MELBOURNE SCHOOL OF
POPULATION & GLOBAL HEALTH

THE UNIVERSITY OF MELBOURNE

Kriton Speech:
Artificial Intelligence and Mental Health

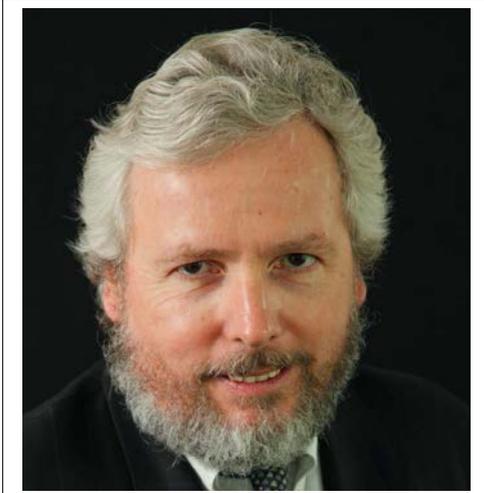## Professor Joachim Diederich

5-6pm Tuesday 18 August 2015
Rm 410 Level 4,
207 Bouverie Street, Carlton

Kriton Speech integrates artificial intelligence and psychological methods to acquire knowledge for hybrid / neural network systems and to apply this knowledge for computational diagnosis. As a knowledge acquisition system, Kriton Speech elicits domain specific knowledge, and as an application, it applies this knowledge for diagnostic purposes.

Kriton Speech exclusively uses a voice user interface (VUI). The system uses upper-level ontologies and domain-specific knowledge, as well as psychological heuristics to 1) interview the user to obtain knowledge; and 2) perform tasks such as psychological assessments, based on the knowledge obtained.

The system allows free verbal responses and has an explanation capability, ie provides feedback about why certain questions are asked. Currently the main application area of the system is clinical psychological assessment. In this context, the system interviews a user for symptoms of a disorder and analyses transcribed speech samples to determine, with high accuracy, if there is a mental health problem.

This seminar includes a demonstration of the system and discusses the main application area: mental health assessments.

Joachim Diederich is a clinical psychologist and computer scientist.

He is the Founder and Director of the Psychology Network Pty Ltd and an Honorary Professorial Fellow in the Centre for Mental Health at the University of Melbourne and an Honorary Professor in the School of Information Technology and Electrical Engineering at the University of Queensland. Joachim obtained a Habilitation (Higher Doctorate) in Computer Science from the University of Hamburg (Germany), a PhD in Psycholinguistics/Computer Linguistics from the University of Bielefeld (Germany) and a Masters degree in Psychology (with a specialisation in Clinical Psychology) from the University of Münster (Germany).

His professional career includes four years at the German National Research Center for Information Technology (GMD) and two years at the International Computer Science Institute in Berkeley, California.