

# Ian D. Jonsen

Department of Biology, Dalhousie University, 1355 Oxford St., Box 15000, Halifax, NS B3H 4R2 CANADA  
1.902.494.3910 (w); ijonsen@dal.ca; <http://ram.biology.dal.ca/~jonsen>

## Academic Background

- 2002 Ph.D., Environmental Biology & Ecology, University of Alberta  
Supervisors: Dr. Jens Roland & Dr. Robert Bourchier  
Spatial Dynamics of *Aphthona* Flea Beetles on the Invasive Weed, Leafy Spurge
- 1998 M.Sc., Biology, Acadia University  
Supervisor: Dr. Philip Taylor  
The Influence of Landscape Structure on the Fine-scale Movement Behaviour and Meso-scale Dispersion of Two Species of Calopterygid Damselfly
- 1995 B.A. (Honours), Biology, Carleton University  
Supervisor: Dr. Lenore Fahrig  
Response of Generalist and Specialist Insect Herbivores to Landscape Spatial Structure

## Professional Positions

- 2010– Research Associate. Department of Biology, Dalhousie University  
I apply Bayesian and Classical statistical tools to electronic tracking data to understand how marine predators interact with their environment.
- 2007–12 Adjunct Research Associate Professor. Department of Biology, Dalhousie University  
Although tenure of this position has completed, I continue to co-supervise three students (1 PhD, 1 MSc, 1 Honours). I also serve on three Ph.D. student advisory committees.
- 2007–10 Research Scientist. Bedford Institute of Oceanography, Fisheries and Oceans Canada  
I was responsible for the development and application of fishery stock assessment models and the provision of science advice for the management of the eastern Canadian offshore scallop fishery. I liaised with DFO Fisheries Management and Industry representatives and supervised 2 full-time technical staff.
- 2005–07 Research Associate. Department of Biology, Dalhousie University  
I worked with Dr. Ransom Myers, estimating Leatherback turtle movement behaviours during migratory and foraging phases. I also worked with Dr. Doug Swain, estimating Winter Skate population trends in the northwestern Atlantic.
- 2003–05 Honourary Research Associate. Department of Biology, Acadia University  
I was an advisor/mentor for 4 M.Sc. students.
- 2002–05 Postdoctoral Fellow. Department of Biology, Dalhousie University  
I worked with Dr. Ransom Myers to develop a novel state-space modelling approach for the analysis of animal movement patterns and behaviour from satellite tracking data.

## Honours & Awards

- 2003–04 Natural Sciences & Engineering Research Council Postdoctoral Fellowship
- 2001 University of Alberta Graduate Tuition Supplement Award

2000	Best Student Presentation, Entomological Society of America, Annual Meeting
2000	J. Gordin Kaplan Graduate Student Travel Award, University of Alberta
1999–00	Natural Sciences & Engineering Research Council Postgraduate Scholarship B
1999–00	WH Johns Graduate Fellowship, University of Alberta
1998	University of Alberta Graduate Teaching Assistantship (Declined)
1998	Nominated for Governor General's Gold Medal, Acadia University
1997	Alden B. Dawson Scholarship, Acadia University
1995–97	Acadia Graduate Fellowship, Acadia University

## Training of Highly Qualified Personnel

### *Supervision*

#### Postdoctoral Researchers

S Bestley	2010–12	Integrative approaches for understanding climate change impacts on a deep-diving migratory mammal (Killam PDF)
I Katara	2009–11	Habitat modelling of leatherback turtles ( <i>Dermochelys coriacea</i> )
G Breed	2009–10	State-space estimation of time-varying behavioral parameters from animal tracking data (co-supervised with D Costa and JM Flemming)
A Winship	2008–10	Statistical modelling of marine predator movement patterns

#### Graduate students

L Baker	2012–	(MSc) Developing experimental design principles for acoustic telemetry studies
T Davies	2007–	(PhD) Estimating population trends for poorly sampled marine species

#### Undergraduate Honours students

J Rowsell	2013	(BSc Hons)
K Whoriskey	2013	(BSc Hons)

#### Technical Staff

B Hubley	2008–10	DFO Assessment Biologist (BI-2), Bedford Institute of Oceanography
A Glass	2007–10	DFO Assessment Technician (EG-4), Bedford Institute of Oceanography

#### Thesis Committees

S Gutowsky	2012–	PhD Thesis. Dr. M Leonard, supervisor. Dalhousie University
M Milligan	2012–13	MSc Thesis. Dr. H. Whitehead, supervisor. Dalhousie University
S Heaslip	2009–13	PhD Thesis. Dr. S. Iverson, supervisor. Dalhousie University
D Keith	2009–13	PhD Thesis. Dr. J. Hutchings, supervisor. Dalhousie University
G Breed	2007–08	PhD Thesis. Dr. R. Myers, supervisor. Dalhousie University
T Leonard	2004–06	MSc Thesis. Dr. P. Taylor, supervisor. Acadia University

**Instructor**

H Benoit	2010	Special Topics in Population Biology, Dalhousie University
S Gutowsky	2013	Special Topics in Population Biology, Dalhousie University

**Thesis Examiner**

JS Sandhu	2011	Reader. MSc Thesis. Computer Science, Dalhousie University
A-C Dragon	2011	External Examiner. PhD Dissertation. L'Université Pierre et Marie Curie
MK Wong	2011	Examiner. PhD Aptitude Defence. Computer Science, Dalhousie University
T Patterson	2009	External Examiner. PhD Dissertation. University of Tasmania
G Mitchell	2006	External Examiner. MSc Thesis. Acadia University
M Jankowski	2005	Internal Reader. MSc Thesis. Dalhousie University

**Teaching Experience**

2013	Census of Marine Life. 1 guest lecture. R O'Dor, Dalhousie University
2012	Census of Marine Life. 1 guest lecture. R O'Dor, Dalhousie University
2010	State-Space Models for Ecologists. 3-day Workshop. Chizé, CNRS, France
2010	State-Space Models for Ecologists. 5-week Graduate Module. Dalhousie University
2004	Statistical Models in R. 12-week Graduate course (taught with PD Taylor). Acadia University
2004	Research Methods (Grad). 1 guest lecture. PD Taylor & J Roff, Acadia University
2004	Animal Movement. Graduate Module. 1 guest lecture. D Bowen, Dalhousie University
2003	Resource Ecology (3rd yr). 3 guest lectures. RA Myers, Dalhousie University
2003	Research Methods (Grad). 2 guest lectures. PD Taylor, Acadia University
2003	Analysis of Biological Data (4th yr). 1 guest lecture. H Whitehead, Dalhousie University
2003	Population Ecology (3rd yr). 1 guest lecture. PD Taylor, Acadia University
1997	Lab Instructor. Introductory Ecology. Acadia University
1997	Lab Instructor. Population Biology. Acadia University
1996	Lab Instructor. Introductory Biology. Acadia University

**Research Support**

2010–17	The Ocean Tracking Network Canada: Understanding species movements, interactions, and environmental variability across Canada's three oceans. NSERC Strategic Network Grant. PI: S Iverson; Co-PI's: ID Jonsen and 27 others. 7 yrs	\$CAD 10M
2009–11	Platform for Ocean Knowledge Management. CANARIE-NEP. PI: RS Abidi; Co-PI's: ID Jonsen and 6 others. 2.5 yrs	\$CAD 1.4M
2009–10	The oceanographic basis of marine predator movements. Census of Marine Life / Sloan Foundation. Co-PI's: ID Jonsen & BA Block. 1.5 yrs	\$USD 50K
2009	Identifying critical foraging habitat for leatherback turtles in Atlantic Canada. DFO/SARSEP. PI: ID Jonsen. 1 yr	\$CAD 90K
2008–10	Future of Marine Animal Populations Renewal grant (2009-2010). Census of Marine Life / Sloan Foundation. PI: B Worm; Co-PI's: H Lotze, ID Jonsen. 2 yrs	\$USD 1M

- 2008–09 Statistical Methods to Improve PSAT Location Estimates and Procedures for Efficient Access to Physical Fields from Operational Oceanographic Models. DFO International Governance Strategy fund. PI: ID Jonsen; Co-PI's: R Hendry, S Campana, J Neilson. 1.5 yrs \$CAD 130K
- 2003–06 Predicting songbird distributions and persistence on managed landscapes. NSERC Collaborative Research and Development Grant #271654-03. PI: Philip D. Taylor; Collaborator: ID Jonsen. 3 yrs \$CAD 240K

## Professional Service

- 2012 **Panel Expert** for the Center for Independent Experts review of the Gulf of Alaska Pollock stock assessment, Alaska Fisheries Science Center, Seattle, WA, USA, July 17-20
- 2010–11 **Atlantic Arena Theme Leader** for the Ocean Tracking Network Canada Strategic Network
- 2010 **Science Contributor** for the Review of Proposed Critical Habitat for Leatherback Turtle, National Marine Mammal Peer Review Committee, Mont Joli, PQ, Nov
- 2010 **Science Lead** for the Georges Bank Scallop Assessment. Regional Advisory Process. Fisheries and Oceans, Bedford Institute of Oceanography, NS, Jan
- 2009–10 **Co-Chair** of Census of Marine Life synthesis group meetings, "The Oceanographic Basis of Marine Predator Movements", Hopkins Marine Station, Monterey, USA
- 2009–11 **Ocean Research Team Leader** for the Platform for Ocean Knowledge Management (POKM) project
- 2009 **Conference Session Co-Organizer** of Advances in Modelling and Statistical Analysis of Aquatic Ecosystems at the Canadian Conference for Fisheries Research. Ottawa ON, Jan
- 2009 **Panel Expert** in CLIOTOP (Climate Impacts on Oceanic Top Predators) Working Group 2. Swansea, UK, July
- 2009 **Science Lead** for the Georges Bank Scallop Framework Assessment. Regional Advisory Process. Fisheries and Oceans, Bedford Institute of Oceanography, NS, Feb
- 2008 **Science Lead** for the Georges Bank Scallop Assessment. Regional Advisory Process. Fisheries and Oceans, Bedford Institute of Oceanography, NS, Mar
- 2007–10 **Co-Leader** of the Future of Marine Animal Populations project, Census of Marine Life
- 2007 **Science Lead** for the Cusk Recovery Potential Assessment. Regional Advisory Process. Fisheries and Oceans, St. Andrews, NB, Dec
- 2007 **Science Lead** for the Georges Bank Scallop Assessment. Regional Advisory Process. Fisheries and Oceans, Bedford Institute of Oceanography, NS, Apr
- 2007 **Panel Expert** in the Pacific Leatherback Turtle Workshop. Lenfest Ocean Program. Washington, DC, USA
- 2007 **Science Contributor** in the Surf Clam Framework Assessment. Regional Advisory Process. Fisheries and Oceans, Bedford Institute of Oceanography, NS, Apr
- 2006 **Science Contributor** in the Winter Skate Recovery Potential Assessment. Regional Advisory Process. Fisheries and Oceans Canada, Bedford Institute of Oceanography, NS

## Peer Reviewer

Ecology; Ecology Letters; Conservation Ecology; Journal of Animal Ecology, Journal of Applied Ecology; Ecological Applications; Landscape Ecology; Trends in Ecology and Evolution; Proceedings of the Royal Society B; Marine Ecology Progress Series; Canadian Journal of Fisheries and Aquatic Sciences; Oecologia; Ecography; Endangered Species Research; Biodiversity and Conservation; Journal of Marine Science; Journal of Experimental Marine Biology and Ecology; NSF; Australian Antarctic Division; DFO-CSAS stock assessments; SeaChoice assessments; NMFS stock assessments

**Publications** (contributions by HQP are underlined)*Manuscripts Submitted*

33. Almeida Silva M, Prieta R, **Jonsen ID**, Baumgartner MF (2013) Assessing performance of a Bayesian state-space model fit to Argos locations processed with a Kalman filtering algorithm *PLoS One* In Review
32. Pollet I, Ronconi R, **Jonsen ID**, Leonard ML, Taylor PD, Shutler D (2013) Spatiotemporal patterns in foraging movements of Leach's storm-petrels, *Oceanodroma leucorhoa*, during incubation. *Journal of Avian Biology* In Review

*Peer-reviewed Journals* (number of citations from ISI Web of Science in parentheses)

31. Lidgard DC, Bowen WD, Jonsen ID, Iverson SJ (2013) Predator-borne acoustic transceivers and GPS tracking reveal spatial and temporal patterns of encounters with acoustically-tagged fish in the open ocean. *Marine Ecology Progress Series* Accepted
30. Silva MA, Prieta R, **Jonsen ID**, Baumgartner MF, Santos RS (2013) North Atlantic blue and fin whales suspend their spring migration to forage in middle latitudes: building up energy reserves for the journey? *PLoS One* 8(10): e76507 DOI:10.1371/journal.pone.0076507
29. Whitehead H, **Jonsen ID** (2013) Inferring animal densities from tracking data using Markov chains. *PLoS One* 8(4): e60901 DOI:10.1371/journal.pone.0060901
28. **Jonsen ID**, Basson M, Bestley S, Bravington M, Patterson TA, Pederson M, Thomson R, Thygesen U, Wotherspoon S (2013) State-space models for biologists: a methodological road map. *Deep Sea Research II* 88-89:34-46
27. Bestley S, **Jonsen ID**, Hindell MA, Guinet C, Charrassin J-B (2013) Integrative modelling of animal movement: incorporating *in situ* habitat and behavioural information for a migratory marine predator. *Proceedings of the Royal Society B* 280: 20122262
26. Wong MK, Abidi SSR, **Jonsen ID** (2012) A multi-phase correlation search framework for mining non-taxonomic relations from unstructured text. *Knowledge and Information Systems* DOI:10.1007/s10115-012-0593-7
25. Swain DP, **Jonsen ID**, Simon JE, Davies TD (2012) Decadal mortality trends of skate populations in Atlantic Canada. *Canadian Journal of Fisheries and Aquatic Sciences* 70:74-89
24. Hazen EL, Jorgensen S, Rykaczewski RR, Bograd SJ, Foley DG, **Jonsen ID**, Shaffer SA, Dunne JP, Costa DP, Crowder LB, Block BA (2012) Predicted habitat shifts of Pacific top predators in a changing climate. *Nature Climate Change* 3:234-238
23. Lidgard DC, Bowen WD, **Jonsen ID**, Iverson SJ (2012) Animal-borne acoustic transceivers reveal patterns of at-sea associations in an upper-trophic level predator. *PLoS One* 7(11): e48962 DOI:10.1371/journal.pone.0048962
22. Edwards AM, Freeman MP, Breed GA, **Jonsen ID** (2012) Incorrect Likelihood Methods Were Used to Infer Scaling Laws of Marine Predator Search Behaviour. *PLoS One* 7(10): e45174 DOI:10.1371/journal.pone.0045174
21. Benoit HP, Hurlburt T, Chasse J, **Jonsen ID** (2012) Estimating fishery-scale rates of discard mortality using conditional reasoning. *Fisheries Research* 125:318-330 (0)
20. Breed GA, Costa DP, **Jonsen ID**, Robinson PW, Mills Flemming JE (2012) State-space methods for more completely capturing behavioural dynamics from animal tracks. *Ecological Modelling* 235:49-58 (1)

19. Winship AJ, Jorgensen SJ, Shaffer SA, Jonsen ID, Robinson PW, Costa DP, Block BA (2012) State-space framework for estimating measurement error from double-tagging telemetry experiments. *Methods In Ecology and Evolution* 3:291-302 (1)
18. Block BA, Jonsen ID, Jorgensen SJ, Winship AJ, Shaffer SA, Bograd SJ, et al. (2011) Tracking Apex Marine Predator Movements in a Dynamic Ocean. *Nature* 475:86-90 (43)
17. Davies TD, Jonsen ID (2011) Identifying non-proportionality of fishery-independent survey data to estimate population trends and assess recovery potential for cusk (*Brosme brosme*). *Canadian Journal of Fisheries and Aquatic Sciences* 68:413-425 (2)
16. Mills Flemming J, Jonsen ID, Myers RA, Field CA (2010) Hierarchical state-space estimation of leatherback turtle navigation ability. *PLoS One* 5(12):e14245 doi:10.1371/journal.pone.0014245 (3)
15. Breed GA, Jonsen ID, Myers RA, Bowen WD, Leonard ML (2009) Sex-specific, seasonal foraging tactics in adult grey seals (*Halichoerus grypus*) are revealed by behaviour discriminating state-space models. *Ecology* 90:3209-3221 (25)
14. Swain DP, Jonsen ID, Simon JE, Myers RA (2009) Assessing threats to species-at-risk using stage-structured state-space models: mortality trends in skate populations. *Ecological Applications* 19:1347-1364 (8)
13. Calvert AM, Bonner SJ, Jonsen ID, Flemming JM, Walde SJ, Taylor PD (2009) A hierarchical Bayesian approach to multi-state mark-recapture: simulations and applications. *Journal of Applied Ecology* 46:610-620 (8)
12. Jonsen ID, Bouchier RS, Roland J (2007) Effect of matrix habitat on the spread of flea beetle introductions for biological control of leafy spurge. *Landscape Ecology* 22:883-896 (7)
11. Jonsen ID, Bouchier RS, Roland J (2007) Influence of dispersal, stochasticity, and an Allee effect on the persistence of weed biocontrol introductions. *Ecological Modelling* 203:521-526 (11)
10. Jonsen ID, Myers RA, James MC (2007) Identifying leatherback turtle foraging behaviour from satellite telemetry using a switching state-space model. *Marine Ecology Progress Series* 337:255-264 (50)
9. Jonsen ID, Myers RA, James MC (2006) Robust hierarchical state-space models reveal diel variation in travel rates of migrating leatherback turtles. *Journal of Animal Ecology* 75:1046-1057 (41)
8. Flemming JEM, Field C, James MC, Jonsen ID, RA Myers (2006) How well can animals navigate? Estimating the circle of confusion from tracking data. *Environmetrics* 17:351-362 (6)
7. Jonsen ID, Flemming JEM, Myers RA (2005) Robust state-space modeling of animal movement data. *Ecology* 86:2874-2880 (109)
6. Jonsen ID, Myers RA, Flemming JEM (2003) Meta-analysis of animal movement using state-space models. *Ecology* 84:3055-3063 (78)
5. Jonsen ID, Bouchier RS, Roland J (2001) The influence of matrix habitat on *Aphthona* flea beetle immigration to leafy spurge patches. *Oecologia* 127:287-294 (50)
4. Jonsen ID, Taylor PD (2000) Calopteryx damselfly dispersions arising from multiscale responses to landscape structure. *Conservation Ecology* 4(2):4 [URL: [http:// www.consecol.org/vol4/iss2/art4](http://www.consecol.org/vol4/iss2/art4)] (18)
3. Jonsen ID, Taylor PD (2000) Fine-scale movement behaviours of calopterygid damselflies are influenced by landscape structure: an experimental manipulation. *Oikos* 88:553-562 (47)
2. Fahrig L, Jonsen ID (1998) Effect of habitat patch characteristics on abundance and diversity of insects in an agricultural landscape. *Ecosystems* 1:197-205 (38)
1. Jonsen ID, Fahrig L (1997) Response of generalist and specialist insect herbivores to landscape spatial structure. *Landscape Ecology* 12:187-195 (91)

### *Book Chapters*

1. Worm B, Lotze HK, **Jonsen ID** & Muir C (2010) The future of marine animal populations. In McIntyre, AD (ed.) *Life in the World's Oceans: Diversity, Distribution and Abundance*. Wiley-Blackwell, Oxford: Chapter 16, 313-330 (2)

### *Conference Proceedings*

1. Wong MK, Abidi SSR & **Jonsen ID** (2011) Mining non-taxonomic concept pairs from unstructured text: a concept correlation search framework. *WEBIST 2001 - Proceedings of the 7th International Conference on Web Information Systems and Technologies*. pp. 707-716

### *Technical Reports & Non-Peer Reviewed Publications*

15. DFO (2010) Assessment of Georges Bank scallops (*Placopecten magellanicus*). *DFO Canadian Science Advisory Secretariat Science Advisory Report* 2010/036 (lead contributor)
14. O'Dor R, Dagorn L, Holland K, **Jonsen I**, Payne J, Sauer W, Semmens J, Stokesbury M, Smith P & Whoriskey F (2009) The Ocean Tracking Network. *OceanObs'09 Community White Paper CWP-4A-09* <http://www.oceanobs09.net/blog/?p=116>
13. DFO (2009) Assessment of Georges Bank scallops (*Placopecten magellanicus*). *DFO Canadian Science Advisory Secretariat Science Advisory Report* 2009/038 (lead contributor)
12. Smith SJ, Denton C, Hubley B, **Jonsen ID**, Lundy MJ, Pezzack D, Sameoto JA & Tremblay MJ (2009) Scallop fishing area 29: stock status and update for 2009. *Canadian Science Advisory Secretariat Research Document* 2009/38
11. **Jonsen ID**, Glass A, Hubley B & Sameoto J (2009) Georges Bank 'a' scallop framework assessment: data inputs & population models. *Canadian Science Advisory Secretariat Research Document* 2009/034
10. Hubley B, Smith SJ, **Jonsen ID** & Sameoto J (2009) Georges Bank 'a' scallop framework assessment: survey design. *Canadian Science Advisory Secretariat Research Document* 2009/033
9. Gavaris S, Sameoto J, Glass A, & **Jonsen ID** (2009) Discards of Atlantic Cod, Haddock, and Yellowtail Flounder from the 2008 Canadian Scallop Fishery on Georges Bank. *TRAC Reference Document* 2009/06
8. DFO (2008) Assessment of Georges Bank scallops (*Placopecten magellanicus*). *DFO Canadian Science Advisory Secretariat Science Advisory Report* 2008/045 (lead contributor)
7. Davies TD & **Jonsen ID** (2008) Recovery potential assessment of 4VWX Cusk (*Brosme brosme*): Population models. *Canadian Science Advisory Secretariat Research Document* 2008/028
6. DFO (2008) Recovery potential assessment for Cusk (*Brosme brosme*). *DFO Canadian Science Advisory Secretariat Science Advisory Report* 2008/024 (contributed)
5. Gavaris S, Glass A & **Jonsen ID** (2008) Discards of Atlantic Cod, Haddock and Yellowtail Flounder from the 2007 Canadian scallop fishery on Georges Bank. *TRAC Reference Document* 2008/04
4. DFO (2007) Assessment of Georges Bank Scallops (*Placopecten magellanicus*). *DFO Canadian Science Advisory Secretariat Science Advisory Report* 2007/026 (lead contributor)
3. Swain DP, **Jonsen ID** & Myers RA (2006) Recovery potential assessment of 4T and 4VW winter skate (*Leucoraja ocellata*): Population models. *Canadian Science Advisory Secretariat Research Document* 2006/004

2. DFO (2005) Recovery potential assessment for Winter Skate in the southern Gulf of St. Lawrence (NAFO Division 4T) *DFO Canadian Science Advisory Secretariat Science Advisory Report 2005/063* (contributed)
1. DFO (2005) Recovery potential assessment for Winter Skate in the eastern Scotian Shelf (NAFO Division 4VW) *DFO Canadian Science Advisory Secretariat Science Advisory Report 2005/062* (contributed)

## Invited Talks

- 2011 A Quantitative Approach to Animal Movement Ecology. Biologging IV, Keynote Talk. Hobart, Australia
- 2011 A Quantitative Approach to Animal Movement Ecology. Department of Biology, Dalhousie University
- 2010 State-Space Models for Ecologists. Ecology Seminar and Workshop, Centre d'Etudes Biologiques de Chizé, CNRS, France
- 2010 Understanding Marine Predator Movements in a Dynamic Ocean. Department of Biology Seminar, Dalhousie University
- 2010 Understanding Marine Predator Movements in a Dynamic Ocean. Harvest Fisheries Seminar. Bedford Institute of Oceanography, Fisheries and Oceans Canada
- 2008 Inferring Animal Behaviour in the Ocean from Noisy Data. Canadian Conference for Fisheries Research, Halifax, NS
- 2006 Dealing with Complex Data Using Bayesian State-Space Models. Bedford Institute of Oceanography, Fisheries and Oceans Canada
- 2006 Dealing with Complex Data Using Bayesian State-Space Models. St Andrews Biological Station, Fisheries and Oceans Canada
- 2006 Robust State-Space Modelling of Leatherback Turtle Movement. Statistics Colloquia, Department of Mathematics & Statistics, Dalhousie University
- 2005 Robust Hierarchical State-Space Models for Animal Movement. In: Modeling Movement at Multiple Scales, Organized Oral Session. Ecological Society of America Annual Meeting, Montreal, PQ
- 2004 Estimation of Animal Movement Behaviour with State-Space Models. Annual Conference of the Quebec Society for the Study of Animal Behaviour, Sherbrooke PQ
- 2003 Meta-Analysis of Animal Movement Using State-Space Models. Departmental Seminar, Biology Department, Acadia University
- 2003 Meta-Analysis of Animal Movement Using State-Space Models. Harvest Fisheries Seminar Series, Bedford Institute of Oceanography, Fisheries and Oceans Canada
- 1998 Linking Individual Movements to Landscape-Level Patterns of Distribution. Ecology 631 Series Seminar, Biological Sciences, University of Alberta

## Conference Presentations (contributions by HQP are underlined)

- 2012 Jonsen ID. Performance of the Ocean Tracking Network receiver lines. Ocean Tracking Network Canada: Annual Symposium, Halifax
- Jonsen ID. Detection efficiency of Vemco Mobile Transceiver (VMT) tags (Bioprobes): preliminary results. Ocean Tracking Network Canada: Annual Symposium, Halifax
- 2010 Winship AJ, Jonsen ID, Jorgensen S, Breed GA, Harrison A-L, Ganong JE, Shaffer SA, Costa DP, Block BA. Statistical methods for synthesizing the world's largest tracking dataset. Census of Marine Life Meeting, London (poster)

- Worm B, Lotze HK, Jonsen ID, Myers RA, Tittensor D, Mora C, Coll M, Winship AJ, Muir C. The future of marine animal populations. Census of Marine Life Meeting, London (poster)
- 2009 Jonsen ID. Statistical models for linking marine predator movements to oceanography. Canadian Conference for Fisheries Research, Ottawa, ON
- 2008 Breed GA, Jonsen ID, Bowen WD, Leonard ML, Myers RA. Sex- and age-specific foraging tactics in grey seals (*Halichoerus grypus*) revealed by behaviour discriminating state-space models. ICES Conference, Halifax, NS
- 2005 Breed GA, Jonsen ID, Bowen WD, Austin D, Myers RA. Using state-space models to discriminate behavioural state from ARGOS satellite telemetry data. Biennial Conference on the Biology of Marine Mammals, San Diego
- Cluff HD, Jonsen ID. Movement patterns of wolves on extended trips on the tundra. International Wolf Conference, Colorado Springs, CO
- 2003 Jonsen ID. Meta-analysis of aquatic and terrestrial animal movement using state-space models. Ecological Society of America Annual Meeting, Savannah, GA
- Jonsen ID. Meta-analysis of animal movement using state-space models. Atlantic Cooperative Wildlife Ecology Research Network, Annual Meeting, Wolfville, NS
- 2001 Jonsen ID, Bouchier RS, Roland J. Dispersal-landscape interactions: Implications for successful weed biocontrol. Entomological Society of Canada, Annual Meeting, Niagara Falls, ON (poster)
- Carcamo H, Dunn R, Jonsen ID. Spatial distribution of cabbage seedpod weevil in canola fields with trap strips. Entomological Society of Alberta, Annual Meeting, Calgary, AB
- 2000 Jonsen ID, Bouchier RS, Roland J. The spatial dynamics of *Aphthona* flea beetles on Leafy Spurge: A landscape perspective. Entomological Society of Canada and Entomological Society of America, Joint Annual Meeting, Montreal, PQ (poster)
- Bouchier RS, Jonsen ID. Monitoring the impact of biocontrol: Tracking an outbreak. Entomological Society of Canada & Entomological Society of America, Joint Annual Meeting, Montreal, PQ
- 2000 Jonsen ID, Bouchier RS, Roland J. The spatial dynamics of *Aphthona* flea beetles on Leafy Spurge: A landscape perspective. Expert Committee on Weeds, Annual Meeting. Banff, AB
- 1999 Jonsen ID, RS Bouchier & J Roland. Landscape effects on the patch colonization abilities of Spurge flea beetles. Entomological Society of Canada, Annual Meeting, Saskatoon, SK
- 1998 Taylor PD, J Pither & ID Jonsen. The spatial scales of connectivity. Conservation Biology Meeting. MacQuarie University, Sydney, AU
- 1997 Jonsen ID & PD Taylor. Response of *Calopteryx* damselfly movement behaviour to differences in landscape spatial structure arising from habitat fragmentation. Ecological Society of America, Annual Meeting, Albuquerque, NM
- 1996 Jonsen ID & PD Taylor. *Calopterygid* damselfly movement behaviour is influenced by landscape spatial structure: results from an experimental manipulation. Entomological Society of Canada, Annual Meeting, Fredericton, NB
- Jonsen ID & DG Kehler. Does energy predict large-scale patterns of species richness in animal dietary groups? Northeastern Graduate Wildlife Conference, Acadia University, Wolfville, NS
- 1995 Jonsen ID & L Fahrig. Response of generalist and specialist insect species on alfalfa to differences in landscape structure. Ecological Society of America, Annual Meeting, Snowbird, UT
- Jonsen ID. Response of generalist and specialist insect species on alfalfa to differences in landscape structure. Ontario Ecology and Ethology Conference, Toronto, ON

## References

- Dr. Sara Iverson, Professor, Department of Biology, Dalhousie University, Halifax, NS, Canada B3H 4R2, Sara.Iverson@dal.ca; 1-902-494-2566
- Dr. Frederick Whoriskey, Executive Director, Ocean Tracking Network, Dalhousie University, Halifax, NS, Canada B3H 4R2, fwhoriskey@dal.ca; 1-902-494-6741
- Dr. Barbara Block, Charles & Elizabeth Prothro Professor of Marine Sciences, Hopkins Marine Station, Stanford University, Pacific Grove, CA, USA 94305-0010, bblock@stanford.edu, 1-831-655-6236
- Dr. Joanna Mills Flemming, Assistant Professor, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada B3H 4R2, Joanna.Flemming@dal.ca; 1-902-494-1268
- Dr. W. Don Bowen, Research Scientist. Population Ecology Division, Bedford Institute of Oceanography, Fisheries and Oceans Canada, bowenD@dfo-mpo.gc.ca, 1-902-426-8909