the effects of errors in land-cover maps on derived grizzly bear habitat models using a Monte Carlo simulation approach. Proceedings, American Society for Photogrammetry and Remote Sensing (ASPRS) Annual Conference, Sacramento, California
64. Ram, A., G.J. McDermid, J. Linke, S. Nielsen, and J. Cranston, 2011: Changes in grizzly bear habitat due to human disturbance in the Rocky Mountain foothills of Alberta from 1985 to 2005. Proceedings, 32nd Canadian Remote Sensing Symposium, Sherbrooke, Quebec.
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62. Linke, J. and G.J. McDermid, 2011: A disturbance-inventory framework for annual landscape monitoring: application in west-central Alberta. Proceedings, 32nd Canadian Remote Sensing Symposium, Sherbrooke, Quebec.
61. Dalton, S., J. So, G.J. McDermid, and C. Gates, 2011: Enhancing land-use decisions for sage grouse recovery in Alberta. Proceedings, Canadian Association of Geographers 2011 Annual Conference, Calgary, Alberta.
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 53. Latham, E., L. Greene, T. Stephenson, G. McDermid, and M. Hebblewhite, 2011: Change detection using historical aerial photography in bighorn sheep habitat of the Sierra Nevada. Proceedings, Spatial Knowledge and Information Canada, Fernie, British Columbia.
 52. Befus, A. and G.J. McDermid, 2011: Characterizing white pine habitat in Alberta: mapping highly localized tree species across a large study area. Proceedings, Spatial Knowledge and Information Canada, Fernie, British Columbia.
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48. Linke, J., G. Castilla, A.J. McLane, and G.J. McDermid, 2010: Effects of the spatial offset between landscape structure covariates and species distribution field data. Proceedings, 24th International Congress for Conservation Biology (Society for Conservation Biology), Edmonton, Alberta.
47. Lapka, S., B.J. Moorman, and G.J. McDermid, 2010: Analyzing Oceanic Storm Surge Impacts Using Remote Sensing Within the Mackenzie Delta, Northwest Territories. Proceedings, Canadian Association of Geographers Annual Conference, Regina, Saskatchewan³¹.
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25. Linke, J., G.J. McDermid, A.J. McLane, and D.N. Laskin, 2008: Methods for tracking landscape change in an object-based environment. Proceedings, GEOBIA 2008, Calgary, Alberta.
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23. Smith, I. and G.J. McDermid, 2008: Mapping the distribution of whitebark pine in Waterton Lakes National Park using logistic regression and classification tree analysis. Proceedings,

- American Society for Photogrammetry and Remote Sensing (ASPRS) Annual Conference, Portland, Oregon.
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 14. McDermid, G.J., 2005: Remote sensing for large-area, multi-jurisdictional resource management. Proceedings, 26th Canadian Symposium on Remote Sensing.
 13. McDermid, G.J., S.E. Franklin, Ron J. Hall, Gordon B. Stenhouse, George Mercer, and E.F. LeDrew, 2004: A Geospatial approach to large-area, multi-jurisdiction resource management. Proceedings, Canadian Institute of Foresters/Society of American Foresters 2004 Convention.

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11. McDermid, G.J., A. Pape, M.S. Chubey, and S.E. Franklin, 2003: Object-oriented analysis for change detection. Proceedings, 25th Canadian Symposium on Remote Sensing.
10. McDermid, G.J., K. Montgomery, and S.E. Franklin, 2003: Radiometric correction of Landsat data: a case study from the Alberta foothills. Proceedings, 25th Canadian Symposium on Remote Sensing.
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4. McDermid, G.J. and S.E. Franklin, 1993: Optical, radar, and geomorphometric signature matrix applied to slope process studies in the St. Elias Mountains, southwest Yukon. Third International Conference on Geomorphology, McMaster University, Hamilton, Ontario.
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Non-Refereed Publications (Selected)

23. Blackadder, S., Sexton, E., & McDermid, G., 2016: *Modelling Five-Needle Pine across the Crown of the Continent Ecosystem*. Report Prepared for Crown Managers Partnership.
22. Foothills Facility for Remote Sensing and Geographic Information Science, 2012: *Accuracy Assessment of the Alberta wall to wall landcover polygon vector layer circa 2000*, beta version (ABw2wLCV2000beta).28 p.
21. Castilla, G., J. Hird, B. Maynes, G.J. McDermid, 2011: *ABMI Photo-Plot Interpretation Manual*. Calgary, Alberta, Alberta Biodiversity Monitoring Institute.
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18. Biodiversity Monitoring Institute, 2011: Castilla, G., J. Hird, and G.J. McDermid, 2009: *ABMI Photo-Plot Mapping Interpretation Standards Manual, Version 2.1.2*. Alberta Biodiversity Monitoring Institute Report, 41 p.
17. Sexton, E., A. Sobol, J. Burke, G.J. McDermid, and L. O’Gan, 2010: *Crown Managers Partnership Landscapes Data Review Report – A Review of Baseline Geospatial Datasets for the Crown of the Continent Ecosystem Landscape Project*. Crown Managers Partnership, 248p.
16. Sexton, E., A. Sobol, J. Burke, G.J. McDermid, and L. O’Gan, 2010: *NPScape Products: Presenting Examples of Maps and Statistical Tables Derived Through NPScape*. Crown Managers Partnership, 58p.
15. Castilla, G., D. Crane, J. Hird, and G.J. McDermid, 2009: *ABMI Photo-Plot Data Model, Version 2.1.2*. Alberta Biodiversity Monitoring Institute Report, 61 p.
14. Castilla, G., J. Hird, and G.J. McDermid, 2009: *ABMI Photo-Plot Quality Control Manual, Version 1.0.1*. Alberta Biodiversity Monitoring Institute Report, 20 p.
13. Hird, J., A. Collingwood, G. Castilla, A.J. McLane, J. Linke, and G.J. McDermid, G., 2009: *2007 Human Footprint Characterization and Preliminary Statistics*. Alberta Biodiversity Monitoring Institute Report, 23 p.
12. McDermid, G.J., A. Collingwood, J. Cranston, Y. He, J. Hird, S.E. Franklin, X. Guo, D.N. Laskin, J. Linke, A. McLane, A. Pape, and I. Smith, 2009: Remote sensing mapping and research update. In G. B. Stenhouse and K. Graham (Eds.) *Foothills Research Institute Grizzly Bear Research Program: 2008 Annual Report*, pp. 30-48.

11. Hebblewhite, M., Musiani, M., G.J. McDermid, N. DeCesare, S. Hazenberg, L. Morgantini, H. Robinson, and B. Weckworth 2008: *Canadian Rockies Woodland Caribou Project. First Year Progress Report*, June 2008, 58 p.
10. Stenhouse, G.B., J. Boulanger, M. Cattet, S.E. Franklin, D. Janz, G.J. McDermid, S. Nielsen, M. Vijayan 2008: New Tools to Map, Understand, and Track Landscape Change and Animal Health for Effective Management and Conservation of Species at Risk. Report to Alberta Advanced Education and Technology and Alberta Sustainable Resource Development, 398 p.
9. Franklin, S.E., G. J. McDermid, D.C. Duro, and J. Hird 2008: *Remote Sensing Strategy and Implementation Plan for the Alberta Biodiversity Monitoring Institute*. Report to Alberta Research Council, 23 p.
8. McDermid, G.J., A.J. McLane, A. Collingwood, J. Hird, A. Faraguna, D.N. Laskin, J. Linke, J. Cranston, X. Guo, and S.E. Franklin 2008: Remote sensing mapping and research update. In G. B. Stenhouse and K. Graham (Eds.) *Foothills Research Institute Grizzly Bear Research Program: 2007 Annual Report*, pp. 21-87.
7. Wulder, M.A., J. White, N. Seitz, N. Coops, T. Hilker, C. Bater, McDermid, G.J., A. Faraguna, G. Stenhouse 2008: Grizzly bear/mountain pine beetle interactions: remote sensing monitoring and modeling year-end report. In G. B. Stenhouse and K. Graham (Eds.) *Foothills Research Institute Grizzly Bear Research Program: 2007 Annual Report*, pp. 88-109.
6. McDermid, G.J., A.D. Pape, and D.L. Laskin, 2006: Remote sensing map product update. In G. B. Stenhouse, R. H. Munro, and K. Graham (Eds.) *Foothills Model Forest Grizzly Bear Research Program: 2005 Annual Report*, pp. 28-34.
5. McDermid, G.J., D.L. Laskin, and A.J. McLane, 2006: Parks Canada Montane Bioregion Landcover Mapping Project. In G. B. Stenhouse, R. H. Munro, and K. Graham (Eds.) *Foothills Model Forest Grizzly Bear Research Program: 1999-2003 Final Report*, pp. 51-56.
4. Franklin, S.E and G.J. McDermid, 2004: Satellite Remote Sensing and Mapping in the Grizzly Bear Research Program, Foothills Model Forest. In G. B. Stenhouse, R. H. Munro, and K. Graham (Eds.) *Foothills Model Forest Grizzly Bear Research Program: 1999-2003 Final Report*, pp. 107-123.
3. McDermid, G.J., and S.E. Franklin, 2004: A Landcover/vegetation information system to support grizzly bear conservation activities in Alberta. In G. B. Stenhouse, R. H. Munro, and K. Graham (Eds.) *Foothills Model Forest Grizzly Bear Research Program 2003 Annual Report*, pp. 46-59.
2. McDermid, G.J., 2003: Remote sensing activities: progress report. In G. B. Stenhouse, R. H. Munro, and K. Graham, *Foothills Model Forest Grizzly Bear Research Program 2002 Annual Report*, pp. 140-146.

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PRESENTATIONS

Workshops, Panels, Keynotes, and Public Presentations (Selected)

Presenter: COSIA Airborne Remote Sensing Applications Workshop. Calgary, Alberta, 2017.

Organizer and Host: Boreal Ecosystem Recovery and Assessment (BERA) Project Partner Workshop. Calgary, Alberta, 2017.

Co-Organizer and Presenter: NAIT 7th Annual Seminar – Linear Disturbance Impacts on Boreal Wetland Ecosystems. Edmonton, Alberta, 2017

Keynote Address: Association of Public Land-grant Universities Commission on International Initiatives (APLU CII) Conference. Kananaskis, Alberta, 2017

Organizer and Host: CloudUAV User Needs Workshop. Montreal, Quebec, 2017.

Organizer and Host: Boreal Ecosystem Recovery and Assessment (BERA) Project Stakeholder Engagement Workshop. Edmonton, Alberta, 2016.

Co-Organizer and Presenter, Crown Managers Partnership Landscape Patterns Workshop, Fernie, British Columbia, 2014

Organizer, Alberta-Bavaria Research Network (ABBY-Net) Workshop, University of Calgary, Calgary, Alberta 2014

Organizer and Moderator: Remote Sensing of Alberta's Dynamic Landscapes, Alberta Biodiversity Monitoring Institute Workshop, Edmonton, Alberta, 2014

Organizer and Moderator: Oil Sands and Environmental Monitoring Forum, Banff, Alberta, 2013

Crown Manager's Partnership Annual Forum, Cranbrook, British Columbia, 2013

Alberta Energy and Sustainable Resource Development Workshop and Webinar, Edmonton, Alberta, 2012

GeoAlberta, Calgary, Alberta, 2012

ASPRS Annual Conference, Sacramento, California, 2012

Crown Managers Partnership Transboundary Workshop, Cranbrook, British Columbia, 2012

Alberta Biodiversity Monitoring Network Internal Forum, Edmonton, Alberta, 2011

Alberta-Bavaria Research Network (ABBY-Net), Ludwig Maximillians University, Munich, Germany, 2011

Great Northern Landscape Conservation Cooperative Webinar, October, 2011

Canadian Association of Geographers Annual Conference, Calgary, Alberta, 2011

Alberta Biodiversity Monitoring Institute Workshop, Edmonton, Alberta, 2011

Foothills Model Forest Grizzly Bear Research Program Annual Partner Meeting, Edmonton, Alberta, 2011

Western Canada Whitebark-Limber Pine Workshop, Calgary, Alberta, 2010

ASPRS Annual Conference, San Diego, California, 2010

Crown Managers Partnership Ecological Health Workshop, West Glacier, Montana, 2009

Canadian Symposium on Remote Sensing, Lethbridge, Alberta, 2009

Alberta Sustainable Resource Development, Edmonton, Alberta, 2009

Parks Canada Western Canada Service Centre, Calgary, Alberta 2008
 ASPRS Annual Conference, Portland, Oregon, 2008
 Alberta Biodiversity Monitoring Institute Workshop, Edmonton, Alberta, 2008
 ASPRS Annual Conference, Tampa, Florida, 2007
 Montgomery Junior High School Young Scientists Program, Calgary, Alberta, 2007
 Foothills Model Forest Sponsor Meeting, Calgary, Alberta, 2006
 Foothills Model Forest Visiting Scientists Program, Jasper, Alberta, 2006
 ASPRS Annual Conference, Reno, Nevada, 2006
 Canadian Forest Service, Victoria, British Columbia, 2006
 CSRS Annual Conference, Wolfville, Nova Scotia, 2005
 Alberta Forest Producers Association, Calgary, Alberta, 2005
 Canadian Association of Petroleum Producers, Edmonton, Alberta, 2005
 Alberta Fish and Wildlife, Edmonton, Alberta, 2005
 Parks Canada, Jasper, Alberta, 2005
 Canadian Institute of Forestry, Edmonton, Alberta, 2004
 ASPRS Fall Conference, Kansas City, Missouri, 2004

University Seminars and Guest Lectures (Selected)

Canadian Association of Faculty Associations Annual Awards Banquet, Edmonton, Alberta
 2012
 Faculty of Arts Distinguished Research Awards Banquet, Calgary, Alberta 2012
 Integrated Wildlife Ecology Network, Faculty of Environmental Design, Calgary, Alberta,
 2011
 Department of Geomatics Engineering, University of Calgary, 2007
 Department of Geography, University of Iowa, 2005

GRANTS AND CONTRACTS

External Awards

Project (Grant Holders)	Funding Agency/ Program	Funding Amount (Share)	Time Period
Lightweight Unmanned Aerial Vehicles (UAVs) for Forestry and Ecological Applications (McDermid)	NSERC/Discovery	\$33,000 (100%)	2016
		\$33,000 (100%)	2017
		\$33,000 (100%)	2018
		\$33,000 (100%)	2019
		\$33,000 (100%)	2020
Cloud UAV: A Network Enabled Platform for Unmanned Aerial Vehicles (McDermid)	CANARIE Research Software Program	\$200,000 (100%)	2016
		\$200,000 (100%)	2017
Geospatial Technologies for Monitoring Vegetation Recovery on Human Disturbance Features in Alberta's Boreal Forest	NSERC/Collaborative Research and Development (industrial partners: Alberta-Pacific Forest	\$325,997 (20%)	2015
		\$525,128 (20%)	2016
		\$552,531 (20%)	2017
		\$504,577 (20%)	2018
		\$393,842 (20%)	2019

(McDermid and 5 others)	Industries, Conoco Phillips, Cenovus, Devon Energy)		
Improved construction of roads and pipelines to minimize impact on peatland greenhouse gas emissions (Strack and 2 others)	Emissions Reduction Alberta (previously Climate Change and Emissions Management Corporation) and Canadian Oil Sands Alliance (COSIA)	\$209,300 (30%)	2015
		\$184,000 (30%)	2016
		\$169,000 (30%)	2017
Multi-Institutional Alberta-Bavaria Research Network (ABBY-Net) Partnership Grant (Nascimento, McDermid, Kienzle, Bergerson)	Alberta Innovates, Technology Futures University of Calgary International	\$201,000 (33%)	2012-17
		\$12,000 (100%)	2018
Remote Sensing of Plant Phenophases and Pulsed Ecosystem Dynamics for Wildlife Ecological Applications (McDermid)	NSERC/Discovery	\$22,000 (100%)	2011
		\$22,000 (100%)	2012
		\$22,000 (100%)	2013
		\$22,000 (100%)	2014
		\$22,000 (100%)	2015
Remote Sensing for Biodiversity Monitoring (McDermid)	Alberta Biodiversity Monitoring Institute	\$100,182 (100%)	2008
		\$175,000 (100%)	2009
		\$144,000 (100%)	2010
		\$100,000 (100%)	2011
		\$110,000 (100%)	2012
		\$120,000 (100%)	2013
		\$85,000 (100%)	2014
		\$85,000 (100%)	2015
		\$85,000 (100%)	2016
		\$85,000 (100%)	2017
\$85,000 (100%)	2018		
A Landscape Analysis and Monitoring Program for the Crown of the Continent Ecosystem (McDermid, Sexton)	Great Northern Landscape Conservation Cooperative, US National Parks Service, Alberta Environment and Parks, Crown Managers Partnership, Kresge Foundation	\$50,000 (100%)	2010
		\$51,225 (100%)	2011
		\$85,000 (100%)	2012
		\$65,000 (100%)	2013
		\$65,250 (100%)	2014
		\$65,250 (100%)	2015
Full-coverage mapping and updating of habitat characteristics for regional	NSERC/Collaborative Research and Development	\$188,434 (100%)	2011
		\$219,339 (100%)	2012
		\$192,230 (77%)	2013

biodiversity monitoring and integrated landscape management (McDermid, Boutin, and Castilla)	(industrial partner: Alberta-Pacific Forest Industries)		
Geo-Expert Training Program (McDermid)	TECTERRA	\$20,000 (100%)	2011
A scenario-planning model to forecast land-use intensification and mitigation measures on Albertan woodland caribou (Marceau, Musiani, McDermid, and Hebblewhite)	GEOIDE, ConocoPhillips, TECTERRA/ GEOIDE Strategic Investment Initiative	\$148,000 (20%)	2011
Mapping the Distribution of Endangered Whitebark and Limber Pine, and Understanding Their Role in Alberta's High-elevation Ecosystems (McDermid)	Parks Canada; Alberta Sustainable Resource Development; and Alberta Tourism, Parks, and Recreation	\$96,000 (100%)	2010
Remote Sensing of Vegetation and Landscape Dynamics for Wildlife Ecological Applications (McDermid)	NSERC/Discovery	\$20,000 (100%)	2009
Mapping Vegetation and Land Cover in Support of Northern Woodland Caribou Research and Management (McDermid)	Taku River Tlingit First Nations	\$12,250 (100%)	2008
Grizzly Bear/Mountain Pine Beetle Interactions: Remote Sensing Monitoring and Modeling (Wulder, Coops, and McDermid)	Foothills Research Institute	\$150,000 (33%) \$150,000 (33%)	2008 2009
Understanding and Tracking Landscape Change and Animal Health for Effective Management and Conservation of Species at Risk (Franklin and 5 others)	NSERC/Collaborative Research and Development	\$226,829 (15%) \$257,593 (15%) \$255,355 (15%) \$253,924 (15%) \$252,924 (15%)	2006 2007 2008 2009 2010
Grizzly Bear Habitat Mapping (Stenhouse and 7 others)	Alberta Innovation and Science/Unleashing Innovation	\$700,000 (15%) \$700,000 (15%)	2006 2007
Montane Bioregion Landcover Mapping (McDermid)	Parks Canada	\$75,000 (100%) \$25,000 (100%)	2005 2006

Internal Awards

Project/Grant Holders	Funding Agency/ Program	Total Amount	Time Period
University of Calgary International Activity Grant	University of Calgary International	\$12,500 (100%)	2017
Eyes High Postdoctoral Scholars Program (McDermid)	University of Calgary	\$100,000 (100%)	2013-14
Establishing a Multi-Disciplinary Field School in the British Virgin Islands (McDermid, Moorman, Longair)	University of Calgary International, UofC Faculty of Arts, UofC Department of Geography, UofC Department of Biological Sciences	\$11,000 (100%)	2012
New Faculty Start Up (McDermid)	Faculty of Social Sciences	\$33,000 \$15,000	2005 2006

Consulting

Newfoundland Department of Environment and Conservation
 Crown Managers Partnership
 Alberta Research Council
 Alberta Tourism, Parks, Recreation, and Culture
 Canadian Forest Service
 Foothills Model Forest
 Parks Canada

ACADEMIC AND PROFESSIONAL ACTIVITIES

Membership in Professional Organizations

American Association of Geographers
 Canadian Remote Sensing Society
 American Society for Photogrammetry and Remote Sensing

Executive Responsibilities

Alberta-Bavaria Research Network (ABBY-Net) Academic Board, 2011-present
 Alberta Human Footprint Monitoring Program Steering Committee, 2014-2016
 Crown Managers Partnership Steering Committee, 2013-2016
 Canadian Remote Sensing Society Regional Chair, Prairies, 2010-2014

Conference and Workshop Responsibilities

Session Chair, Earth Observation Summit, Montreal, Quebec, 2017
 Scientific Committee, MultiTemp 2017: 9th International Workshop on the Analysis of Multi-Temporal Remote Sensing Images, Brussels, Belgium, 2017
 Scientific Committee, IEEE Geoscience and Remote Sensing Society (IGARSS) 2015 International Remote Sensing Symposium, Milan, Italy 2015
 Scientific Committee, MultiTemp 2015: 8th International Workshop on the Analysis of Multi-Temporal Remote Sensing Images, Annecy, France, 2015
 Organizer and Co-Chair, Alberta-Bavaria Research Network (ABBY-Net) Summer School, Kananaskis, Alberta, 2014
 Co-Organizer and Chair, Technical Program and Science Committees, Multi-Temp 2013: 7th International Conference on the Analysis of Multi-Temporal Remote Sensing Images, Banff, Alberta, 2013
 Session Chair, MultiTemp 2013: 7th International Conference on the Analysis of Multi-Temporal Remote Sensing Images, Banff, Alberta, 2013
 Co-Organizer, Alberta-Bavaria Research Network (ABBY-Net) Summer School, Kloster Banz, Germany, 2013
 Panelist, Large Landscapes: Working Across Boundaries, 2013 Crown Managers Forum, Cranbrook, British Columbia, 2013
 Organizer and Co-Chair, Alberta-Bavaria Research Network (ABBY-Net) Summer School, Kananaskis, Alberta, 2012
 Organizer and Chair, Remote Sensing for Oil Sands Monitoring Workshop, Calgary, Alberta, 2011
 Organizer and Chair, New Approaches for Mapping and Monitoring Landcover and Biodiversity Workshop, Edmonton, Alberta, 2011
 Organizer and Chair, Integrated Wildlife Ecology Network Workshop, Calgary, Alberta, 2011
 Scientific Committee, GEOBIA Conference, Calgary, Alberta, 2008
 Session Chair, ASPRS Annual Conference, Tampa, Florida, 2007
 Organizer, Foothills Model Forest Grizzly Bear Research Project Partner Meeting, 2006
 Session Chair, ASPRS Annual Conference, Reno, Nevada, 2006
 Panelist, Canadian Institute of Foresters/Society of American Foresters, 2006
 Session Chair, ASPRS Annual Conference, Kansas City, Missouri, 2004

Peer Review

Oxford University Press
 IEEE Journal of Selected Topics in Applied Earth Observation and Remote Sensing
 Natural Sciences and Engineering Research Council of Canada
 International Journal of Remote Sensing
 Canadian Journal of Remote Sensing
 Remote Sensing of Environment
 Photogrammetric Engineering and Remote Sensing
 Journal of Geographical Systems
 Global Change Biology
 Landscape and Urban Planning

Cartographica
Science of the Total Environment

Editorial

Guest Editor, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, Special Issue on Mutli-Temporal Image Analysis, 2014

Proceedings Editor, IEEE Xplore - Proceedings on MultiTemp 2013: 7th International Workshop on the Analysis of Multi-temporal Remote Sensing Images, 2013

Academic Service, University of Calgary

Graduate Program Director, Geography, 2015-present

MGIS Renewal Committee, Geography, 2017-present (Chair)

Graduate Program Committee 2007-2010, 2014-2015, 2015-present (Chair)

Graduate Curriculum and Academic Review Committee, Faculty of Arts, 2016-present

Graduate Studies Council, Faculty of Graduate Studies, 2015-present

Unit Review Committee, Department of Geography, 2015-2017

Eyes High Strategic Vision Committee: New Earth-Space Technologies, University of Calgary, 2014-2016

Infrastructure and Planning Committee, Department of Geography, 2014-2015 (Chair)

Faculty Tenure and Promotion Committee, Faculty of Arts, 2014-2015

IT Committee, Department of Geography, 2009-2011; 2013-2014, (Chair)

Student Academic Appeals Committee, Faculty of Arts, 2006-2008, 2014

Graduate Scholarship Committee, Faculty of Graduate Studies, 2007-2010, 2012-2013

Undergraduate Curriculum Re-design Workshop, Department of Geography, 2010 (Workshop Organizer and Chair)

Department Conference Committee, Department of Geography, 2009

IT Committee, Department of Geography, 2005-2009

MGIS Steering Committee, Department of Geography, 2005-2008

Library Committee, Department of Geography, 2005-2007

Search Committees:

Geography Faculty Hire, 2015

Maps, Academic Data, Geographic Information Centre Unit Head, 2008

Geography Remote Sensing Technician, 2008

Geography IT Technician, 2007