

Sherri Ann Ferguson

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Professional Employment

Shanfe Research & Consulting Ltd.	President	2022-Present
Environmental Medicine & Physiology Unit.	Director	2009-22/03/2024
Faculty of Science, Simon Fraser University	Coordinator	2007-2009
Risk Management University of British Columbia	Diving Safety Officer	2005-2017
Environment, Health & Safety University of Victoria	Diving Safety Officer	2011-2017
International Training	Instructor Examiner, Territory Manager	1999-2005
Commercial Diving Group	Instructor	1999- 2001
Sea Sales Inc.	President	1998-2005

Post-Secondary Education

Simon Fraser University	Master of Science , Department of Biomedical Physiology. Thesis: The effect of sudden drop in partial pressure of oxygen during ascent on heart function
Simon Fraser University	Bachelor of Science , Department of Biomedical Physiology & Kinesiology, completed qualifying course requirements.
Capilano University	Bachelor of Arts , Psychology, first 2-years
York University	Bachelor of Science , Environmental Science incomplete

Teaching (selected)

University of Padua, Italy	Guest Lecturer	24/05/2024 - Present
	Master's program, Diving & Hyperbaric Medicine	
Simon Fraser University	Faculty	2015-22/03/2024
	Environmental Medicine & Physiology	
	Life Long Learning, Continuing Medical Education	

	Physicians and Hyperbaric staff EMPU 121,122, 130, 135, 145, 155	
University of British Columbia	Guest Lecturer School of Population and Public Health SPPH 535	2005-Present
Canadian Armed Forces	Faculty 17 Wing & JTF Hyperbaric Emergency Stretcher Evacuation Ops	2016
Simon Fraser University	Guest Lecturer Beedie School of Business BUS 238	2014-2015
Bamfield Marine Science Centre	Faculty BIO 812	2012
University of Victoria & University of British Columbia	Instructor Scientific Diver	2005-2018

Scholarly and Professional Activities

Research Appointments

Research Associate	Divers Alert Network Durham, NC, USA	2024-Present
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Research Expeditions

Principal Investigator	Shanfe Research & Consulting Inc. Chuuk, Micronesia	March 2025
Scientific Diver	Ocean Networks Canada, UVic. Cambridge Bay, Nunavut	2008

Research Grants

U.S. Office of Naval Research (Principal Investigator)	<u>The role of total pressure and partial pressure of breathing gasses on cognitive and heart function during hyperbaric dives in both human and cellular models.</u>	\$126,000 USD	2014
Worksafe BC Research (Princial Investigator)	<u>The use of dive computers in occupational diving</u>	\$50,000 CAD	2022

Invited Presentations (Selected)

University of North Carolina, Chapel Hill,	<u>Saturation diving and compressed air work</u>	2025
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Canadian Underwater Conference Toronto, ON	<u>DCS and Occupational Diving</u>	2024
Bedford Institute of Oceanography Halifax, NS	<u>DCS Is what you don't know hurting you</u>	2023
Canadian Underwater Conference Halifax, NS	<u>DCS Is what you don't know hurting you</u>	2023
American Industrial Hygiene Association AGM virtual	<u>Occupational Health Considerations for Workers in Pressurized Environments</u>	2022
University North Carolina Chapel Hill	<u>Unconventional Path to Science</u>	2020
Human Performance at Sea U.S. DoD. Panama City, FL	<u>Environmental Medicine & Physiology Testing Capabilities and Studies</u>	2019
Divescapes Calgary, AB.	<u>The effect of sudden drop in pressure on heart function.</u>	2018
Canadian Underwater Conference Vancouver, B.C.	<u>The diver's heart</u>	2018
American Academy of Underwater Science, Alpena, MI	<u>When a case of skin bends is a serious condition</u>	2017
Canadian Underwater Conference Ottawa, ON	<u>Your heart and diving</u>	2017
Canadian Underwater Conference Halifax, NS	<u>When a case of skin bends is a serious case</u>	2016
Undersea & Hyperbaric Medical Society, Montreal, PQ	<u>Canadian hyperbaric standards and regulations</u>	2015
American Association of Mechanical Engineers PVHO Montreal, PQ	<u>Hyperbaric research capabilities in Canada</u>	2015
Canadian Underwater Conference Victoria, BC	<u>The effect of oxygen pressure on narcosis severity</u>	2015
Office of Naval Research US Program Review, Buffalo NY	<u>The effect of oxygen pressure on narcosis and heart function</u>	2015
Canadian Underwater Conference Toronto, ON	<u>Inert gas narcosis</u>	2014
Divers Weekend Vancouver Aquarium	<u>Managing decompression stress using dive computers and tables</u>	2014
Canadian Underwater Conference St. Johns, NF	<u>Scientific diving methods</u>	2012

BC Safety Authority Annual Technical Conference Vancouver, B.C.	<u>Hyperbaric chamber inspection</u>	2011
BC Ministry of Health Panel Victoria, B.C.	<u>HBOT in BC research prospective</u>	2010
American Industrial Hygiene Association, Vancouver, B.C.	<u>Work in pressurized environments</u>	2009
American Association of Diving Contractors, Portland, OR	<u>Using nitrox in occupation diving</u>	2001

Other Conference Participation

Canadian Underwater Conference & Exhibition	Co-Chair	2025
Canadian Undersea & Hyperbaric Medical Association, Various Locations in Canada	Planning Committee	2010-2016

Services to the Community

Director at Large	<u>BoD, Canadian Undersea & Hyperbaric Medical Association</u>	2025-Present
Editor	<u>E-News, Canadian Undersea & Hyperbaric Medical Assoc.</u>	2020-2022
Secretary	<u>Canadian Undersea & Hyperbaric Medical Association</u>	2020-2022
Vice-Chair	<u>Canadian Standards Association Technical Committee Z275 Diving and Hyperbaric</u>	2019-Present
Reviewer	<u>Undersea Hyperbaric Medical Journal</u>	2020 & 2025
Reviewer	<u>Journal of Military, Veteran and Family Health</u>	2019 & 2020
Interviewer	<u>Mock Multiple Mini Interview Medical School Career Services and Co-op Simon Fraser University</u>	2015
Reviewer	<u>Applied Physiology, Nutrition and Metabolism</u>	2014
Board of Directors	<u>Canadian Undersea and Hyperbaric Medical Association</u>	2014-2018
Chair	<u>Canadian Standards Association Z275.1 Sub-committee</u>	2013-Present
Supervisory Committee	<u>Ramasamy Meyyappan Master of Science BPK Diaphragm Pacing during Mechanical Ventilation: Development of a Control Algorithm and Analysis of Respiratory Mechanics</u>	2013

Board of Directors	<u>Canadian Association for Underwater Science</u>	2011-2017
Treasurer	<u>Undersea & Hyperbaric Medical Association</u> <u>Canadian Chapter</u>	2010-2014
President	<u>Canadian Association for Underwater Science</u>	2008-2011

Awards and Distinctions

James H. Wilson Award	Canadian Undersea & Hyperbaric Medical Association	2019
Platinum Pro 5000 Award	Scuba Schools International	2017
Paul C. Baker Award	Undersea & Hyperbaric Medical Society	2016
Research Trainee Award	Worksafe BC \$22,500/year	2014 & 2015
Special Recognition	Canadian Chapter Undersea & Hyperbaric Medicine	2013
Excellence in Presentation	Undersea & Hyperbaric Medical Society	2010

Publications Record

Refereed Publications: (selected)

Journals

Evan A. Hutcheon, Sherri Ferguson, Victoria E. Claydon, Urs Ribary, Sam M. Doesburg. *A Protocol to Simultaneously Examine Cardiorespiratory, Cerebrovascular and Neurophysiological Responses Inside a Hypobaric Chamber*. **PLOS ONE**. 24 October 2024

Evan A. Hutcheon, Vasily A. Vakorin, Adonay S. Nunes, Urs Ribary, Sherri Ferguson, Victoria E. Claydon, Sam M. Doesburg. *Comparing neuronal oscillations during spatial attention orienting between normobaric and hypobaric hypoxia*. **Scientific Reports** October 2023 Vol. 13 (1)

E Hutcheon, V Vakorin, A Nunes, U Ribary, S Ferguson, V Claydon and S Doesburg. *Effects of Normobaric and Hypobaric Hypoxia on Spontaneous EEG Oscillations and Entropy*. **Human Brain Mapping** January 2023 Vol 44 (4)

Richard NA, Sahota IS, Widmer N, Ferguson S, Sheel AW, Koehle MS. *Acute Mountain sickness, chemosensitivity and cardio-respiratory responses in humans exposed to hypobaric and normobaric hypoxia*. **J Appl Physiol** 2013 Jul 3 (Epub ahead of print)

Asmaro D, Mayall J, Ferguson S. *Cognition at altitude: Impairment in executive and memory processes under hypoxic conditions*. **Aviation, Space and Environmental Medicine**. Vol. 84, No. 11, Nov 2013

Abstracts and Conference Proceedings (selected)

S Ferguson, A Khazei, W Sikkema, M Atkins, R Nishi, N Vlcek. Dive profiles and DCS rate among seafood harvesters in British Columbia, Canada. *Undersea Hyperbaric Medical Society ASM*. New Orleans, USA 2024. [Oral presentation]

K LeDez, G Zibitnew, S Ferguson, R Linden. Investigation of hyperbaric treatment facilities in Canada. *Undersea Hyperbaric Medical Society ASM*. New Orleans, USA 2024. [Poster presentation]

E Hutcheon, A Nunes, V Vakorin, U Ribary, S Ferguson, V Claydon and S Doesburg. Effect of Normobaric Hypoxia on Spontaneous EEG Power Spectra. *Organization for Human Brain Mapping*. Glasgow, Scotland. 2022. [Poster presentation]

E Hutcheon, A Nunes, V Vakorin, U Ribary, S Ferguson, V Claydon and S Doesburg. Effect of Normobaric Hypoxia on Spontaneous EEG Power Spectra. *Organization for Human Brain Mapping*. Virtual Meeting. 2021.[Poster presentation]

E Hutcheon, A Nunes, U Ribary, S Ferguson, V Claydon and S Doesburg. Increased Resting Alpha EEG Oscillations During Normobaric Hypoxia. *Aerospace Medical Association*. Atlanta, Georgia. 2020.[abstract was accepted for an oral presentation, conference was cancelled due to COVID-19 published as an abstract]

E Hutcheon, A Nunes, U Ribary, S Ferguson, V Claydon and S Doesburg. Effects of hypoxia on N100 and P300 event related potentials during visuospatial attention control. *Undersea and Hyperbaric Medical Society*. Puerto Rico, United States of America.2019. [Poster presentation]

S Ferguson, E Hutcheon, and S Doesburg. The effect of oxygen and nitrogen on nitrogen narcosis severity. *Undersea and Hyperbaric Medical Society*. Puerto Rico, United States of America. 2019.[Poster presentation]

E Hutcheon, S Doesburg, S Ferguson. The Effect of Oxygen and Nitrogen on Nitrogen Narcosis Severity. *Tricontinental Scientific Conference on Diving and Hyperbaric Medicine*. Durban, South Africa.2018. [Oral Presentation]

Deyar Asmaro, James Mayall, Sherri Ferguson. *Cognition at altitude: Impairment in executive and memory processes under hypoxic conditions*. Conference: Society for Psychophysiological Research Florence, Italy **2013** [poster presentation]

Deyar Asmaro, James Mayall, Sherri Ferguson. *Are altitude exposure tables needed?; Retrospective longitudinal analyses of hypobaric exposures and incidence of DCS*. Annual Scientific Meeting of the Undersea & Hyperbaric Medical Society. Phoenix, USA. **2012** [oral presentation]

Sherri Ferguson, James Mayall. *Servicing a multi-place hyperbaric chamber fire suppression system; a follow up to servicing contamination of the system due to failure of the compressor autodrain*. Annual Scientific Meeting of the Undersea & Hyperbaric Medical Society. Texas, USA. **2011** [oral presentation]

Sherri Ferguson, James Mayall. *Servicing of a multiplace hyperbaric chamber following contamination of the system due to failure of the compressor autodrain: maintenance considerations in light of repair*. Annual Scientific Meeting of the Undersea & Hyperbaric Medical Society. St. Petersburg, USA. **2010**. [oral presentation]

Sherri Ferguson, Andrew Blaber, Karyn O'Keeffe, Lee Signal, Sara Jay, P Garnder, Stephen Jones, P rock, Mike Muhm. *Effective blinding during hyper and hypo baric exposure: A double blind randomized study on mild hypoxia during sleep* Annual Scientific Meeting of the Undersea & Hyperbaric Medical Society. St. Petersburg, USA. **2010**. [oral presentation]

Non-refereed Publications:

Sherri Ferguson, Meagan Abele, Ian Bercovitz, Jim Carter. *The efficacy of breathing apparatus of various mask design when worn with facial hair*. Commissioned study by Corrections Canada. **2020**

Sherri Ferguson, Dan Warkander, Sam Doesburg, Evan Hutcheon. *The efficacy of oxygen delivery masks for commercial pilots with facial hair*. Commissioned study by Air Canada **2016**

Membership

Canadian Undersea and Hyperbaric Medical Association

Canadian Standards Association

South Pacific Undersea Hyperbaric Medical Society

Undersea and Hyperbaric Medical Society

Aerospace Medical Association

International Training (SCUBA and Technical Diving)

Canadian Association of Underwater Science

Society of Automotive Engineers International – Aviation division

American Society of Mechanical Engineers – Pressure vessels for human occupancy division