

The Melbourne Clinical Gait Course, 2018



WELCOME

Thank you for registering to attend the Melbourne Clinical Gait Analysis Course, 2018.

We would like to welcome you to an exciting and comprehensive course program.

It is particularly great to welcome those attending from interstate and overseas.

This may not be the best time of year to visit Melbourne but it is the perfect time to be cosy and warm inside learning about gait analysis!

We hope that you will gain an appreciation and knowledge of what is required for clinical gait analysis

Regardless of your professional background and training, this course should provide a forum for stimulating discussion and learning opportunities.

We hope you will join us on the course and social events and make the most of this opportunity to network with friends in the field, meet new colleagues and forge new connections across the gait analysis community.

Pam Thomason
Course Coordinator

COURSE FACULTY

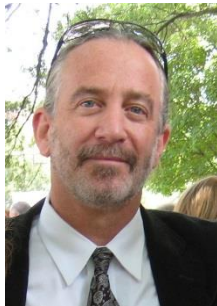
This course is being led by:



Prof H. Kerr Graham

Kerr is internationally renowned for his clinical research and in particular his research into the combination of orthopaedic surgery and Botulinum Toxin to improve walking in children with cerebral palsy. He has over 120 publications in peer-reviewed journals and is regularly invited to speak at national and international conferences. Kerr has twice been awarded the prestigious Richmond Prize for the best paper presented to the American Academy of Cerebral Palsy and Developmental Medicine and in 2001 won the John Mitchell Crouch Fellowship - the highest research award of the Royal Australasian College of Surgeons. Kerr is an enthusiastic teacher and is always willing to share his knowledge. He was awarded the American Academy of Cerebral Palsy and Developmental Medicine Mentorship Award in 2015. Professor Graham was responsible for establishing the Hugh Williamson Gait Laboratory at the Royal Children's Hospital.

With International Speakers:



Dr Jon R. Davids

Jon R. Davids MD is a board certified Paediatric Orthopaedic Surgeon, is the Assistant Chief of Orthopaedics and Medical Director of the Motion Analysis Laboratory at the Shriners Hospitals for Children Northern California; and Professor and Ben Ali Chair in Paediatric Orthopaedics in the Department of Orthopaedics at the University of California Davis Medical School in Sacramento, California, USA. He has worked for the Shriners Hospitals for Children since 1993. Jon is internationally recognized for his work in treating children with cerebral palsy and limb deficiencies. Jon is a member of the Paediatric Orthopaedic Society of North America, International Paediatric Orthopaedic Think Tank, the American Orthopaedic Association, the American Academy of Orthopaedic Surgeons, the American Board of Orthopaedic Surgeons, Gait & Clinical Movement Analysis Society, and the American Academy of Cerebral Palsy and Developmental Medicine.



Assoc Prof Sylvia Ounpuu

Sylvia Ounpuu, M.Sc., is the Director of Research of the Center for Motion Analysis at the Connecticut Children's Medical Center and has been with the CMA since 1987. She received a Bachelor of Science Degree in Kinesiology (1982) and a Masters of Science Degree in Biomechanics (1986), both at the University of Waterloo in Ontario, Canada. She is an Associate Professor in the Department of Orthopaedic Surgery, School of Medicine at the University of Connecticut. Sylvia has over 50 peer reviewed journal publications. Her research interests have focused on understanding the pathomechanics of gait issues and evaluating treatment outcomes for surgical intervention in patients with cerebral palsy.

Sylvia's current research focus includes long-term treatment outcomes in patients with cerebral palsy, study of the pathomechanics of Charcot-Marie-Tooth disease and determining the role of gait analysis in treatment decision-making for patients with spinal bifida.

Faculty

From The Hugh Williamson Gait Analysis Laboratory and Orthopaedics Department, Royal Children's Hospital, Melbourne (alphabetical order):

Dr Tandy Hastings-Ison

Dr Abhay Khot

Ms Jessie Mackay

Ms Liz Martin

Mrs Jessica Pascoe

Dr Elyse Passmore

Dr Paulo Selber

Ms Pam Thomason

Administrative Support:

Ms Mikaela Benke

GENERAL INFORMATION FOR DELEGATES

VENUE

The RACV Club

Level 2 Bourke Rooms 1 and 2

501 Bourke Street

Melbourne, 3000

VICTORIA

The RACV Club is in the heart of the Melbourne CBD.

SOCIAL PROGRAM

Welcome drinks and nibbles

Date: Monday 6th August 2018

Time: 5pm - 6pm

Venue: Level 1 Gallery

The RACV Club

Cost: Included in course registration

Course dinner

Date: Tuesday 7th August 2018

Time: 6:00pm

Venue: Chin Chin Restaurant-Gogo Bar, 125 Flinders Lane, Melbourne

A short 15 minute walk through the city from The RACV Club, Melbourne.

Cost: \$90 per head Banquet Dinner, beer, house wine and soft drinks included.

PRELIMINARY

PROGRAM DETAILS

The program has been designed to appeal to a broad range of professionals involved in the varied aspects of clinical gait analysis.

The teaching approach draws on the experience of gait analysis for children with cerebral palsy to help plan complex orthopaedic surgery but the course will be informative to anyone involved in instrumented clinical gait analysis.

This three day course is an introduction to understanding and interpreting gait analysis data to guide clinicians to a better understanding of the impairments affecting their patients walking ability. A new web-based application to detect gait features computationally will be introduced.

Day one focuses on the understanding of normal gait and introduces the basic concepts and terminology used in instrumented gait analysis. The principles of interpretation of clinical gait analysis data will be presented.

Days 2 and 3 explore the interpretation of clinical gait data and the identification of impairments affecting gait. There will be practical sessions for participants to experience and learn data analysis techniques with time for group discussions. Mock gait analysis reporting sessions will be included with a panel of surgeons, engineers and physiotherapists discussing cases to establish the impairments affecting gait and management recommendations. There will be ample opportunity for audience participation in these discussions!

Learning objectives:

- To develop an understanding of the requirements for normal gait and normal gait analysis data
- To gain an understanding of the impairment focused approach to data interpretation
- To identify common impairments associated with gait abnormalities seen in children with cerebral palsy
- To develop skills of gait analysis data interpretation and reporting

COURSE MATERIALS

Course materials have been provided on a USB stick. You are most welcome to bring your electronic device to the course. Please keep in mind that there will be limited stations available to charge your device.

Day 1 Monday 6th August 2018: Understanding normal gait and principles of interpretation

Time	Topic	Faculty
8.00-8.30	Registration, tea and coffee on arrival	Mikaela Benke
8.30-8.40	Introduction and course objectives	Kerr Graham
8.40-9.10	Basic Concepts: Temporal spatial parameters, introduction to gait terminology and gait graphs	Sylvia Ounpuu
9.10-9.40	The conventional gait model	Elyse Passmore
9.40-10.40	Introduction to kinematics and normal kinematic patterns	Sylvia Ounpuu
10.40-11.10	Break	
11.10-12.20	Introduction to kinetics and normal kinetic patterns	Sylvia Ounpuu
12.20-1.00	Two dimensional gait assessment and visual gait scales	Jessica Pascoe
1.00-1.15	Computer and application technology used for video analysis	Jon Davids
1.15-2.15	Lunch	
2.15-2.45	Physical examination: Norms and interpretation	Pam Thomason
2.45-3.30	Introduction to EMG	Sylvia Ounpuu
3.30-3.45	Pedobarography and assessment of the foot	Jon Davids
3.45-4.15	Break	
4.15-4.45	Considering data quality and error discussion	Elyse Passmore and Jessica Pascoe
4.45-5.00	Principles of impairment focussed interpretation	Pam Thomason
5.00-6.00	Welcome reception: drinks and nibbles	The RACV Club, Level 1 Lounge

Day 2 Tuesday 7th August 2018: Interpreting and understanding pathological gait

Time	Topic	Faculty
8.00-8.30	Tea and coffee on arrival	
8.30-9.00	Gait analysis in decision making: The diagnostic matrix	Jon Davids
9.00-9.15	Orientation to the child with cerebral palsy	Jon Davids
9.15-9.30	Identifying gait features and mark up	Tandy Hastings-Ison
9.30-10.10	Interpretation: grouping gait features and incorporating clinical data	Pam Thomason
10.10-10.40	Break	
10.40-11.40	Sagittal plane: Common gait features and interpretation	Sylvia Ounpuu
11.40-12.10	Sagittal plane: Guided case	Liz Martin
12.10-12.40	Management of children with cerebral palsy: Sagittal plane	Jon Davids
12.40-1.40	Lunch	
1.40-3.25	Case studies (clinicians)	Musculoskeletal modelling (biomechanists) Faculty
3:25-3:55	Break	
3.55-4.30	Mock reporting session: Discussion of cases	Panel
4.30-5.00	Use of orthoses to improve gait in children with cerebral palsy	Jon Davids
6.00-8.15	Course dinner	Chin Chin Restaurant Gogo Bar 125 Flinders Lane Melbourne

Day 3 Wednesday 8th August 2018: Interpreting and understanding pathological gait

Time	Topic	Faculty
8.00-8.30	Tea and coffee on arrival	
8.30-8.50	Coronal plane: Common gait features and interpretation	Sylvia Ounpuu
8.50-9.30	Transverse plane: Common gait features and interpretation	Sylvia Ounpuu
9.30-10.20	Primary features vs compensations	Sylvia Ounpuu
10.20-10.50	Break	
10.50-11.10	Impact of the trunk and trunk kinematics	Sylvia Ounpuu
11.10-11.40	Gait evaluation: Outcome measures and their uses	Pam Thomason
11.40-12.00	Management of coronal and transverse plane impairments in cerebral palsy	Jon Davids
12.00-12.30	Guided complex case	Tandy Hastings-Ison
12.30-1.30	Lunch	
1.30-3.15	Case studies (clinicians)	Programming (biomechanists)
3:15-3:45	Break	
3.45-4.15	Mock reporting session: Discussion of cases and quality assurance	Panel
4.15-4.35	Gait analysis in other pathologies	Sylvia Ounpuu
4.35-4.50	Quality assurance and limitations of gait analysis	Elyse Passmore
4.50-5.00	Future of gait analysis: Modelling and machine learning	Elyse Passmore
5.00-5.15	Summary and close	Kerr Graham