

“The Okanagan campus has an entrepreneurial spirit, and it’s this spirit that attracts students whose optimism and drive are changing the world.”



As Dean of the Faculty of Health and Social Development, Dr. Binsted is dedicated to building a Faculty recognized for stimulating positive change.

Dr. Binsted’s research interests focus on understanding of how the human brain detects and uses sensory information to control movement.

Even the simple act of picking up a cup of coffee requires the brain to rapidly perform a complex series of sensory to motor transformations.

While the everyday act of reaching, grasping, and balancing a cup may not appear complex, simple movements such as tying a shoe or buttoning a shirt require participation of wide areas of the nervous system. The brain must rapidly perform a complex series of sensory to motor transformations, processing sensory information about one’s body and the external environment from sensory receptors to command and control movement. The way the nervous system generates movement has been studied formally for about 150 years, and despite remarkable advances in technology the scientific community is just beginning to identify how the systems in the brain work together in an integrated fashion to create complex mental processes and command movement. In addition to his role as Dean of the Faculty of Health and Social Development, Binsted works with researchers across Canada to better understand how the human brain detects and uses sensory information

Main Research Focus:

1. Role of visual processing in motor learning and control
2. Influence of environmental stress (e.g., temperature, hypoxia, fatigue) on sensorimotor function
3. Improving motor skill acquisition performance



GORDON BINSTED

About

A UBC Vancouver alum, Dr. Gordon Binsted completed his undergraduate education in human kinetics. During this time Binsted was drawn to the role that the human brain plays in controlling and commanding human movement. In line with this passion, Binsted completed a Master's at McMaster University studying motor behaviour, before continuing to finish his PhD at the University of Alberta in experimental psychology. After holding positions at the University of Illinois, the Beckman Institute, and the University of Saskatchewan, Binsted returned to UBC in 2007 — this time to the Okanagan campus — as professor in the School of Health and Exercise Sciences.

Binsted played a pivotal role in the School, growing the Bachelor of Human Kinetics from 50 to 225 students, and increasing the number of faculty members from 3 to 20 full-time appointments. The School, in partnership with UBC Vancouver's Kinesiology, is now regularly ranked in the top three in the world in the QS University Rankings in sports-related subjects. In 2011, during this period of growth for the School and campus, Binsted was appointed Dean of the Faculty of Health and Social Development. Since then, Binsted has taken on numerous leadership roles on the Okanagan campus during this tenure including Associate Provost Academic Health Initiatives, Acting Vice Principal Research, and Acting Dean Faculty of Education.

As Dean of the Faculty of Social Development, Binsted oversees three Schools: School of Nursing, School of Social work and School of Health and Exercise Sciences. In this role Binsted is focused on advancing the Faculty's reputation by building on strong foundations in health research. Binsted aims to support collaborative work to support training graduates to find answers to questions that improve the health and well-being for the communities the Faculty serves: regionally, nationally, and internationally.

Research Environment

Binsted is head of the Perception Action lab which collaborates with labs across campus to better understand how the human brain detects and uses sensory information to control movement. Binsted and his team, however, are rarely found in the lab. Binsted has trekked from the high mountain passes of Nepal to simulated outer space environments such as HI-SEAS (Hawai'i Space Exploration Analog and Simulation) habitat to better understand the human brain.

Next Stages

Binsted is driven by the passion to model new ways of thinking about interdisciplinary and innovative programs. As an experienced academic leader, Binsted is dedicated to creating ties with organizations around the world to empower students researchers and community partners.



FEATURED PROJECT

Simulation habitat launches experiments on astronaut fatigue

While a trip to the red planet may still be years away, Binsted and a team of Canadian researchers visited simulated Mars habitat HI-SEAS (Hawai'i Space Exploration Analog and Simulation) habitat. The HI-SEAS project, funded by NASA and led by the University of Hawai'i at Mānoa, studies human behavior and performance and aims to help determine individual and team requirements for long-term space exploration missions, including travel to Mars. During the one-week simulation, the crew of scientists investigated the influence of fatigue on memory, decision-making, learning, attention and perception. The eight-day simulation was designed to study a concept called cognitive fatigue, where the brain begins to make poor decisions the more tired it gets. The results of the studies will have wide-ranging impacts on people in many occupations who face long work hours and require critical decision-making skills, including emergency room physicians, pilots or heavy equipment operators.

TO LEARN MORE:

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