**Day 1: Thursday January 24, 2019 **

[[Thu Jan 24](https://www.bme2019.nl/program/day/1)] [[Fri Jan 25](https://www.bme2019.nl/program/day/2)]

Bovenkant formulier



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| **Lecture room 558** | **Lecture room 559** | **Lecture room 535** | **Lecture room 536** |
| **08:00**   **Arrival, Registration, Company Exhibition**   |  | | --- | |  | | | | |
| **09:00**   **Lamoraalzaal: Conference Opening**   |  | | --- | |  | | | | |
| **09:15**   [**Keynote Prof. Anthony Bull, Imperial College, UK**](https://www.bme2019.nl/program/show_slot/3)   |  |  | | --- | --- | | 09:15  45 mins | **Engineering Mitigation, Protection, and Rehabilitation due to High Energy Trauma, Focusing on Amputees**  *Anthony Bull* | |  |  | | | | |
| **10:00**   **Break**   |  | | --- | |  | | | | |
| **10:30**   [**Sleep**](https://www.bme2019.nl/program/show_slot/17)  Chair: Jurriaan de Groot   |  |  | | --- | --- | | 10:30  15 mins | **Cardiorespiratory Interactions in Sleep Apnea and Associated Comorbidities**  *Carolina Varon, Margot Deviaene, Dries Hendrikx, Sara Van de Putte, Dries Testelmans, Bertien Buyse, Sabine Van Huffel* | |  |  | | 10:45  15 mins | **Unsupervised Artefact Detection in Emfit Sensor with Screening of Sleep Apnea Patients**  *Bertien Buyse, Dries Testelmans, Sabine Van Huffel, Carolina Varon* | |  |  | | 11:00  15 mins | **An Improved Deep Convolutional Neural Network for Sleep Stage Classification in Preterm and Term Neonates**  *Amir Hossein Ansari, Kirubin Pillay, Ofelie De Wel, Anneleen Dereymaeker, Katrien Jansen, Alexander Caicedo, Jan Vervisch, Sabine Van Huffel, Gunnar Naulaers, Maarten De Vos* | |  |  | | 11:15  15 mins | **Modelling Sleep State Misperception at Sleep Onset**  *Lieke Hermans, Tim Leufkens, Merel van Gilst, Tim Weysen, Marco Ross, Peter Anderer, Sebastiaan Overeem, Annemiek Vermeeren* | |  |  | | 11:30  15 mins | **Night to Night Variability Analysis of the Saturation Signal in Children with Suspected Sleep Apnea.**  *Xenia Hoppenbrouwer, Parastoo Dehkordi, Aryannah Rollinson, Dustin Dunsmuir, Mark Ansermino, Guy Dumont, Ainara Garde* | |  |  | | 11:45  15 mins | **From Free Text to Structured Information in Sleep Description Analysis Using Deep Learning Networks**  *Heereen Shim, Stijn Luca Luca, Dietwig Lowet, Bart Vanrumste* | |  |  | | **10:30**   [**The heart**](https://www.bme2019.nl/program/show_slot/18)  Chair: Richard Lopata   |  |  | | --- | --- | | 10:30  15 mins | **Blood Flow Patterns in a Model of the Human Heart**  *Fei Xu, Sasa Kenjeres* | |  |  | | 10:45  15 mins | **Tomographic PIV in Left Ventricle Phantom for 4D Flow MRI and 4D Echo-PIV Validation**  *Hicham Saaid, Jason Voorneveld, Christiaan Schinkel, Sasa Kenjeres, Johan G. Bosch, Jos Westenberg, Frank Gijsen, Patrick Segers, Pascal Verdonck, Tom Claessens* | |  |  | | 11:00  15 mins | **A Simplified Atrial Electrogram Model for Tissue Conductivity Estimation**  *Bahareh Abdi, Richard C. Hendriks, Alle-Jan van der Veen, Natasja M.S. de Groot* | |  |  | | 11:15  15 mins | **Myocardial Perfusion Phantom Experiments in CT**  *Marije E. Kamphuis, Gijs J. de Vries, Marcel J.W. Greuter, Riemer H.J.A. Slart, Cornelis H. Slump* | |  |  | | 11:30  15 mins | **Variational Mode Decomposition Features for Heartbeat Classification**  *Amalia Villa Gomez, Sibasankar Padhy, Rik Willems, Sabine Van Huffel, Carolina Varon* | |  |  | | 11:45  15 mins | **Evaluation of Single Lead Ecg Features for Detecting Out-Of-Hospital Cardiac Arrests**  *Jordy Jansen, Richard Houben, Joël Karel, Ralf Peeters* | |  |  | | **10:30**   [**Medical devices & safety**](https://www.bme2019.nl/program/show_slot/19)  Chair: Ingrid Koopmans   |  |  | | --- | --- | | 10:30  15 mins | **The Risk of Sawing in Bone**  *Jip Pluim, Lucas Jimenez-Bou, Reza Gerretsen, Arjo J. Loeve* | |  |  | | 10:45  15 mins | **User and context framework to develop new diagnostic devices in the low-resource setting**  *GYoung Van, Jan-Carel Diehl, Jo M.L. van Engelen* | |  |  | | 11:00  15 mins | **3D Printing of Highly Complex Medical Instruments**  *Costanza Culmone, Paul WJ Henselmans, Gerwin Smit, Paul Breedveld* | |  |  | | 11:15  15 mins | **Detecting Magnetic Particles in a Patient, in a Regular Operating Room**  *Bennie ten Haken* | |  |  | | 11:30  15 mins | **Uniforming the Route Around CE Issues in Healthcare Institutions in the Netherlands**  *Herke Jan Noordmans* | |  |  | | 11:45  15 mins | **Faltering Medical Instruments and Suboptimal Situation Awareness as Risk-Factors for Surgery**  *Linda Wauben, Connie Dekker-van Doorn, Johan Lange, Jan Klein* | |  |  | | **10:30**   [**Arteries**](https://www.bme2019.nl/program/show_slot/20)  Chair: Alina van der Giessen   |  |  | | --- | --- | | 10:30  15 mins | **Adaptive Velocity Compouding for Blood Vector Velocity Imaging in Carotid Arteries**  *Anne Saris, Rik Hansen, Stein Fekkes, Jan Menssen, Maartje Nillesen, Chris de Korte* | |  |  | | 10:45  15 mins | **Novel Approach for Material Properties Estimation of Atherosclerotic Plaque Tissue**  *Ronald van den Berg, Stéphane Avril, Frank Gijsen, Ali Akyildiz* | |  |  | | 11:00  15 mins | **Carotid Plaque Composition Differentiation in Asymptomatic Individuals Using Compound Ultrasound Strain Imaging Validated by Magnetic Resonance Imaging**  *Hendrik Hansen, Inge van den Munckhof, Eveline van der Kolk, Anton Meijer, Marinette van der Graaf, Joost Rutten, Chris de Korte* | |  |  | | 11:15  15 mins | **High-Risk Coronary Plaque Development Is Related to Multi-Directional Shear Stress in an Atherosclerotic Pig Model**  *Ayla Hoogendoorn, Annette Kok, Eline Hartman, Suze-Anne Korteland, Lorena Casadonte, Adriaan Coenen, Frank Gijsen, Dirk Jan Duncker, Antonius van der Steen, Jolanda Wentzel* | |  |  | | 11:30  15 mins | **Towards in Vivo Photoacoustic Imaging of Vulnerable Plaque in Carotid Artery**  *Min Wu, Richard Lopata* | |  |  | | 11:45  15 mins | **Detection of Haemorrhages Using a Single Wavelength and Singular Value Decomposition**  *Roy van Hees, Frans van de Vosse, Richard Lopata* | |  |  | |
| **12:00**   **Lunch**   |  | | --- | |  | | | | |
| **12:30**   **Lecture room 525: IEEE EMBS Chapter meeting**   |  | | --- | |  | | | | |
| **13:30**   [**Birth & Neonates**](https://www.bme2019.nl/program/show_slot/22)  Chair: Sasa Kenjeres   |  |  | | --- | --- | | 13:30  15 mins | **Decomposition of a Multiscale Entropy Tensor for Sleep Stage Identification in Preterm Neonates**  *Ofelie De Wel, Mario Lavanga, Alexander Caicedo, Katrien Jansen, Gunnar Naulaers, Sabine Van Huffel* | |  |  | | 13:45  15 mins | **Brain-Heart Interaction to Assess Stress in Premature Infants**  *Mario Lavanga, Chiara Bernagie, Alexander Caicedo, Katrien Jansen, Els Ortibus, Gunnar Naulaers, Sabine Van Huffel* | |  |  | | 14:00  15 mins | **Monitoring Infant Brain Perfusion by Trans-Fontanel Echography (MIFFY)**  *Jorinde Kortenbout, Rik Vos, Jeroen Dudink, Paul Govaert, Martin Verweij, Michiel Pertijs, Nico de Jong* | |  |  | | 14:15  15 mins | **Improving Maternal Care in Resource-Limited Settings Using a Low-Cost Ultrasound Device and Machine Learning**  *Thomas van den Heuvel, Bram van Ginneken, Chris de Korte* | |  |  | | 14:30  15 mins | **Non-Invasive Multi-Parametric Ultrasound (NIMPUS) Classification Tool to Assess Fetal Lung Maturity**  *Gert Weijers, Freke Wilmink, Frank van der Bussche, Chris de Korte* | |  |  | | 14:45  15 mins | **Nonlinear Transfer Entropy to Assess the Neurometabolic Coupling in Premature Neonates**  *Dries Hendrikx, Liesbeth Thewissen, Anne Smits, Gunnar Naulaers, Karel Allegaert, Sabine Van Huffel, Alexander Caicedo* | |  |  | | **13:30**   [**Soft Tissue & Abdominal Organs**](https://www.bme2019.nl/program/show_slot/23)  Chair: Linda Wauben   |  |  | | --- | --- | | 13:30  15 mins | **3D Ultrasound Strain Imaging of the Puborectalis Muscle**  *Shreya Das, Hendrik H.G. Hansen, Frieda van den Noort, C. Huub van der Vaart, Chris L. de Korte* | |  |  | | 13:45  15 mins | **Quantitative Ultrasound Imaging and Characterization of Uterine Peristaltic Waves**  *Yizhou Huang, Federica Sammali, Celine Blank, Nienke Kuijsters, Chiara Rabotti, Dick Schoot, Massimo Mischi* | |  |  | | 14:00  15 mins | **Needle-Hepatic Vessel Interaction Forces: Adding Blood Vessels to a Liver Phantom**  *Tonke L. de Jong, Sander van der Velden, Jenny Dankelman, John J. van den Dobbelsteen* | |  |  | | 14:15  15 mins | **Enhancing Lateral Contrast and Resolution Using Multi-Perspective Ultrasound Imaging: Applied to Abdominal Aortas**  *Niels Petterson, Marc van Sambeek, Frans van de Vosse, Richard Lopata* | |  |  | | 14:30  15 mins | **Quantitative third harmonic generation microscopy for assessment of presence/absence of diffuse glioma in human brain tissue**  *Zhiqing Zhang, Jan de Munck, Niels Verburg, Annemieke Rozemuller, Willem Vreuls, Laura van Huizen, Sander Idema, Eleonora Aronica, Philip de Witt Hamer, Pieter Wesseling, Marie Louise Groot* | |  |  | | 14:45  15 mins | **Efficacy of MRI in Determining the Effect of Gravitation and the True Extent of Prolapse in the Standing Position.**  *Anique Grob, Judith olde Heuvel, Jurgen Futterer, Diana Massop, Angelique Veenstra van Nieuwenhoven, Frank Simonis, Huub van der Vaart* | |  |  | | **13:30**   [**Behavior & Monitoring**](https://www.bme2019.nl/program/show_slot/24)  Chair: Joris Jaspers   |  |  | | --- | --- | | 13:30  15 mins | **Bathroom Activity Monitoring Via Wearable Accelerometer Device**  *Yiyuan Zhang, Ine D'Haeseleer, Vero Vanden Abeele, Bart Vanrumste* | |  |  | | 13:45  15 mins | **Carewear: Integrating Wearable Technology in Mental Healthcare**  *Glen Debard, Romy Sels, Marc Mertens, Nele De Witte, Tom Van Daele, Bert Bonroy* | |  |  | | 14:00  15 mins | **Transfer Learning Improves Event-Based Modeling in Small and Heterogeneous Datasets**  *Leontine Ham, Vikram Venkatraghavan, Alle Meije Wink, Wiesje van der Flier, Rebecca Steketee, Marion Smits, Wiro Niessen, Stefan Klein, Esther Bron* | |  |  | | 14:15  15 mins | **Detection of Infant Cries Using Acoustic Features: a Comparison of Classification Techniques**  *Ahnjili ZhuParris, Max van Gent, Robert-Jan Doll, Geert Jan Groeneveld, Adam Cohen* | |  |  | | 14:30  15 mins | **Digital Biomarkers in Early Phase Clinical Trials Using a Remote Monitoring System: a Method Description**  *Ghobad Maleki, Robert-Jan Doll, Ernst-Jan Bos, Geert Jan Groeneveld, Adam Cohen* | |  |  | | 14:45  15 mins | **Development of a Realistic On-the-Road Driving Test for Characterization of (impaired) Driving Behavior**  *Ingrid Koopmans, Hein van der Wall, Ernst Jan Bos, Hemme Hijma, Robert-Jan Doll, Rob Zuiker, Adam Cohen* | |  |  | | **13:30**   [**Neurological disorders**](https://www.bme2019.nl/program/show_slot/25)  Chair: Jan R. Buitenweg   |  |  | | --- | --- | | 13:30  15 mins | **Non-Convulsive Status Epilepticus Detection**  *Ying Wang, Xi Long, Johannes P. van Dijk, Richard H.C. Lazeron, Ronald M. Aarts, Johan Arends* | |  |  | | 13:45  15 mins | **Hyper-Spectral Imaging of the Human Brain Revealing Slow Sinusoidal, Hemodynamic Oscillations at Distinct Frequencies**  *Herke Jan Noordmans, Dorien van Blooijs, Jeroen Siero, Jaco Zwanenburg, John Klaessens, Nick Ramsey* | |  |  | | 14:00  15 mins | **The Interaction Between a Cognitive Dual-Task and Visual Cues on Freezing-Severity and Gait in Parkinson's Disease**  *Janne Heijs, Sabine Janssen, Ciska Heida, Richard van Wezel* | |  |  | | 14:15  15 mins | **Design of a Multi-Functional Smart Optrode for Electrophysiology and Optogenetics**  *Ronaldo Ponte, Chengyu Huang, Vasiliki Giagka, Wouter Serdijn* | |  |  | | 14:30  15 mins | **Visibility Graph Methods in Nonconvulsive Seizure Detection**  *Hui Du* | |  |  | | 14:45  15 mins | **Embedding Small Electronic Components into Tiny Flexible Implants**  *Anna Pak, Wouter Serdijn, Vasiliki Giagka* | |  |  | |
| **15:00**   [**Poster session I**](https://www.bme2019.nl/program/show_slot/26)  40 presentations, [click](https://www.bme2019.nl/program/show_slot/26) to view all | | | |
| **16:00**   [**Poster session II**](https://www.bme2019.nl/program/show_slot/27)  41 presentations, [click](https://www.bme2019.nl/program/show_slot/27) to view all | | | |
| **17:00**   **End poster sessions**   |  | | --- | |  | | | | |
| **18:00**   **Conference dinner in hotel restaurant**   |  | | --- | |  | | | | |
| **19:00**   **The Ritz: Job Market**   |  | | --- | |  | | | | |
| **20:15**   **The Ritz: Best Poster & IEEE EMB Best paper award ceremony**   |  | | --- | |  | | | | |
| **20:30**   **The Ritz Beer & Wine Party** | | | |

**Day 2: Friday January 25, 2019**

[[Thu Jan 24](https://www.bme2019.nl/program/day/1)] [Fri Jan 25]

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| **Lecture room 558** | **Lecture room 559** | **Lecture room 535** | **Lecture room 536** |
| **09:15**   [**Keynote Lecture Prof. Richard Reilly, Trinity College Dublin, Ireland**](https://www.bme2019.nl/program/show_slot/31)   |  |  | | --- | --- | | 09:15  45 mins | **Signal Processing derived Objective Measures to aid Clinical Decisions: examples from Neurology, Otolaryngology and Respiratory Medicine**  *Richard Reilly* | |  |  | | | | |
| **10:00**   **Break**   |  | | --- | |  | | | | |
| **10:30**   [**Sensors and pain**](https://www.bme2019.nl/program/show_slot/33)  Chair: Allan Veale   |  |  | | --- | --- | | 10:30  15 mins | **Psychophysical and Neurophysiological Correlates of Nociceptive Paired-Pulse Facilitation**  *Boudewijn van den Berg, Jan Buitenweg* | |  |  | | 10:45  15 mins | **CUTASTIM: a Superficial Stimulation Electrode for Pain Sensitivity Measurements – an Explorative Study**  *Niels Jansen, Jan R. Buitenweg* | |  |  | | 11:00  15 mins | **Modulating the Perception of Pain Using Virtual Reality**  *Robert-Jan Doll, Ingrid Koopmans, Geert Jan Groeneveld* | |  |  | | 11:15  15 mins | **Microstimulation in a Spiking Neural Network Model of the Superior Colliculus Elicits Normometric Eye Saccades**  *John van Opstal, Bahadir Kasap* | |  |  | | 11:30  15 mins | **Rapid Systolic Blood Pressure Changes after Standing Up Associate with Impaired Physical Performance in Geriatric Outpatients**  *Arjen Mol, Esmee Reijnierse, Marijke Trappenburg, Richard van Wezel, Andrea Maier, Carel Meskers* | |  |  | | 11:45  15 mins | **Smart Glasses for Visual Cueing in Augmented Reality: an On-Demand Turning Aid for Freezing of Gait in Parkinson’s Disease.**  *Jaap de Ruyter van Steveninck, Hizirwan Salim, Sabine Janssen, Tjitske Heida, Richard van Wezel* | |  |  | | **10:30**   [**Cancer**](https://www.bme2019.nl/program/show_slot/34)  Chair: Omer Can Akgun   |  |  | | --- | --- | | 10:30  15 mins | **Assessment of Fresh Breast Tumor Tissue Using HHG Microscopy**  *Laura van Huizen, Nikolay Kuzmin, Ellis Barbé, Susanne van der Velde, Elisabeth te Velde, Marie Louise Groot* | |  |  | | 10:45  15 mins | **3D Strain Estimation for Improved Breast Cancer Detection in Automated Volumetric Breast Ultrasound Scanners**  *Gijs Hendriks, Chuan Chen, Hendrik Hansen, Chris de Korte* | |  |  | | 11:00  15 mins | **Prediction of Prostate Cancer Biopsy Outcomes Based on Dynamic 3D Contrast-Enhanced Ultrasound Quantification**  *Rogier R Wildeboer, Ruud JG van Sloun, Pintong Huang, Hessel Wijkstra, Massimo Mischi* | |  |  | | 11:15  15 mins | **Fully Automatic Construction of Optimal Radiomics Workflows**  *Martijn Starmans, Sebastian van der Voort, Razvan Miclea, Melissa Vos, Fatih Incekara, Milea Timbergen, Maarten Wijnenga, Guillaume Padmos, Wouter Kessels, Arno van Leenders, Martin van den Bent, Arnaud Vincent, Dirk Grünhagen, Cornelis Verhoef, Stefan Sleijfer, Jacob Visser, Marion Smits, Maarten Thomeer, Wiro Niessen, Stefan Klein* | |  |  | | 11:30  15 mins | **Lab-on-Chip Device for High-Throughput Multi-Analysis Single-Cell Studies**  *Federico Bedini, Virgilio Valente* | |  |  | | 11:45  15 mins | **Design and Custom Fabrication of a Smart Temperature Sensor for an Organ-on-a-Chip Platform**  *Ronaldo Ponte, Vasiliki Giagka, Wouter Serdijn* | |  |  | | **10:30**   [**Neuromuscular – upper extremities**](https://www.bme2019.nl/program/show_slot/35)  Chair: Joleen Blok   |  |  | | --- | --- | | 10:30  15 mins | **Miniaturization of Hydraulic Components**  *Ronald Bos, Dick Plettenburg* | |  |  | | 10:45  15 mins | **It Takes a Week to Obtain Reliable Estimates of Tremor Characteristics: a Pilot Study in Organic and Functional Tremor Patients**  *Zeus Tlaltecutli Dominguez Vega, Gerrit Kramer, Jan Willem Elting, Marina A J Tijssen, Natasha M Maurits* | |  |  | | 11:00  15 mins | **Evaluating Time-Varying System Identification Methods to Assess Joint Impedance: a Simulation Study and Experimental Validation**  *Mark van de Ruit, Winfred Mugge, Alfred Schouten* | |  |  | | 11:15  15 mins | **Studying Single Nerve Cells in Humans by Integrating Multichannel Surface-EMG with Exctabiltiy Testing**  *Boudewijn T.H.M. Sleutjes, Ernest Boskovic, Leonard J. van Schelven, Leonard H. van den Berg, Hessel Franssen* | |  |  | | 11:30  15 mins | **Motor Axon Loss in Patients with SMA**  *Boudewijn T.H.M. Sleutjes, Camiel A. Wijngaarde, H. Stephan Goedee, Louise A.M. Otto, Renske I. Wadman, Inge Cuppen, Leonard H. van den Berg, W. Ludo van der Pol* | |  |  | | 11:45  15 mins | **A Semi-Automatic Workflow for CT-MRI Registration of Complex Deformations Induced by Interscan Radio-Ulnar Rotations**  *Ruurd Kuiper, Marijn van Stralen, Frank Zijlstra, Harrie Weinans, Kasper Roth, Joost Colaris, Ralph Sakkers, Peter Seevinck* | |  |  | | **10:30**   [**Neuromuscular – lower extremities 1**](https://www.bme2019.nl/program/show_slot/36)  Chair: Wouter Serdijn   |  |  | | --- | --- | | 10:30  15 mins | **Effect of Perturbation Amplitude and Number of Repetitions on System Identification of Human Balance Control During Stance**  *Ingrid Schut, Jantsje Pasma, Alfred Schouten, Herman van der Kooij* | |  |  | | 10:45  15 mins | **Provoking Neuromuscular Responses in the Healthy Knee with Various Gait Perturbations**  *Jim Schrijvers, Josien van den Noort, Martin van der Esch, Jaap Harlaar* | |  |  | | 11:00  15 mins | **Performance-Based Adaptive Assistance for Robotic Gait Training**  *Simone Fricke, Cristina Bayón, Herman van der Kooij, Edwin van Asseldonk* | |  |  | | 11:15  15 mins | **Hydra: Hydrostatic Actuation for Wearable Robotics**  *Kyrian Staman, Herman van der Kooij* | |  |  | | 11:30  15 mins | **Analysis of the Factors of Patellofemoral Instability Using Musculoskeletal Modelling and Simulation**  *Marco Marra, Sebastiaan van de Groes, Dennis Janssen, Nico Verdonschot, Bart Koopman* | |  |  | | 11:45  15 mins | **Eeg Analysis of Freezing of Gait in Local-Moving Experiment**  *Ying Wang, Mike X Cohen, Jorik Nonnekes, Richard van Wezel* | |  |  | |
| **12:00**   **Lunch**   |  | | --- | |  | | | | |
| **13:00**   [**Cardiovascular diseases**](https://www.bme2019.nl/program/show_slot/38)  Chair: Joost van Kordelaar   |  |  | | --- | --- | | 13:00  15 mins | **Photoplethysmography – Unobtrusive Means to Measure Force-Interval Relationships of the Heart During Atrial Fibrillation?**  *Linda Eerikäinen, Alberto Bonomi, Lukas Dekker, Fons Schipper, Rik Vullings, Ronald Aarts* | |  |  | | 13:15  15 mins | **Investigating Subendocardial Ischemia in Aortic Valve Stenosis Patients Using Speckle Tracking**  *Esther Maas, Richard Lopata, Frans van de Vosse, Arthur Bouwman, Patrick Houthuizen, Peter Bovendeerd* | |  |  | | 13:30  15 mins | **In Vitro Patient Specific Tavi-Procedure Assessment: a Tool for Clinical Decision Support and Training**  *Roel Meiburg, Jorn J.D. Roijen, Sjors J.A. van Velthoven, Jo M. Zelis, Marcel C.M. Rutten, Frans F.N. van de Vosse* | |  |  | | 13:45  15 mins | **In Aortic Coarctation Is the Age at Curative Reconstruction Correlated with Aortic Vessel Wall Stiffening: an Evaluation of Pulse Wave Velocity and Wall Shear Stress From 4D Flow MRI.**  *Joe Juffermans, Ineke Nederend, Pieter van den Boogaard, Hildo Lamb, Arno Roest, Jos Westenberg* | |  |  | | 14:00  15 mins | **Temporal and Spatial Changes in Wall Shear Stress During Atherosclerotic Plaque Progression in Mice**  *Ruoyu Xing, Astrid Moerman, Yanto Ridwan, Anton van der Steen, Frank Gijsen, Kim van der Heiden* | |  |  | | 14:15  15 mins | **Dual-Spect Translational Cardiovascular Imaging of Inflammatory Cellular Protagonists**  *Hilary Barrett, Eric Meester, Monique Bernsen, Kim van der Heiden, Anton van der Steen, Marion de Jong, Frank Gijsen* | |  |  | | **13:00**   [**Body - implant interfacing**](https://www.bme2019.nl/program/show_slot/39)  Chair: Bennie ten Haken   |  |  | | --- | --- | | 13:00  15 mins | **Titanium Nanostructures Produced by Inductively Coupled Plasma Reactive Ion Etching and their Effects on Cells**  *Mahya Ganjian, Khashayar Modaresifar, Kees Hagen, Peter-Leon Hagedoorn, Linda Otten, Michelle Minneboo, Lidy Fratila-Apachitei, Amir A Zadpoor* | |  |  | | 13:15  15 mins | **The Effect of Different Interference Fit on Micromotions and Opening in a Cementless Femoral TKA Component**  *Esther Sanchez Garza, Christoph Schilling, Thomas Grupp, Nico Verdonschot, Dennis Janssen* | |  |  | | 13:30  15 mins | **Surface Physical Nanocues with Bactericidal Activity**  *Khashayar Modaresifar, Mahya Ganjian, Manon Ligeon, Dwisetya Widyaratih, Cornelis Hagen, Peter-Leon Hagedoorn, Linda Otten, Lidy Fratila-Apachitei, Amir Zadpoor* | |  |  | | 13:45  15 mins | **Energy Efficient Sampling and Conversion of Bio-Signals Using Time-Mode Circuits**  *Omer Can Akgun, Wouter Serdijn* | |  |  | | 14:00  15 mins | **A Soft Exosuit for Assistance of the Elbow Joint: Design and Control**  *Lorenzo Masia, Michele Xiloyannis* | |  |  | | 14:15  15 mins | **Polymer-Encapsulated Single-Chip Implants for Bioelectronic Medicine**  *Kambiz Nanbakhsh, Wouter Serdijn, Vasiliki Giagka* | |  |  | | **13:00**   [**Joints**](https://www.bme2019.nl/program/show_slot/40)  Chair: Marloes Groot   |  |  | | --- | --- | | 13:00  15 mins | **Estimation of Ankle Joint Stiffness Via System Identification Techniques During Functional Movement**  *Ronald C. van 't Veld, Alejandro Moya Esteban, Alfred C. Schouten* | |  |  | | 13:15  15 mins | **Self-Defending Bone Implants**  *Ingmar van Hengel, Niko Eka Putra, Melissa Tierolf, Francisca Gelderman, Vito Valerio, Stefanos Athanasiadis, Raisa Grotenhuis, Ad Fluit, Bram van der Eerden, Lidy Fratila-Apachitei, Iulian Apachitei, Amir Zadpoor* | |  |  | | 13:30  15 mins | **Extracellular Matrix-Derived Bioink for Elastic Cartilage Bioprinting: Implications for Chondrogenesis**  *Ludo van Haasterecht, Dafydd Visscher, Yigitcan Sumbelli, M.N. Helder, J.P.J Don Griot, M.L. Groot, P.P.M van Zuijlen* | |  |  | | 13:45  15 mins | **Improving Long-Term Culture of Cartilage Tissue in an Ex Vivo Osteochondral Model**  *Martina Puricelli, Edoardo Andreini, Dave Wanders, Linda M. Kock* | |  |  | | 14:00  15 mins | **Biomechanical Functional Assessment of Hydrospacer to Serve as a Cartilage Implant**  *Rienk Schuiringa, René van Donkelaar, Keita Ito* | |  |  | | 14:15  15 mins | **Friction Characteristics of a Lubricated Implant for Articular Cartilage Defects**  *Alicia Damen, René van Donkelaar, Keita Ito* | |  |  | | **13:00**   [**Neuro-muscular – lower extremities 2**](https://www.bme2019.nl/program/show_slot/41)  Chair: Alfred Schouten   |  |  | | --- | --- | | 13:00  15 mins | **A Retrospective Look at the Design of the Symbitron Modular Exoskeleton**  *Victor Sluiter, Cor Meijneke, Gijs van Oort* | |  |  | | 13:15  15 mins | **Continous Dynamic Ultrasound Skeletal Muscle Thickness Measurement During Walking Exercise**  *Cristina Caresio* | |  |  | | 13:30  15 mins | **Passive Ankle Joint Stiffness Compensation by a Novel Ankle-Foot-Orthosis: Improving Spastic Paretic Ankle Motor Control after Stroke**  *Karen Rodriguez, Jurriaan H de Groot, Frank Baas, Yvette Kerkum, Marjon Stijntjes, Frans van der Helm, Herman van der Kooij, Winfred Mugge* | |  |  | | 13:45  15 mins | **A Novel Design for Decoupling the Energy Storage and Release in Passive Ankle Foot Prostheses: a Redesign of the VSPA Foot**  *Hashim Quraishi* | |  |  | | 14:00  15 mins | **Validation of an Online Reflex Activity Measure**  *Eline Flux, Ronald van 't Veld, Marjolein van der Krogt* | |  |  | | 14:15  15 mins | **The Effects of Electromyography-Assisted Modelling in Estimating Musculotendon Forces During Gait in Children with Cerebral Palsy**  *Kirsten Veerkamp, Wouter Schallig, Jaap Harlaar, Claudio Pizzolato, Christopher Carty, David Lloyd, Marjolein van der Krogt* | |  |  | |
| **14:30**   **Lamoraalzaal: 1 minute Pitches Award Nominees for Oral presentations**   |  | | --- | |  | | | | |
| **15:00**   **Break**   |  | | --- | |  | | | | |
| **15:30**   [**Distinguished lecturer of IEEE EMBS by Em. Prof. Bart M. ter Haar Romeny,TU Eindhoven, NL**](https://www.bme2019.nl/program/show_slot/44)   |  |  | | --- | --- | | 15:30  45 mins | **A Biomedical Vision on Deep Learning Mechanisms**  *Bart Ter Haar Romeny* | |  |  | | | | |
| **16:15**   **Lamoraalzaal: Award Session & Conference Closure** | | | |