"Apoplexic Now: Biomechanics of Locomotion in the Lab and in the Wild"

Art Kuo, Ph.D.
Professor, Kinesiology
University of Calgary

Tuesday, Aug. 29, 2017, 4:00 pm | B11 Kimball Hall
Refreshments at 3:30, 204 Thurston Hall

ABSTRACT
A recurring theme in literature is the comfortable bourgeoisie's thirst for adventure. The protagonist is frustrated or bored with their cloistered, structured environment. They imagine the frontier as idyllic, natural, and exciting, and thrust themselves into an adventure of the unknown. But it is not what they expected: it is untamed, anything but idyllic, and maybe even lethal. Examples include Joseph Conrad’s Heart of Darkness, the movie Apocalypse Now, and more recently, The Life of Pi, and Into the Wild. These play out in various ways, some depressing, some comic, some quite grim.

Here is the story of a naive biomechanist, who idles away in the laboratory of constant-speed treadmills, accurate motion capture, and perfect theories, from which the wild seems so alluring. It is full of uneven terrain, irregular steps, and other exciting thrills. Predictably, the realities are more than he bargained for, and he receives his comeuppance. But how does the story end? Does the biomechanist lose his bearings (tenure), starve (for funding), or even go mad (for even worse theories)? Does he long to return to the relative safety of the now sentimentalized lab? Is anything ever the same again? Join this classic tale's academic edition, nearly as long as Apocalypse Now but far less entertaining. No Academy Awards will be won, no animals will be harmed. Some scientists may be imperiled.

BIOGRAPHICAL SKETCH
Art Kuo is a Professor of Kinesiology at University of Calgary (2016-present). His research group studies the basic principles of locomotion and other movements, and applies those principles to the development of robotic, assistive, and therapeutic devices to aid humans. Current interests include walking and running on uneven terrain, development of wearable sensors to track foot motion in the wild, and devices to improve the economy of locomotion in the impaired.

Background:
• Dr. Benno Nigg Chair in Biomechanics (2016 – present)
• Canada Research Chair, Tier 1 (2017 – present)
• Professor of Mechanical Engineering at University of Michigan (1994-2016)
• Ph.D. in Mechanical Engineering, Stanford
• BS in Electrical Engineering, University of Illinois (Urbana Champaign)