



Shear and tissue integrity – the state of the science

20 October 2014
Royal Overseas League, London



Research – Now & MT



- Clearly what goes on inside is critical
 - MRI, Ultrasound etc. and other tools
 - Detecting biological stress/change – biomarkers/biochem
- Currently the only reliable tool is the expert clinician's hand
 - Need a tool that is not so dependent on 'expert', but is KISS
 - Means of replicating/understanding WHAT we're measuring
- Measuring the 'dynamic' human/interface & impact
 - Logging
 - Evaluating movement etc.
- Characterise range of 'test subjects' for cushions etc.
- Create metrics (TR) to replace the 32mmHg myth...





Welcome

Hosts – Ray Hodgkinson MBE
Lloyd Walker (WG11)

Chairman – Professor Dan L Bader
BSc MSc PhD DSc, Professor of Bio-
engineering and Tissue Health





The ISO approach to wheelchair seating standards

Dr Nicola Petrone
University of Padova
Chairman ISO TC 173/SC1





The role of shear forces and shear strains in the development of pressure ulcers

Dr IR C W J Oomens

Biomedical Engineering Department
Eindhoven University of Technology





The impact of shear force on rehabilitation of amputees

Dr Saeed Zahedi OBE FREng CEng
FIMechE, Technical Director
Chas A Blatchford & Sons Ltd





Practical challenges in clinical assessment of soft tissue shear: where we are now and future potentials

Kath Bogie DPhil
Cleveland Advanced Platform
Technology Center





The role of moisture in increasing the friction of human skin

Professor M J Adams FREng
School of Chemical Engineering
University of Birmingham





Human and bench methods for measurement of shear and performance characteristics of devices intended to mitigate shear

Evan Call MS CSM (NRM)





Defining cushion shape compliance: study of 3D buttocks tissue deformation to inform cushion test method development

**Stephen Sprigle PhD PT
& Sharon Sonenblum PT
Georgia Institute of Technology**





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