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WeCT1**Geoff Chase: Tight Glycemic Control - the Leading Role of Insulin Sensitivity in Determining Efficacy and Thus Outcome (Plenary Session)**

Chair: Andreassen, Steen Aalborg Univ.

10:40-11:25 WeCT1.1

Tight Glycemic Control - the Leading Role of Insulin Sensitivity in Determining Efficacy and Thus Outcome (I), pp. 1-6.

Chase, J. Geoffrey (Univ. of Canterbury), Le Compte, Aaron (Univ. of Canterbury), Shaw, Geoffrey M (Christchurch Hospital, Canterbury District Health Board), Lin, Jessica (Univ. of Otago Christchurch), Pretty, Christopher (Univ. of Canterbury), Razak, Normy (Univ. of Canterbury), Parente, Jacquelyn Dawn (Univ. of Canterbury), Lynn, Adrienne (Christchurch Women's Hospital), Hann, Christopher E (Univ. of Canterbury), Suhaimi, Fatanah (Univ. of Canterbury)

WeDT1**Glycaemia: Modeling, Control and Management in Acute and Chronic Care I (Invited Session)**

Chair: Andreassen, Steen Aalborg Univ.

11:25-11:50 WeDT1.1

Prediction Performance Comparison between Three Intensive Care Unit Glucose Models, pp. 7-12.

Van Herpe, Tom (Katholieke Univ. Leuven), Haverbeke, Niels (Katholieke Univ. Leuven), Van den Berghe, Greet (Katholieke Univ. Leuven), De Moor, Bart L.R. (Katholieke Univ. Leuven)

11:50-12:15 WeDT1.2

Development of a Model-Based Clinical Sepsis Biomarker for Critically Ill Patients (I), pp. 13-18.

Lin, Jessica (Univ. of Otago Christchurch), Parente, Jacquelyn Dawn (Univ. of Canterbury), Chase, J. Geoffrey (Univ. of Canterbury), Shaw, Geoffrey M (Christchurch Hospital, Canterbury District Health Board), blakemore, amy (Univ. of canterbury), Le Compte, Aaron (Univ. of Canterbury), Pretty, Christopher (Univ. of Canterbury), Razak, Normy (Univ. of Canterbury), lee, dominic (Univ. of canterbury), Hann, Christopher E (Univ. of Canterbury), wang, sheng-hui (Univ. of Otago Christchurch)

12:15-12:40 WeDT1.3

Blood Glucose Control in Neonatal Intensive Care with Model-Based Controllers, pp. 19-24.

Le Compte, Aaron (Univ. of Canterbury), Chase, J. Geoffrey (Univ. of Canterbury), Lynn, Adrienne (Christchurch Women's Hospital), Hann, Christopher E (Univ. of Canterbury), Shaw, Geoffrey M (Christchurch Hospital, Canterbury District Health Board), Lin, Jessica (Univ. of Otago Christchurch)

12:40-13:05 WeDT1.4

Corticosteroids and Insulin Resistance in the ICU, pp. 25-30.

Pretty, Christopher (Univ. of Canterbury), Chase, J. Geoffrey (Univ. of Canterbury), Lin, Jessica (Univ. of Otago Christchurch), Shaw, Geoffrey M (Christchurch Hospital, Canterbury District Health Board), Le Compte, Aaron (Univ. of Canterbury), Razak, Normy (Univ. of Canterbury), Parente, Jacquelyn Dawn (Univ. of Canterbury)

WeET1**Glycaemia: Modeling, Control and Management in Acute and Chronic Care II (Invited Session)**

Chair: Chase, J. Geoffrey Univ. of Canterbury

14:00-14:20 WeET1.1

Physiologic Insulin Delivery with Insulin Feedback: A Control Systems Perspective, pp. 31-36.

Palerm, Cesar C. (Medtronic Diabetes)

14:20-14:40 WeET1.2

Anticipating Meals with Behavioral Profiles: Towards Stochastic Model Predictive Control of T1DM, pp. 37-42.

Patek, Stephen D. (Univ. of Virginia), Hughes, Colleen (Univ. of Virginia), Breton, Marc (Univ. of Virginia), Kovatchev, Boris (Univ. of Virginia)

14:40-15:00 WeET1.3

Model-Based Decision Support System to Improve Diabetes Care and Management, pp. 43-48.

Salzsieder, Eckhard (Inst. of Diabetes "Gerhardt Katsch" Karlsburg), Vogt, Lutz (Diabetes Service Center Karlsburg),

Kohnert, Klaus-Dieter (Inst. of Diabetes "Gerhardt Katsch" Karlsburg), Heinke, Peter (Inst. of Diabetes "Gerhardt Katsch" Karlsburg), Augstein, Petra (Inst. of Diabetes "Gerhardt Katsch" Karlsburg)

15:00-15:20 WeET1.4

The Effect of Glargine As Basal Insulin Support for Recovering Critically Ill and High Dependency Unit Patients: An in Silico Study, pp. 49-54.

Lin, Jessica (Univ. of Otago Christchurch), Razak, Normy (Univ. of Canterbury), Chase, J. Geoffrey (Univ. of Canterbury), Wong, Jason (Univ. of Canterbury), Pretty, Christopher (Univ. of Canterbury), Parente, Jacquelyn Dawn (Univ. of Canterbury), Le Compte, Aaron (Univ. of Canterbury), Suhaimi, Fatanah (Univ. of Canterbury), Shaw, Geoffrey M (Christchurch Hospital, Canterbury District Health Board), Hann, Christopher E (Univ. of Canterbury)

15:20-15:40 WeET1.5

Induced L2-Norm Minimization of Glucose-Insulin System for Type I Diabetic Patients, pp. 55-60.

Kovacs, Levente (Budapest Univ. of Tech. and Ec.), Kulcsar, Balazs (Delft Univ. of Tech.), Benyo, Balazs (Budapest Univ. of Tech. and Ec.), Benyo, Zoltan (Budapest Univ. of Tech. and Ec.)

WeFT1**Glycaemia: Modeling, Control and Management in Acute and Chronic Care; and Pharmacokinetics and Drug Delivery - Posters (Invited Session)**

15:40-16:20 WeFT1.1

Contrast-Enhanced Ultrasound Imaging of Insulin-Induced Microvascular Recruitment in Type 1 Diabetes, pp. 61-66.

Chan, Alice (Univ. of Virginia Health System), Breton, Marc (Univ. of Virginia), Kovatchev, Boris (Univ. of Virginia)

15:40-16:20 WeFT1.2

Comparison of Identification Methods of a Time-Varying Insulin Sensitivity Parameter in a Simulation Model of Glucose Metabolism in the Critically Ill, pp. 67-72.

Pielmeier, Ulrike (Aalborg Univ.), Andreassen, Steen (Aalborg Univ.), Steinfeldt Nielsen, Birgitte (Aalborg Hospital), Hann, Christopher E (Univ. of Canterbury), Chase, J. Geoffrey (Univ. of Canterbury), Haure, Pernille (Aalborg Hospital)

15:40-16:20 WeFT1.3

Glucose Control in Critically Ill Patients Using Sliding Mode Control with Robust Differentiators, pp. 73-78.

Zambrano, Darine (Univ. of Girona), Garcia-Gabin, Winston (Univ. of Girona), Bondia Company, Jorge (Tech. Univ. of Valencia), Vehi, Josep (Univ. de Girona)

15:40-16:20 WeFT1.4

A New General Glucose Homeostatic Model Using a Proportional-Integral-Derivative Controller, pp. 79-84.

Watson, Edmund (Univ. of Warwick/AstraZeneca), Chappell, Michael (Univ. of Warwick), Ducrozet, Frederic (AstraZeneca), Poucher, Simon Martin (Astrazeneca Pharmaceuticals), Yates, James (AstraZeneca)

15:40-16:20 WeFT1.5

A Sliding Mode Predictive Control Approach to Closed-Loop Glucose Control for Type 1 Diabetes, pp. 85-90.

Garcia-Gabin, Winston (Univ. of Girona), Zambrano, Darine (Univ. of Girona), Bondia Company, Jorge (Tech. Univ. of Valencia), Vehi, Josep (Univ. de Girona)

15:40-16:20 WeFT1.6

DISTq: Low-Cost, Accurate and Real-Time Estimation of Insulin Sensitivity, pp. 91-96.

Docherty, Paul D (Univ. of Canterbury), Chase, J. Geoffrey (Univ. of Canterbury), Lotz, Thomas (Univ. of Canterbury), Hann, Christopher E (Univ. of Canterbury), Shaw, Geoffrey M (Christchurch Hospital, Canterbury District Health Board), Berkeley, Juliet E (Christchurch School of Medicine, Univ. of Otago), J I, Mann (Univ. of Otago), McAuley, Kirsten A (Univ. of Otago)

15:40-16:20 WeFT1.7

Structural Identifiability of the Minimal Model and a Euglycemic Hyperinsulinemic Clamp Model for Glucose-Insulin Dynamics, pp. 97-102.

Chin, Sze Vone (Univ. of Warwick), Chappell, Michael (Univ. of

- Warwick)
15:40-16:20 WeFT1.8
Indistinguishability and Identifiability of Kinetic Models for the Mur C Reaction in Peptidoglycan Biosynthesis, pp. 103-108.
Perez-Velazquez, Judith (Univ. of Warwick), Hattersley, John Glenn (Univ. of Warwick), Chappell, Michael (Univ. of Warwick), Bearup, Daniel (Univ. of Warwick), Roper, David (Univ. of Warwick), Dowson, Chris (Univ. of Warwick), Bugg, Timothy (Univ. of Warwick), Evans, Neil D. (Univ. of Warwick)
- 15:40-16:20 WeFT1.9
Kinetic Modelling of the Role of the Aldehyde Dehydrogenase Enzyme and the Breast Cancer Resistance Protein in Drug Resistance and Transport, pp. 109-114.
Atari, Mohammed I. (Univ. of Warwick), Chappell, Michael (Univ. of Warwick), Errington, Rachel (Cardiff Univ.), Smith, Paul (Cardiff Univ.), Evans, Neil D. (Univ. of Warwick)
- 15:40-16:20 WeFT1.10
Compartmental Modelling of the Pharmacokinetics of a Breast Cancer Resistance Protein, pp. 115-120.
Grandjean, Thomas R. B. (Univ. of Warwick), Chappell, Michael (Univ. of Warwick), Yates, James (AstraZeneca), Jones, Kevin (AstraZeneca), Coleman, Tanya (AstraZeneca), Wood, Gemma (AstraZeneca)

- WeGT1**
Pharmacokinetics and Drug Delivery, (Invited Session)
Chair: Godfrey, Keith Richard Univ. of Warwick
- 16:20-16:40 WeGT1.1
Optimal Drug Dosing Via Application of the Contraction Mapping Theorem, pp. 121-126.
Evans, Neil D. (Univ. of Warwick)
- 16:40-17:00 WeGT1.2
Modelling the Double Peak Phenomenon in Pharmacokinetics, pp. 127-132.
Godfrey, Keith Richard (Univ. of Warwick), Arundel, Philip (Univ. of Warwick), Dong, Zimeng (Univ. of Warwick), Bryant, Robert (Univ. of Warwick)

- ThBT1**
Cardiopulmonary Modelling I (Invited Session) Ny Kilden
Chair: Rees, Stephen Edward Aalborg Univ.
- 09:15-09:35 ThBT1.1
Measurement of Respiratory Input Impedance Using the Interrupter Technique - a Model Study (I), pp. 133-138.
Polak, Adam G. (WrocB;aw Univ. of Tech.), JabB;oD;ski, Ireneusz (WrocB;aw Univ. of Tech.), Mroczka, Janusz (WrocB;aw Univ. of Tech.)
- 09:35-09:55 ThBT1.2
Tidal Breathing Model Describing End-Tidal, Alveolar, Arterial and Mixed Venous CO₂ and O₂ (I), pp. 139-144.
Poulsen, Peter (Aalborg Univ.), Karbing, Dan Stieper (Aalborg Univ.), Andreassen, Steen (Aalborg Univ.), Rees, Stephen Edward (Aalborg Univ.)
- 09:55-10:15 ThBT1.3
Modelling Acute Renal Failure Using Blood and Breath Biomarkers in Rats, pp. 145-150.
Moorhead, Katherine T (Univ. of Canterbury), Scotter, Jennifer M. (Syft Tech. Ltd), Chase, J. Geoffrey (Univ. of Canterbury), Hann, Christopher E (Univ. of Canterbury), Hill, Jonathan V. (Univ. of Otago, Christchurch School of Medicine), Endre, Zoltan H. (Univ. of Otago, Christchurch School of Medicine)
- 10:15-10:35 ThBT1.4
Respiratory Mechanics Monitoring During Artificial Ventilation: Batch Algorithms and Their Accuracy (I), pp. 151-156.
Polak, Adam G. (WrocB;aw Univ. of Tech.)

- ThCT1**
Cardiopulmonary Modelling II (Invited Session) Ny Kilden
Chair: Ottesen, Johnny Tom Roskilde Univ.
- 11:00-11:20 ThCT1.1
A Mathematical Physiological Model of the Pulmonary Capillary Perfusion (I), pp. 157-162.
Mogensen, Mads Lause (Aalborg Univ.), Steimle, Kristoffer Lindegaard (Aalborg Univ.), Karbing, Dan Stieper (Aalborg Univ.), Andreassen, Steen (Aalborg Univ.)

- 11:20-11:40 ThCT1.2
A Comparative Study of Codification Techniques for Clustering Heart Disease Database, pp. 163-168.
Barceló-Rico, Fátima (Univ. Pol. de Valencia), Díez, José Luis (Univ. Pol. de Valencia)
- 11:40-12:00 ThCT1.3
Unique Parameter Identification for Model-Based Cardiac Diagnosis in Critical Care, pp. 169-174.
Hann, Christopher E (Univ. of Canterbury), Chase, J. Geoffrey (Univ. of Canterbury), Desai, Thomas (Univ. of Liege), Froissart, Claire (Univ. de Tech. de Belfort-Montbéliard), Revie, James A (Univ. of Canterbury), Stevenson, David (Univ. of Canterbury), Lambermont, Bernard (Univ. of Liege), Ghuyssen, Alexandre (Univ. of Liege), Kolh, Philippe (Univ. of Liege), Shaw, Geoffrey M (Christchurch Hospital, Canterbury District Health Board)
- 12:00-12:20 ThCT1.4
A 5-Component Model for Salt-Induced Hypertension, pp. 175-180.
McLoone, Violeta (National Univ. of Ireland Maynooth), Ringwood, John V. (Dublin City Univ.), Van Vliet, Bruce (Memorial Univ. of Newfoundland)
- 12:20-12:40 ThCT1.5
Optimization of a Mathematical Model of Cerebral Autoregulation Using Patient Data, pp. 181-186.
Aoi, Mikio C (North Carolina State Univ.), Kelley, C. T (North Carolina State Univ.), Novak, Vera (Beth Israel Deacones Medical Center and Harvard Medical School), Olufsen, Mette (North Carolina State Univ.)
- 12:40-13:00 ThCT1.6
On the Track of Syncope Induced by Orthostatic Stress - Feedback Mechanisms Regulating the Cardiovascular System, pp. 187-191.
Ottesen, Johnny Tom (Roskilde Univ.)

- ThDT1**
Biomedical Imaging Systems (Regular Session) Ny Kilden
Chair: Feng, David Dagan Hong Kong Pol. Univ.
- 14:00-14:20 ThDT1.1
Lung Movement Determination in Temporal Sequences of MR Images Using Hough Transform and Interval Arithmetics, pp. 192-197.
Tavares, Renato Seiji (Escola Pol. da Univ. de São Paulo), Tsuzuki, Marcos de Sales Guerra (Univ. of Sao Paulo), Gotoh, Toshiyuki (Yokohama National Univ.), Kagei, Seiichiro (Yokohama National Univ.), Iwasawa, Tae (Kanagawa Cardiovascular and Res. Center)
- 14:20-14:40 ThDT1.2
Airway Segmentation for Low-Contrast CT Images from Combined PET/CT Scanners Based on Airway Modeling and Seed Prediction, pp. 198-203.
Fang, Chaoqun (The Univ. of Sydney), wang, xiuying (Univ. of Sydney), Feng, David Dagan (Hong Kong Pol. Univ.)
- 14:40-15:00 ThDT1.3
Application of Hybrid C-Means Clustering Models in Inhomogeneity Compensation and MR Brain Image Segmentation, pp. 204-209.
Szilagy, Laszlo (Budapest Univ. of Tech. and Ec.), Szilagy, Sandor Miklos (Sapientia - Hungarian Science Univ. of Transylvania), Benyo, Balazs (Budapest Univ. of Tech. and Ec.), Benyo, Zoltan (Budapest Univ. of Tech. and Ec.)
- 15:00-15:20 ThDT1.4
A Priori Knowledge Based Frequency-Domain Quantification of Magnetic Resonance Spectroscopy, pp. 210-215.
GUO, Yu (Univ. de Reims Champagne-Ardenne), RUAN, Su (Univ. de Reims Champagne-Ardenne), Landré, Jérôme (Univ. de Reims Champagne-Ardenne), Constans, Jean-Marc (CHU de Caen)
- 15:20-15:40 ThDT1.5
A Study of Non-Invasive Patlak Quantification for Experimental Whole-Body Dynamic FDG-PET Studies of Mice, pp. 216-221.
Zheng, Xiujuan (Hong Kong Pol. Univ.), Wen, Lingfeng (Univ. of Sydney), Yu, Shu-Jung (David Geffen School of Medicine at UCL), Feng, David Dagan (Hong Kong Pol. Univ.), Huang, Sung-Cheng (UCLA David Geffen School of Medicine)

- ThET1**
Cardiopulmonary Modelling - Posters (Invited Session)

- 15:40-17:00 ThET1.1
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Steimle, Kristoffer Lindegaard (Aalborg Univ.), Mogensen, Mads Lause (Aalborg Univ.), Karbing, Dan Stieper (Aalborg Univ.), Bernardino de la Serna, Jorge (Univ. of Southern Denmark), Smith, Bram W (Aalborg Univ.), Vacek, Ondrej (Charles Univ.), Andreassen, Steen (Aalborg Univ.)
- 15:40-17:00 ThET1.2
End Expiratory Volume Can Be Estimated Using a Stress Strain Approach (I), pp. 228-233.
Sundaresan, Ashwath (Univ. of Canterbury), Hann, Christopher E (Univ. of Canterbury), Chase, J. Geoffrey (Univ. of Canterbury), Shaw, Geoffrey M (Christchurch Hospital, Canterbury District Health Board)
- 15:40-17:00 ThET1.3
Two Distinct Controllers for Pressure Regulation in Total Liquid Ventilation, pp. 234-239.
Robert, Raymond (Univ. de Sherbrooke), Micheau, Philippe, Micheau (Univ. de Sherbrooke), Beaulieu, Alexandre (Univ. de Sherbrooke), Avoine, Olivier (Univ. de Sherbrooke), Walti, Herve (Univ. de Sherbrooke)
- 15:40-17:00 ThET1.4
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Hodrea, Ramona (Ghent Univ. Faculty of Engineering), Nour, Bogdan (Ghent Univ. Faculty of Engineering), Ionescu, Clara (Ghent Univ.), De Keyser, Robin M.C. (Ghent Univ.)
- 15:40-17:00 ThET1.5
Independence of Variables in Stewart's Model of the Acid-Base Chemistry of the Blood Plasma, pp. 246-250.
Matousek, Stanislav (Charles Univ. in Prague), Kofranek, Jiri (1st Faculty of Medicine, Charles Univ. in Prague), Rees, Stephen Edward (Aalborg Univ.)
- 15:40-17:00 ThET1.6
A Combined Model of Respiratory Drive and Acid-Base Status (I), pp. 251-255.
Gitzsche, Mette (Aalborg Univ.), Nielsen, Stinne Klitgaard (Aalborg Univ.), Rees, Stephen Edward (Aalborg Univ.)
- 15:40-17:00 ThET1.8
Model-Based Therapeutics for the Cardiovascular System - a Clinical Focus, pp. 256-261.
Hann, Christopher E (Univ. of Canterbury), Chase, J. Geoffrey (Univ. of Canterbury), Desai, Thomas (Univ. of Liege), Starfinger, Christina (Univ. of Canterbury), Lambermont, Bernard (Univ. of Liege), Ghuysen, Alexandre (Univ. of Liege), Kolh, Philippe (Univ. of Liege), Shaw, Geoffrey M (Christchurch Hospital, Canterbury District Health Board)
- 15:40-17:00 ThET1.9
Dynamic Hardware-In-The-Loop Test Stand for Total Artificial Hearts, pp. 262-265.
Heinke, Stefanie (RWTH Aachen Univ.), Finocchiaro, Thomas (RWTH Aachen Univ.), Steinseifer, Ulrich (RWTH Aachen Univ.), Schmitz-Rode, Thomas (RWTH Aachen Univ.), Walter, Marian (RWTH Aachen Univ.), Leonhardt, Steffen (RWTH Aachen)

ThET2
Biomedical Imaging Systems - Poster (Regular Session)

- 15:40-17:00 ThET2.1
An Intelligent Generalized System for Tissue Classification by Incorporating Qualitative Medical Knowledge, pp. 266-269.
PINTI, antonio (LAMIH UMR CNRS 8530)
- 15:40-17:00 ThET2.2
A Weighted Patient Specific Electromechanical Model of the Heart, pp. 270-275.
Szilagyi, Sandor Miklos (Sapientia - Hungarian Science Univ. of Transylvania), Szilagyi, Laszlo (Budapest Univ. of Tech. and Ec.), Icl_nzan, David Andrei (Babes Bolyai Univ. of Cluj Napoca), Benyo, Zoltan (Budapest Univ. of Tech. and Ec.)
- 15:40-17:00 ThET2.3
Dynamic 18F-Fluoride PET Quantitative Analysis of Bone Grafts, pp. 276-280.
Wen, Lingfeng (Univ. of Sydney), EBERL, Stefan (Royal Prince Alfred Hospital), Feng, David Dagan (Hong Kong Pol. Univ.),

Stalley, Paul (Royal Prince Alfred Hospital), Huang, Gang (Renji Hospital, Medical Coll. of Shanghai Jiaotong Univ.), Fulham, Michael (Royal Prince Alfred Hospital)

- 15:40-17:00 ThET2.4
Gray Level Local Dissimilarity Map and Global Dissimilarity Index for Quality of Medical Images, pp. 281-286.

Morain-Nicolier, Frédéric (CRESTIC, URCA), Landré, Jérôme (Univ. de Reims Champagne-Ardenne), RUAN, Su (Univ. de Reims Champagne-Ardenne)

- 15:40-17:00 ThET2.5
Active Contour Based Appearance Priors Applied to Tumours Segmentation, pp. 287-291.

DERRAZ, Foued (LAMIH UMR CNRS 8530), PINTI, antonio (LAMIH UMR CNRS 8530)

- 15:40-17:00 ThET2.6
SVM Based Follow-Up System for Brain Tumor Evolution from Magnetic Resonance Images, pp. 292-297.

ZHANG, NAN (IUT de Troyes), RUAN, Su (Univ. de Reims Champagne-Ardenne), Lebonvallet, Stéphane (IUT de Troyes, Univ. de Reims), Liao, Qingmin (Tsinghua Univ.), ZHU, YueMin (INSA de Lyon)

- 15:40-17:00 ThET2.7
Diabetic Retinopathy Screening Using Computer Vision, pp. 298-303.

Hann, Christopher E (Univ. of Canterbury), Chase, J. Geoffrey (Univ. of Canterbury), Revie, James A (Univ. of Canterbury), Hewett, Darren (Univ. of Canterbury), Shaw, Geoffrey M (Christchurch Hospital, Canterbury District Health Board)

- 15:40-17:00 ThET2.8
A Novel Model and an Environment for PET Detector Block Simulation, pp. 304-308.

Szlávecz, Ákos (Budapest Univ. of Tech. and Ec.), Benyo, Balazs (Budapest Univ. of Tech. and Ec.), Steinbach, Cecilia (Budapest Univ. of Tech. and Ec.), Hesz, Gábor (Budapest Univ. of Tech. and Ec.), FördQ;s, Gergely (Budapest Univ. of Tech. and Ec.), Bukki, Tamas (Mediso Ltd.)

FrBT1
Modelling in Infectious Diseases I (Invited Session)

Chair: Andreassen, Steen Aalborg Univ.

- 09:15-09:35 FrBT1.1
Analysing Outbreak Data in a Heterogeneous Population with Migration, pp. 309-312.

Wolkewitz, Martin (Univ. Medical Center Freiburg, Germany), Schumacher, Martin (Univ. Medical Center Freiburg, Germany)

- 09:35-09:55 FrBT1.2
Design of a Method for Prediction of Susceptibility to Antimicrobials, pp. 313-318.

Andreassen, Steen (Aalborg Univ.), Zalounina, Alina (Aalborg Univ.), Paul, Mical (Rabin Medical Center, Beilinson Hospital), Leibovici, Leonard (Rabin Medical Center, Beilinson Hospital)

- 09:55-10:15 FrBT1.3
Increasing Biological Accuracy in Models of HIV Progression While Minimising Complexity, pp. 319-323.

McGuinness, Ed (Dublin City Univ.), Ruskin, Heather J. (Dublin City Univ.), Crane, Martin (Dublin City Univ.)

FrCT1
Modelling in Infectious Diseases - Posters (Invited Session)

- 10:15-10:55 FrCT1.1
Optimization of a Microorganisms Growth Process, pp. 324-329.
Sbarciog, Mihaela (Ghent Univ.), Loccufier, Mia (Ghent Univ.), Noldus, Erik (Ghent Univ.)

- 10:15-10:55 FrCT1.2
The Use of a Formal Sensitivity Analysis on Epidemic Models with Immune Protection from Maternally Acquired Antibody (I), pp. 330-335.

Chapman, James (Univ. of Warwick), Evans, Neil D. (Univ. of Warwick), Chappell, Michael (Univ. of Warwick)

- 10:15-10:55 FrCT1.3
An In-Silico Analysis of the SMART Study of HIV Infection, pp. 336-341.

dos Santos Ferreira, Jorge (The Hamilton Inst. - National Univ. of IrelandMaynooth.), Middleton, Rick (National Univ. of Ireland)

10:15-10:55 FrCT1.4
A Model for Diagnosis of Pulmonary Infections in Solid-Organ Transplant Recipients (I), pp. 342-347.
 Kariv, Galia (Tel-Aviv Univ. Rabin Medical Center, Beilinson Hospital), Shani, Vered (Rabin Medical Center, Beilinson Hospital), Goldberg, Elad (Tel-Aviv Univ.), Leibovici, Leonard (Rabin Medical Center, Beilinson Hospital), Paul, Mical (Rabin Medical Center, Beilinson Hospital)

FrDT1 Ny Kilden
Modelling in Infectious Diseases II (Invited Session)

Chair: Leibovici, Leonard Rabin Medical Center, Beilinson Hospital

10:55-11:25 FrDT1.1
Advantages and Pitfalls of Mathematical Modelling Used for Validation of Biological Hypotheses, pp. 348-353.
 Smieja, Jaroslaw (Silesian Univ. of Tech.)

11:25-11:55 FrDT1.2
Guidance DS: A Web-Based Clinical Decision Support System for Antimicrobial Stewardship in Hospitals (I), pp. 354-358.
 Thursky, Karin (Royal Melbourne Hospital), Robertson, Marion (Royal Melbourne Hospital), Luu, Susan (Royal Melbourne Hospital), Black, James (Victorian Infectious Diseases Service and Peter MacCallum Cancer), Richards, Michael (Victorian Infectious Diseases Service and Peter MacCallum Cancer), Buising, Kirsty (Royal Melbourne Hospital)

FrET1 Ny Kilden
Motor Control I (Invited Session)

13:00-13:20 FrET1.1
Biomechanical Modeling for Biologically Inspired Control of Neural Prosthesis for Walking, pp. 359-364.
 Dosen, Strahinja (Aalborg Univ.), Popovic, Dejan (Aalborg Univ.)

13:20-13:40 FrET1.2
Fatigue and Non-Fatigue Mathematical Muscle Models During Functional Electrical Stimulation of Paralyzed Muscle, pp. 365-370.
 Bai, Er-Wei (Univ. of Iowa), Cai, Zhijun (Univ. of Iowa)

13:40-14:00 FrET1.3
Examination of Time-Varying Kinematic Responses to Support Surface Disturbances, pp. 371-376.
 Gurses, Senih (Middle East Tech. Univ.), Kenyon, Robert (Univ. of Illinois), Keshner, Emily (Temple Univ.)

FrFT1
Motor Control - Posters (Invited Session)

14:00-14:40 FrFT1.1
Modelling the Electromyogram from Ion Channels to Extracellular Potential¹.
 Lowery, Madeleine (Univ. Coll. Dublin), Fortune, Emma (Univ. Coll. Dublin)

14:00-14:40 FrFT1.2
Modelling Load Transfer at the Knee Joint and Perspectives for Validation, pp. 377-382.
 Kersting, Uwe G (Aalborg Univ.), Niehoff, Anja (German Sport Univ. Cologne), Böhm, Harald (Tech. Univ. Munich)

14:00-14:40 FrFT1.3
Tremor Suppression. Estimation of Tremor Time Series Parameters¹.
 Rocon, Eduardo (CSIC)

14:00-14:40 FrFT1.4
Recurrence Quantification Analysis of Sustained Sub-Maximal Grip Force in Patients with Glycogen Storage Disease Type III, pp. 383-388.
 Li, Ke (Univ. de Tech. de Troyes), Hewson, David J (Univ. de Tech. de Troyes), Snoussi, Hichem (Univ. de Tech. de Troyes), Duchêne, Jacques (Univ. de Tech. de Troyes), Hogrel, Jean-Yves (Inst. de Myologie)

14:00-14:40 FrFT1.5
EEG Montage Analysis in Blind Source Separation, pp. 389-394.
 Salido Ruiz, Ricardo Antonio (INPL-ENSEM), Ranta, Radu (Nancy Univ.), Iouis dorr, Valérie (INPL-Nancy Univ.)

14:00-14:40 FrFT1.6
T-S Tracking Controller Design for Sys-Reeduc: A Descriptor

Approach, pp. 395-400.
 Seddiki, Lynda (Univ. de Champagne-Ardenne), Guelton, Kevin (Univ. de Reims Champagne-Ardenne), Bouarar, Tahar (Univ. de Reims Champagne-Ardenne), Manamanni, Nouredine (Univ. de Reims Champagne Ardenne), Zaytoon, Janan (Univ. of Reims)

14:00-14:40 FrFT1.7
Force Sensing and Force Control for Surgical Robots, pp. 401-406.
 Haidegger, Tamas (Budapest Univ. of Tech. and Ec. (BME)), Kovacs, Levente (Budapest Univ. of Tech. and Ec.), Benyo, Balazs (Budapest Univ. of Tech. and Ec.), Benyo, Zoltan (Budapest Univ. of Tech. and Ec.)

FrFT2
General - Posters (Invited Session)

14:00-14:40 FrFT2.1
On Climate Reconstruction Using Bivalve Shells: Three Methods to Interpret the Chemical Signature of a Shell, pp. 407-412.

Bauwens, Maite (VUB), Ohlsson, Henrik (Linköping Univ.), Barbé, Kurt (Vrije Univ. Brussel), Beelaerts, Veerle (VUB), Dehairs, Frank (VUB), Schoukens, Johan (Vrije Univ. Brussel)

14:00-14:40 FrFT2.2
Schola Ludus in Modern Garment: Use of Web Multimedia Simulation in Biomedical Teaching, pp. 413-418.
 Kofranek, Jiri (1st Faculty of Medicine, Charles Univ. in Prague), Privitzer, Pavol (1st Medical Faculty, Charles Univ. Prague), Matousek, Stanislav (Charles Univ. in Prague), Vacek, Ondrej (Charles Univ.), Tribula, Martin (1st Medical Faculty, Charles Univ. Prague), Ruzs, Jan (Faculty of Electrical Engineering)

FrGT1 Ny Kilden
Motor Control II (Invited Session)

14:40-15:00 FrGT1.1
Experimental Platform to Assess the Weight Relief Lifting and Sitting Pivot Transfer Movements, pp. 419-424.
 Debril, Jean-François (Univ. de Valenciennes et du Hainaut Cambrésis), Pudlo, Philippe (Univ. de Valenciennes et du Hainaut Cambrésis), Gorce, Philippe (Univ. du Sud Toulon-Var), Lepoutre, François Xavier (Univ. de Valenciennes et du Hainaut Cambrésis)

15:00-15:20 FrGT1.2
Dynamical Modeling and Identification of a GnRH Neuron, pp. 425-430.
 Cserecsik, Dávid (Computer and Automation Res. Inst. Hungarian Acad. of), Szederkenyi, Gabor (Computer and Automation Res. Inst. Hungarian), Hangos, Katalin M. (Computer & Automation Rsrch. Inst. of the Hungarian Acad. of S), Farkas, Imre (Inst. of Experimental Medicine, Hungarian Acad. of Science)

15:20-15:40 FrGT1.3
Rigid Body Motions Estimation Using Inertial Sensors: Bio-Logging Application, pp. 431-436.
 FOURATI, hassen (Univ. de Reims Champagne ardenne (Reims), Univ. pa), Manamanni, Nouredine (Univ. de Reims Champagne Ardenne), AFILAL, Lissan (Univ. de reims et champagne ardenne), HANDRICH, yves (Univ. Louis Pasteur)