

Professor Zahra Moussavi, Ph.D., P.Eng. CAE Fellow

Professor Zahra Moussavi is a professor, a Canada Research Chair Tier I, and the founder and former director of Biomedical Engineering Graduate Program at the University of Manitoba. Professor Moussavi is a globally recognized researcher and educator who has made groundbreaking contributions to the field of biomedical engineering, particularly in the diagnosis and treatment of Alzheimer's disease and quick and fast detection of obstructive sleep apnea. She is the recipient of several awards including the "2018 Technical Excellence Award," Engineers Geoscientists Manitoba, "Canada's Most Powerful Women (Top 100)", "Manitoba Distinguished Women" and past and current IEEE EMBS Distinguished Lecturer.



Professor Moussavi's current research focuses on a few major areas: 1) the design of innovative immersive virtual reality navigational environments for Alzheimer's diagnosis as well as neuro-rehabilitation; 2) respiratory acoustics signal processing and its application on obstructive sleep apnea (OSA) detection as well as application on swallowing silent aspiration detection and predicting swallowing disorders' severity, and 3) Alzheimer's and dementia treatment by non-pharmaceutical and non-invasive magnetic and electrical stimulations. These research topics have resulted in several international collaborations and major funding. She has published more than 344 peer-reviewed papers in journals and conferences and has given >133 invited talks/seminars including 2 Tedx Talks and 20 keynote speaker seminars at national and international conferences.

Dr. Moussavi has served as deputy editor and associate editor to several journals, grant reviewer for national and international funding agencies, several accreditation board's member for undergraduate and graduate programs, and a consultant for sleep apnea technologies.

Dr. Moussavi is also known for her exceptional leadership in mentoring future generations. She founded the Biomedical Engineering Program at the University of Manitoba and was its director for 10 years, supervised over 70 graduate students and mentored more than 100 undergraduates and high school students. Her former trainees now hold senior positions at institutions such as Facebook, TELUS, Siemens and several prestigious universities such as Harvard and University of Toronto.

Aside from academic work, on her spare time, she writes science articles for public. She has also developed and offered cognitive training programs for aging population along with a free app for memory exercises in dementia population, called MindTriggers, which is available on any platform such as iPads, Tablets, iPhone, and others.