

Index of abstracts (alphabetical by title)

3D Bidomain modeling of cardiac virtual electrode pacing. Luca Pavarino, Piero Colli Franzone, Simone Scacchi. Abstract 106

Access to reaction kinetics data: The SABIO-RK database. Martin Golebiewski, Enkhjargal Algaas, Meik Bittkowski, Lenneke Jong, Renate Kania, Maja Rey, Lei Shi, Andreas Weidemann, Elina Wetsch, Ulrike Wittig, Isabel Rojas, Wolfgang Müller. Abstract 119

Advantage of a Patient-Specific Respiratory Motion Model for the Liver. Golnoosh Samei, Christine Tanner, Gabor Szekely. Abstract 114

AHE and ACD: A gateway into the grid infrastructure for VPH-Share. David Chan-Wei Chang, Stefan Zasada, Ali Haidar, Peter V Coveney. Abstract 35

A-model, a deep look into the atherogenesis onset. David Gomez-Cabrero, Albert Compte, Jesper Tegnér. Abstract 95

Analysis of local and global Hemolysis Index in 2D velocity field of regurgitant flow in mechanical heart valve. Guanglei Wang, Giuseppe D'Avenio, Carla Daniele, Mauro Grigioni. Abstract 82

Application of integrative modelling to the clinical development of fatty acid amide hydrolase (FAAH) inhibitors for pain. Neil Benson, Piet H van der Graaf, Oleg Demin. Abstract 15

Architecture, antenatal activity and arrhythmia of the human foetal heart: a computational database. Eleftheria Pervolaraki, Richard Anderson, Alan P Benson, Barrie Hayes-Gill, Arun Holden, Benjamin Moore, Henggui Zhang. Abstract 75

An automated procedure based on Computer Fluid Dynamics to evaluate risk on abdominal aortic aneurysm. Marco Lotti, Giorgio Colombo, Emiliano Chisci, Stefano Michelagnoli, Claudio Casetta, Tiziana Procacci, Alessandro Pieri, Dante Pugliese, Simone Bartesaghi, Neri Alamanni. Abstract 96

Best practice for multiscale visualisation in VPH. Xiangyin Ma, Nigel McFarlane, Gordon Clapworthy, Nik Bessis, Debora Testi. Abstract 57

Building a shared data infrastructure: a narrative. Susheel Varma, Stefan Zasada, Yves Martelli, Debora Testi, Steven Wood, Peter V Coveney, John Fenner. Abstract 78

Building sustainable capacity for research for health in Africa: first stages of the AFRICA BUILD Project. Ana Jimenez-Castellanos, Maximo Ramirez-Robles, Diana de La Iglesia, Victor Maojo. Abstract 46

Cardiovascular Flow Simulation by Correlation based Optical Flow. Yosuke Otsuki, Akihiro Kurita, Teruo Matsuzawa. Abstract 105

A case study demonstrating VPH-NoE guideline compliance: Exercising the toolkit guidelines for a simple graphical tool. Fearnley Evison, Andrew Narracott, Martin Bayley, John Fenner. Abstract 51

Challenges in data warehousing for personalised medicine. Benjamin Jefferys, Peter V Coveney.

Abstract 110

A collaborative online system dedicated to the study of intracranial aneurysms. Guy Courbebaisse,

Eric Garcia, Lisa Baraco, Julien Vouillot. Abstract 16

Colorectal crypt formation in vitro & in silico: elucidating the role of cellular growth upon tissue-

scale buckling. Martin Nelson, Daniel Howard, Oliver Jensen, John King, Felicity Rose, Sarah Waters. Abstract 24

Comparing the effects of viral (Hiv) and bacterial infection (*Staphylococcus aureus*) in bone

dynamics. Pietro Lio, Mohammad Moni. Abstract 115

Comparison of computational methods for simulating stent deployment. Kateryna Spranger.

Abstract 94

Comparison of different in vitro testing conditions for peripheral Nitinol stents: a computational

study. Alessio Meoli, Elena Dordoni, Lorenza Petrini, Wei Wu, Gabriele Dubini, Francesco Migliavacca, Giancarlo Pennati. Abstract 59

Composition and migration to the cloud of the @neurIST workflow in VPH-Share. Maria-Cruz Villa-

Uriol, Gerhard Engelbrecht, Hector Fernandez, Xavier Planes, Luigi Carotenuto, Susheel Varma, David Rodney Hose, Alejandro F Frangi. Abstract 141

Computational models of the airways to unravel the pathophysiological mechanisms in asthma

and COPD (AirPROM). Kelly Burrowes, Jan De Backer, Rod Smallwood, Peter Sterk, Ivo Gut, Roel Wirix-Speetjens, Salman Siddiqui, John Owers-Bradley, Jim Wild, Dieter Maier, Chris Brightling. Abstract 89

Contribution of mechanical and fluid response to in-stent restenosis. Claudia Amatruda, Brandis

Keller, David Rodney Hose, Julian Gunn, Patricia Lawford, Gabriele Dubini, Francesco Migliavacca, Andrew Narracott. Abstract 40

Developing a Virtual Physiological Mouse model of the heart: Multi-scale coupling is key for controlling ventricular pressure. Sander Land, Steven A Niederer, Jan Magnus Aronsen, Emil

KS Espe, Lili Zhang, William E Louch, Ivar Sjaastad, Ole M Sejersted, Nicolas P Smith. Abstract 109

Developing a workflow system that integrates scientific development. Dani Silva, Steven Wood,

David Jones, David Rodney Hose. Abstract 2

Development of a 3D Computational Sheep Atria for the Study of Atrial Fibrillation. Timothy

Butters, Oleg Aslanidi, Jichao Zhao, Bruce Smaill, Henggui Zhang. Abstract 55

Development of an Immersed Boundary Method for Pulsatile Flow Predictions in Cerebral

Aneurysms. Julia Mikhal, Cornelis Slump, Bernard Geurts. Abstract 5

Differentiating pathological brain atrophy from normal aging: a promising diagnostic tool for

Alzheimer's disease. Marco Lorenzi, Xavier Pennec, Giovanni B Frisoni. Abstract 122

A 'Digital Me': Key to implementation. Nour Shublaq, Peter V Coveney. Abstract 93

A Digital Patient for prosthesis design. Giorgio Colombo, Giancarlo Facoetti, Caterina Rizzi. Abstract 29

Discovering model-model connections in biological model repositories. John Gennari, Maxwell Neal, Robert Hoehndorf, Georgios Gkoutos, Daniel Cook. Abstract 135

Discrete-continuous Mathematical Modeling of Endocrine Systems with Pulsatile Secretion. Alexander Medvedev. Abstract 107

A distributed infrastructure for multiscale biomedical simulations. Derek Groen, Joris Borgdorff, Stefan Zasada, Carles Bona-Casas, James Hetherington, Rupert Nash, Alfons Hoekstra, Peter V Coveney. Abstract 18

Effects of applied pressure and clot viscosity on aspiration catheter performance. Sajjad Soleimani, Giancarlo Pennati, Gabriele Dubini. Abstract 8

Elucidating the Origin of Resistance in HIV-1 Protease Using Atomistic Simulation. Benjamin Hall, David Wright, Peter V Coveney. Abstract 127

Estimating changes to brain oxygenation delivery through multi-scale modelling of the cerebral microvasculature. Chang Sub Park, Piotr Orlowski, Michael Chappell. Abstract 77

EUDAT: a collaborative data infrastructure supporting the Virtual Physiological Human initiative. Ali Nasrat Haidar, Stefan Zasada, Peter V Coveney, Peter Wittenburg, Damien Lecarpentier. Abstract 91

Experimental and numerical simulation study of the near-hinge flow field of a bileaflet mechanical heart valve. Yan Li, Guanglei Wang, Calin Neamtu, Dan Rafiroiu, Giuseppe D'Avenio, Mauro Grigioni. Abstract 83

Exploring the Diseasesome of COPD and its associated diseases. Solène Grosdidier, Antonio Ferrer, Rosa Faner, Joaquim Gea, Janet Piñero, Josep Roca, Borja Cosío, Alvar Agustí, Ferran Sanz, Laura I Furlong. Abstract 42

Fatigue behaviour of Nitinol peripheral stent: finite element analyses of in vivo loading conditions. Elena Dordoni, Alessio Meoli, Lorenza Petrini, Wei Wu, Gabriele Dubini, Francesco Migliavacca, Giancarlo Pennati. Abstract 60

Fibre-based models of muscle wrapping. Josef Kohout, Petr Kellnhofer, David Cholt, Eva Kohoutová, Gordon Clapworthy, Youbing Zhao, Yubo Tao, Gerardo Gonzalez-Garcia, Feng Dong. Abstract 19

From a Foundational to a Functional Model of Anatomy; A multiple systems ontology model of the lower limb. Bruno Bonnechère, Bernard de Bono, Victor Sholukha, Marcel Rooze, Serge Van Sint Jan. Abstract 98

From Cell to Heart: A Multi-scale Lumped Parameter Model of the Cardiovascular System. Benjamin Bhattacharya-Ghosh, Selim Bozkurt, Silvia Schievano, Frans N van de Vosse, Vanessa Diaz-Zuccarini, Marcel C M Rutten. Abstract 67

Functional Effects of the Short QT Syndrome Variant Gene Mutations on the Electrical and Mechanical Function: Insights from Modelling. Ismail Adeniran, Jules Hancox, Henggui Zhang. Abstract 72

Generic evidence-based disease profiling for predicting outcomes: Application to Alzheimer's disease and Traumatic Brain Injuries. Jyrki Lötjönen, Jussi Mattila, Anja Simonsen, Mark van Gils, Juha Koikkalainen, Lennart Thurfjell, David Menon, Olli Tenovuo, Gunhild Waldemar, Hilkka Soininen. Abstract 116

GPGPU Accelerated Cardiac Electrophysiology in the Human Heart. Guillermo Vigueras, Ishani Roy, David Nordsletten, Andrew Cookson, Jack Lee, Pablo Lamata, Nicolas P Smith. Abstract 66

Hemodynamic Assessment of Aortic Coarctation from MR Images. Kristof Ralovich, Lucian Itu, Viorel Mihalef, Puneet Sharma, Razvan Ionasec, Dime Vitanovski, Waldemar Krawtschuk, Allen Everett, Michael Suehling, Nassir Navab, Dorin Comaniciu. Abstract 130

HIV reservoirs and immune surveillance evasion cause the failure of structured treatment interruptions: an in silico clinical trial. Emiliano Mancini, Filippo Castiglione, Massimo Bernaschi, Andrea De Luca, Peter Sloot. Abstract 21

A Horizontal Data Fusion Toolbox: Putting the focus on interoperability. Benoit Bleuze, Nicolas Toussaint, Vincent Garcia, Maxime Sermesant. Abstract 129

Hybrid Modelling of in vitro Epithelial to Mesenchymal Transition. Tariq Abdulla, Jean-Marc Schleich, Ron Summers. Abstract 136

Hypermodelling technology for multiscale simulations. Debora Testi, Daniele Giunchi, Xia Zhao, Gordon Clapworthy. Abstract 23

Identification of mechanistic differences in a virtual population contributing to variation in response to simulated statin therapy. Karim Wahba, Tom Paterson, Lyn M Powell. Abstract 71

Identifying patient safety improvement for surgical simulation: towards modelling an error-free endovascular operating theatre. Mostafa A Albayati. Abstract 7

The immune system as a biomonitor : explorations in innate and adaptive immunity. Benny Chain, Mahdad Nousadeghi, John Shawe-Taylor, Toyin Alabi, Judy Breuer, Guy Danon, James Heather, Theres Matjeka, Gabriel Pollara, Elspeth Potton, Niclas Thomas, Nandi Simspon, Eleanor Gray. Abstract 84

An implementation of a real-time finite element algorithm using CUDA technology with application to Endoclamp Balloon expansion. Vukasin Strbac, Nele Famaey, Jos Vander Sloten. Abstract 138

Improving the Pulsatility in a CF-LVAD Supported Cardiovascular System Applying a Model Control to CF-LVAD Flow Rate. Selim Bozkurt, Frans N van de Vosse, Marcel CM Rutten. Abstract 17

In silico oncology: a novel and explicit numerical treatment of the Neumann boundary conditions imposed by the skull on a multiscale diffusion-reaction model of glioblastoma growth: clinical validation aspects. Georgios Stamatakos, Stavroula Giatili. Abstract 4

Integrated analysis of copy number aberrations for primary breast cancer tumours in the HER2 region, miRNA and mRNA expression. Laura Winchester, Antoine De Weck, Jiannis Ragoussis, Adrian Harris, Francesca Buffa. Abstract 76

An Integrated Multi-Scale Multi-Physics Computational Model of the Respiratory System. Aleck Alexopoulos, Paraskevi Karakosta, Costas Kiparissides. Abstract 45

Integration of glucose and lipid metabolism: In silico models of adipose tissue and blood. Vivien Li, David Bogle, Rajiv Jalan. Abstract 61

Integration of knowledge for personalized medicine: a pharmacogenomics case-study. Robert Hoehndorf, Michel Dumontier, Georgios Gkoutos. Abstract 13

An integrative model of heart and coronary circulation to delineate the effect of coronary occlusion on heart eleDiscovering model-model connections in biological model repositoriesctric conduction. Eun Bo Shim, Young-Tae Kim. Abstract 134

Interactive Electromechanical Model of the Heart for Patient-Specific Therapy Planning and Training using SOFA. Hugo Talbot, Stephanie Marchesseau, Christian Duriez, Hadrien Courtecuisse, Jatin Relan, Maxime Sermesant, Stephane Cotin, Herve Delingette. Abstract 63

Investigating the correlation between pulsatile-flow hemodynamics and aneurysm growth: a patient-specific, CFD study. Alisa Selimovic, Roland Zoephel, Alexander Brawanski, Paul Watton. Abstract 1

Mathematical model of ion transport in human nasal epithelia: Investigating the pathogenesis of Cystic Fibrosis in silico. Donal O'Donoghue, Vivek Dua, Guy Moss, Paola Vergani. Abstract 97

A mathematical model of the electrical and mechanical activity of the uterine cell. Craig Testrow, Arun Holden, Henggui Zhang. Abstract 74

Mechanical Effect on Cell Viability in Healthy and Degenerated Intervertebral Discs. Andrea Malandrino, Jérôme Noailly, Damien Lacroix. Abstract 50

Mesh convergence is affected by poroelasticity in multi-tissue intervertebral disc models. Carlos Ruiz, Jérôme Noailly, Damien Lacroix. Abstract 52

Modelling blood flow and metabolism in the preclinical neonatal brain during physiological insults. Tharindi Hapuarachchi, Tracy Moroz, Ilias Tachtsidis, Nicola Robertson. Abstract 53

Modelling of the Physiological Response of the Brain to Stroke. Piotr Orlowski, David O'Neill, Vicente Grau, Yiannis Ventikos, Stephen Payne. Abstract 108

Modelling progressive metabolic diseases with parameter transition trajectories. Natal van Riel, Peter Hilbers. Abstract 47

Modelling the influence of re-endothelialization on in-stent restenosis. Hannan Tahir, Carles Bona-Casas, Alfons Hoekstra. Abstract 85

Modelling the transport behaviour of platelets in intracranial aneurysms. Lampros Mountrakis, Eric Lorenz, Alfons Hoekstra. Abstract 88

Multi-institutional graduate programme for Virtual Physiological Human scientists. Veronique Feipel, Jesus Bisbal, Patricia Lawford, Martin Nelson, Gabriele Dubini, Andrew Narracott, Jordi Villa, Vanessa Diaz-Zuccarini, Bindi Brook, Giulia Ditomaso. Abstract 111

A multi-nephron model of whole-kidney function for simulation of renal pathologies and blood pressure regulation. Robert Moss, Thibault Grosse, Randy Thomas. Abstract 58

A Multi-physics model of the Ventricular valve-valve interaction. Rajeev Kumar Nallamothu, Dan V Rafiroiu, Vanessa Diaz-Zuccarini, Andrew Narracott, Patricia Lawford, David Rodney Hose, Justin Penrose. Abstract 30

Multi-scale biomechanical modeling and energy loss evaluation of aortic aneurysm. Hao Liu, K Miyamoto, K Sugihimoto, F Liang, K Tsubota, H Haneishi. Abstract 103

MultiScale exemplary problems. Xavier Planes, Valeria Barbarito, Debora Testi, Gordon Clapworthy, Stephen Aylward, Richard Christie. Abstract 37

Multi-scale integrative computational model of pulmonary veins: Studying arrhythmogenic substrate for atrial fibrillation. Oleg Aslanidi, Michael Colman, Marta Varela, Jichao Zhao, Bruce Small, Jules Hancox, Mark Boyett, Henggui Zhang. Abstract 39

Multi-scale integrative computational model the human atria and torso: a platform for the investigation of atrial fibrillation. Michael Colman, Jonathan Stott, Oleg Aslanidi, Henggui Zhang. Abstract 73

A multiscale mechanobiological model of in-stent restenosis. Houman Zahedmanesh, Caitríona Lally, Hans Van Oosterwyck. Abstract 86

A multiscale model of sprouting angiogenesis during fracture healing. Aurélie Carlier, Liesbet Geris, Hans Van Oosterwyck. Abstract 28

Multiscale modeling of insulin secretion. Morten G Pedersen, Claudio Cobelli. Abstract 142

Multiscale modelling of Chlamydia trachomatis infection. Kelly Sutton, Martin Nelson, Bindy Brook, Daniel Mallet, Daniel Simpson, Roger Rank. Abstract 100

Multiscale modelling of delta-notch pathways. Maxim Tankaria, Tariq Abdulla, Ron Summers. Abstract 31

Multi-scale modelling of epithelium homeostasis. Elisa Domínguez Hüttinger, Masahiro Ono, Mauricio Barahona, Reiko J Tanaka. Abstract 65

Multiscale modelling of P2Y11, a receptor involved in heteromeric GPCR signal transduction. Hans Koss, Liberty Foreman, David Wright, Benjamin Hall, Peter V Coveney, Andrea Townsend-Nicholson. Abstract 121

Multiscale Modelling of the Interplay Between Global and Local Structural Changes in Viral Drug Target Proteins. David Wright, Benjamin Hall, Milo Bem, Peter V Coveney. Abstract 126

Multiscale simulation in the prediction of drug-induced cardiotoxicity: Integrating molecular, cellular and tissular levels. Christian Obiol-Pardo, Julio Gomis-Tena, Ferran Sanz, Javier Saiz, Manuel Pastor. Abstract 69

Multiscale Simulation on the initial stage of thrombus growth. Shu Takagi. Abstract 120

Multiscale Simulations of Morphogenesis. Gerardo Tauriello, Florian Milde, Jana Lipkova, Siegrun Zinca, Rajdeep Deb, Eduardo Cruz-Chu, Panagiotis Angelikopoulos, Petros Koumoutsakos. Abstract 123

Neuroswarm: a methodology to explore the constraints that function imposes on simulation parameters in large-scale networks of biological neurons. David Gomez-Cabrero, Salva Ardid, Maria Cano-Colino, Jesper Tegnér, Albert Compte. Abstract 92

A novel active lumbar spine muscle model. Themis Toumanidou, Gerard Fortuny, Damien Lacroix, Jérôme Noailly. Abstract 117

A Novel Mathematical Homogenisation Technique to Link Tissue Scale Properties of the Intervertebral Disc to Whole Organ System Simulations of the Lumbar Spine. Oliver Roehrle, Nils Karajan, Wolfgang Ehlers, Syn Schmitt. Abstract 44

ObTiMA - an ontology-based application for managing clinico-genomic trials. Holger Stenzhorn, Norbert Graf. Abstract 79

Ontology-based knowledge management for clinical data and pharmaceutical modelling: applying the RICORDO and ApiNATOMY toolkits for drug development. Bernard de Bono, Pierre Grenon, Stephen John Sammmut. Abstract 68

Patient-Specific Identification of Optimal Placement of Ubiquitous ECG using a 3D Heart Model. Eun Bo Shim, Ki Moo Lim. Abstract 132

Patient-specific prediction of coronary plaque growth from CTA angiography: a multiscale model for plaque formation and progression. Federico Vozzi, Themis Exarchos, Nenad Filipovic, Paolo Marraccini, Oberdan Parodi. Abstract 22

Patient-specific virtual simulations of stenting procedures in coronary bifurcations. Stefano Morlacchi, Sebastian George Colleoni, Claudio Chiastri, Ruben Cardenes, Ignacio Larrabide, Jose Luis Diez, Alejandro F Frangi, Gabriele Dubini, Francesco Migliavacca. Abstract 54

p-medicine – From data sharing and integration via VPH tools to personalized medicine. Norbert Graf, Alberto Anguita, Anca Bucur, Danny Burke, Brecht Claerhout, Peter V Coveney, Alberto D'Onofrio, Corinna Hahn, Janine Hintz, Benjamin Jefferys, Stephan Kiefer, Kostas Marias, Gordon McVie, Nikolaus Forgó, Christian Ohmann, Andreas Persidis, Juliusz Pukacki, Simona Rossi, Stefan Rüping, Ulf Schwarz, Georgios Stamatakos, Martin Stanulla, Holger Stenzhorn, Yuzuru Tanaka, Marian Taylor, Manolis Tsiknakis. Abstract 81

PredictAD – From Patient Data to Personalised Healthcare in Alzheimer's Disease. Jyrki Lötjönen, Lennart Thurjell, Jarmo Laine, Marcello Massimini, Daniel Rueckert, Roman Zubarev, Matej Oresic, Mark van Gils, Jussi Mattila, Gunhild Waldemar, Hilkka Soininen. Abstract 113

Predicting rebound for mAbs using the TMDD model. Gianne Derkx, Philip J Aston, Balaji M Agoram, Piet H van der Graaf. Abstract 139

Quantifying the relationship between hypertension and age-related baroreflex dysfunction. Klas H Pettersen, Scott M Bugenhagen, Daniel A Beard, Stig Omholt. Abstract 34

Relating findings between breast MR images and X-ray mammograms: A validation study on clinical cases. Thomy Mertzanidou, John Hipwell, Xiying Zhang, Henkjan Huisman, Ulrich Bick, Nico Karssemeijer, David Hawkes. Abstract 25

Risk stratification for stent fracture prediction in percutaneous pulmonary valve implantation through patient-specific finite element analysis. Daria Cosentino, Giancarlo Pennati, Claudio Capelli, Vanessa Diaz-Zuccarini, Philipp Bonhoeffer, Andrew Taylor, Silvia Schievano. Abstract 80

seedEP2 : Integrated modelling of the musculoskeletal system. Serge Van Sint Jan,. Abstract 104

Sensitivity analysis and parameter estimation of a coronary circulation model for patients with triple vessel disease. David Ojeda, Virginie Le Rolle, Agnes Drochon, Herve Corbineau, Jean-Phillipe Verhoye, Alfredo Hernandez. Abstract 124

Shock-induced arrhythmogenesis in the human heart: a simulation study. Miguel O Bernabeu, Mikael Wallman, Blanca Rodríguez. Abstract 133

Sim4Life: A medical image data based multiphysics simulation platform for computational life sciences. Esra Neufeld, Dominik Szczerba, Nik Chavannes, Niels Kuster. Abstract 43

Simulation of the fluid-structure interactions after balloon-angioplasty and stenting treatment in a stenosed arteriovenous fistula geometry. Iolanda Decorato, Zaher Kharboutly, Cécile Legallais, Anne-Virginie Salsac. Abstract 6

Simultaneous prediction of musculo-tendon, joint contact, ligament, and bone forces in the lower limb during gait. Raphael Dumas, Florent Moissenet, Laurence Cheze. Abstract 14

Smart Catheterization project. Mauro Sette, Emmanuel Vander Poorten, Jos Vander Sloten, Alessio Dore, Borja Rodriguez-Vila, Hugues Fontenelle, David Pierce, Giovanni Leo, Monica Vatteroni, Vincent Meiser. Abstract 137

A software framework for reconstructing the proximal femur from dual-energy x-ray absorptiometry and assessing the risk of fracture. Yves Martelli, Tristan Whitmarsh, Ludovic Humbert. Abstract 41

Spatial and temporal multiscale interactive visualization: two prototypes. Debora Testi, Daniele Giunchi, Julien Finet, Stephen Aylward. Abstract 87

A spatially distributed approach of intraperitoneal fluid kinetics combined with its transport through the interstitium during peritoneal dialysis. Joanna Stachowska-Pietka, Jan Poleszczuk, Bengt Lindholm, Jacek Waniewski. Abstract 118

Subject-specific bone mechanical properties: is there an alternative to X-rays modalities?. David Mitton, Charlène Delimoge, Jean-Gabriel Minonzio, Maryline Talmant, Pascal Laugier, Karine Bruyere-Garnier. Abstract 90

SYNERGY-COPD: Abnormal O₂ transport/O₂ utilisation leads to high mitochondrial ROS generation and systematic effects in COPD patients with poor prognosis. Isaac Cano, Michael Mickael, Josep Roca, Vitaly Selivanov, David Gomez-Cabrero, Peter D Wagner, Susana Kalko, Alvar Agustí, Jesper Tegnér, Marta Cascante. Abstract 125

Technologies for modelling fibrous muscle in motion. Josef Kohout, Gordon Clapworthy, Yubo Tao, Petr Kellnhofer, David Cholt, Youbing Zhao. Abstract 20

Three Band Analysis in a FSI model of aorta. Maria Giuseppina C Nestola, Christian Cherubini, Alessio Gizzi, Simonetta Filippi. Abstract 49

Three dimensional optical reconstruction method for stent geometry characterisation; data validation using micro CT technique. Iwona Zwierzak, John Fenner, Andrew Narracott. Abstract 10

A tool for training effective classifiers in the small sample setting. Davide Anguita, Alessandro Ghio, Luca Oneto, Sandro Ridella. Abstract 56

A toolbox for causally cohesive genotype-phenotype modeling. Jon Olav Vik, Arne Gjuvsland, Stig Omholt. Abstract 112

Towards a European collaborative data infrastructure. David Vicente, Damien Lecarpentier, Nagham Salman. Abstract 32

Towards quantifying the impact of blood rheology model on shear stress estimates throughout the cardiac cycle. Miguel O Bernabeu, Rupert W Nash, James Hetherington, Hywel B Carver, Peter V Coveney. Abstract 36

Training scenarios for vascular surgeons of peripheral arteries. Emanthia Tripoliti, Antonios Sakellarios, Michael Peroulis, Euripides Petrakis. Abstract 140

A translational medicine approach to orphan diseases. Robert Hoehndorf, Georgios Gkoutos. Abstract 12

The TUMOR project: integrating cancer model repositories for supporting predictive oncology. Vangelis Sakkalis, Stelios Sfakianakis, Kostas Marias, Georgios Stamatakos, Fay Misichroni, Dimitra Dionysiou, Steve McKeever, David Johnson, Thomas Deisboeck, Norbert Graf. Abstract 99

A validated and optimised model linking muscle and pulmonary oxygen uptake kinetics. Alan P Benson, Bruno Grassi, Harry B Rossiter. Abstract 102

Validation of patient specific multi-scale hemodynamic computational model for planning vascular access surgery in hemodialysis patients. Simone Manini, Anna Caroli, Luca Antiga, Andrea Remuzzi. Abstract 33

Vascular Tissue Modelling Environment. Markus Owen, Grazziela Figueiredo, Tanvi Joshi. Abstract 9

Virtual experiments for reusable models. Jonathan Cooper, Gary Mirams, Mark Slaymaker, Jon Olav Vik, Dagmar Waltemath. Abstract 101

A virtual imaging platform for the Virtual Physiological Human. Tristan Glatard, William A Romero R, Stefan Zasada, Peter V Coveney, Denis Friboulet. Abstract 64

The 'Virtual Population': detailed, whole-body anatomical models based on medical image data. Esra Neufeld, Marie-Christine Gosselin, Dominik Szczerba, Marcel Zefferer, Niels Kuster. Abstract 38

A vision for supporting future VPH activities through resources developed within the VPH network of excellence. Martin Bayley, Alex Mclean, John Fenner, Keith McCormack. Abstract 62

Visualisation and target prioritisation using computational and experimental omics datasets in human. Jonathan Lees, Christine Orengo. Abstract 11

VPH challenges: a solution to interactive visualisation of biomedical data. Debora Testi, Gordon Clapworthy, Xavier Planes, Richard Christie, Stephen Aylward. Abstract 26

VPH tools in clinical education: development of an Education Engine. Martin Bayley, Andrzej Kononowicz, Andrew Narracott, Nabil Zary, Keith McCormack, Patricia Lawford. Abstract 27

VPH2: Extracting knowledge from integrated data. Michele Carenini, Dimitris Gatsios, Oberdan Parodi, Cristiano Querzè. Abstract 3

VPH-Share: Embodying a Patient Avatar for Computational Workflows. Susheel Varma, Maria-Cruz Villa-Uriol, Pablo Lamata, Breanndan O'nuallian, Enrico Schileo, Nicolas P Smith, David Rodney Hose. Abstract 131

VPH-Share: Patient-Centred Multi-scale Computational Workflows. Susheel Varma, Maria-Cruz Villa-Uriol, Pablo Lamata, Breanndan O'nuallian, Enrico Schileo, John Fenner, Nicolas P Smith, David Rodney Hose. Abstract 128

Wave transmission in a three-dimensional nonhomogeneous viscoelastic brain model. Edda Boccia, Christian Cherubini, Simonetta Filippi, Alessio Gizzi. Abstract 48