



Centaur Biomechanics “Virtual” Equine Sports Science Summit

Saturday 2nd October 2021

Presenter Biographies

Prof. Michael A. Weishaupt:

Dr. Weishaupt graduated in Veterinary Medicine in 1989 at the University of Berne and worked the first 3 years as an intern at the Swiss National Stud in Avenches and the Department of Large Animal Medicine of the University of Berne where he completed his doctoral thesis on the relationship among local structural, biochemical and functional variables describing muscle oxidative capacity in horses and steers. Since 1994 he works at the University of Zurich, School of Veterinary Medicine and is in charge of the Equine Performance Centre, a clinical as well as research unit of the Equine Department. In 2004 he finished his PhD on the compensatory mechanisms of weight bearing lameness in horses and received in 2010 the *Venia legendi* of the University of Zurich for Equine Sports Medicine and Exercise Physiology. Since 2014 he is a diplomate of the American College of Sports Medicine and Rehabilitation. In the field of equine sports medicine, his special interests are assessment of poor performing horses and functional testing during exercise, diseases of the upper airways, orthopedics, shoeing and biomechanics of lameness. In addition to a number of research papers in the field of sports medicine and biomechanics, he has published as editor two e-learning tools, one on equine upper airway diseases (Equad) and one on shoeing and diseases of the hoof (e-hoof.com). Dr. Weishaupt is an accredited racetrack veterinarian and member of the veterinary advisory board of the Swiss Horseracing Federation and member of the accreditation board of the European Federation of Farriers Associations (EFFA).



Dr. Rikke Schultz:

Rikke Schultz graduated in veterinary medicine from University of Copenhagen in 1992. Along with the study she started to be interested in holistic medicine. This made it possible to integrate holistic approaches to regular practice right from the beginning. For 5 years she had a mixed





practice in Iceland followed by work in an equine clinic in Denmark for 8 years. She holds international exams in veterinary acupuncture since 1997, osteopathy since 2003 and homeopathy 2016. From 2005 she has her own equine holistic practice and she attends anatomical research, teaching and censorship at University of Copenhagen and lectures and teaches internationally.

Simon John Curtis:

Simon Curtis practiced farriery in Newmarket, England for 48 years. He has lectured and demonstrated farriery in 30 countries on 6 continents including the USA, Australia, India, Russia, and Brazil. He has published four textbooks on farriery and has been published in numerous journals. Simon the only farrier awarded an Honorary Associate by the Royal College of Veterinary Surgeons (2002). He regularly speaks at the British Equine Veterinary Association Congress, World Equine Veterinary Association Congress, and International Hoof Care Summit. Simon Curtis is a Past Master of the Worshipful Company of Farriers (2001-2002) and Chairman of the Farriers Registration Council (2006-10). He is a Fellow of the Worshipful Company of Farriers by examination (FWCF). In 2005 Simon was inducted into the International Farriers Hall of Fame at the Kentucky Derby Museum. Simon gained a BSc. (Hons) in Farriery through Myerscough College, University of Central Lancashire in 2011. In 2017 he gained a Doctoral degree in equine biomechanics and physiology. He was awarded an Honorary Fellowship of Myerscough College in July 2017 and in 2018 the Sir Colin Spedding Award by the National Equine Forum. In December 2018 his fourth book, *The Hoof of the Horse* was published, followed by *The Farrier* a pictorial book.



Dr. Sarah Hobbs:

Sarah Jane Hobbs is a Reader in Equine and Human Biomechanics at the University of Central Lancashire, where she also gained a BEng (Hons) Mechanical Engineering degree in 2000 and a PhD in Equine Biomechanics in 2007. Her PhD work involved developing instrumentation to measure internal hoof strain and using 3D motion capture techniques to track motion of the horse's forelimb. Since then, she has collaborated on international studies,





which include investigating fundamental aspects of balance and stability, exploring the functional consequences of uneven fore hooves, defining performance in dressage, and exploring methods of analysing continuous gait data. She is leading author on the FEI Equine Surfaces White Paper and has led the development of a complete set of protocols for the certification of show jumping competition surfaces for the FEI. In addition, she has been commissioned to lead a project to evidence the FEI para-dressage classification system. Her interests span the kinetics and kinematics of equine gait, hoof-horse-surface interactions, muscle activity during movement, horse/rider interactions and hoof structure, growth, and mechanics.

Dr. Elin Hernlund:

I work as a researcher in biomechanics, as a clinician with a focus on equine orthopaedics and as a teacher in functional and applied anatomy of the equine locomotor apparatus. As a post-doc researcher, I am involved in several different research projects with my biggest focus being on projects concerning equine hindlimb lameness as well as orthopaedic pain in large animals. The aim of my research is to better the understanding of movement and behavioural changes in horses due to orthopaedic pain, including changes in facial expression and body posture. In addition, I investigate risk factors for lameness, such as the influence of the rider as well as training surface. Since 2008, I have worked at SLU both as a researcher and as a clinician at the Equine Clinic of the University Hospital. In 2016, I defended my dissertation on training and competing surfaces in show jumping. Today, I work as a post-doc researcher at the Department of Anatomy, Physiology and Biochemistry. I have also had a part-time post-doc at Utrecht University in the Netherlands.



Prof. Marie Rhodin:

Marie Rhodin, DVM, associate Professor in equine clinical biomechanics at the department of Anatomy, Physiology and Biochemistry, Swedish University of Agricultural Sciences. She graduated 2003, PhD in 2008 where she studied horse and





rider interaction with focus on the effect of different head and neck positions on the kinematics of the back in riding horses. Her main research focus experience in objective motion analysis for lameness detection with techniques as high-speed cameras and inertial measure units. To implement objective measurements in the lameness exams she has looked into the effect of circular movement on movement symmetry in both sound and lame horses. In 2017 she passed the board examination and was accredited as a diplomate of the American College of Veterinary Sports Medicine and Rehabilitation. In 2019 she also become diplomate of the European College of Veterinary Sports Medicine and Rehabilitation. Her main research focus is orthopaedic diagnostics, orthopaedic pain and objective motion analysis in horses, horse-rider interaction.

Haydn Price:

Haydn has been a practicing farrier for 38 years and during that time has developed a special interest in performance and lameness shoeing techniques. During that continued period, he has been instrumental in the practical application and understanding of Farriery specific biomechanics, and the utilisation of equine gait analysis systems for both profiling and quantitative data collection. An interest in research lead to a number of projects looking at applied farriery and its effects on function. Completed the Graduate Diploma in Equine Locomotor and Research course in 2018 at the RVC.



A regular international lecturer and contributor to equestrian related symposiums in Farriery, primarily in North America, South America Australia, Mexico and Europe. Held the post of lead consultant farrier for 20 years to the British Equestrian Federation (BEF) and World Class Equestrian Programme (WCP) before retiring in March 2019. Responsibilities include the development and implementation of a proactive assessment procedure within the Farriery sector looking specifically at performance limiting factors of elite performance horses. Consultant farrier to the HKJC performance programme developing strategic procedures for the implementation of horse profiling as a continued management process, along with focused performance enhancement through applied farriery foot care. Awarded the BEF Medal of Honour in 2011 for his continued contribution to Farriery within the BEF and the WCP. Inducted into the International Farriery Hall of Fame (2013) for his continued services, commitment, and education to the International Farriery Profession. Continues to operate a mixed referral practice to all equine disciplines with a particular interest in lameness and poor





performance. When not working he is often found flying around the Welsh sky's with his 5 year old grandson who equally enjoys his passion for flying.

Dr. Russell MacKechnie-Guire:

Russell MacKechnie-Guire graduated from Warwickshire College in 2006 with a BSc (Hons) in Equine and Human Sports Science and now holds a PhD in Equine Biomechanics, graduating from the Royal Veterinary College in 2019. Russell's thesis was titled 'The Relationship between Saddle and Rider Kinematics, Equine Locomotion, and Thoracolumbar Pressures in Sports Horses'. Russell is based at Centaur Biomechanics, a company which he founded in 2006. He has extensively researched the effect that tack (saddle, bridle and girth) has on equine health and performance. Russell's current area of research is horse-saddle-rider interaction, spinal kinematics in horses when ridden over ground and the effect that rider asymmetry has on equine back movement. In addition, Russell collaborates with researchers from around the world on various research projects associated with equine health and performance. He regularly presents his work at international meetings throughout the world and is a consultant for the British Equestrian Federations World Class, Team GBR programme. Russell is a member of the Team GBR's Scientific Advisory Group, Society of Master Saddlers Scientific Advisory Group and chairs the horse+rider subgroup, part of the International Task force on Laterality in Sports Horses.

