

12th IFAC Symposium on Biological and Medical Systems (BMS 2024)

IFAC PapersOnline Volume 58, Issue 24

Villingen-Schwenningen, Germany
11-13 September 2024

Editor:

B. Benyo

ISBN: 979-8-3313-0928-2

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

To the extent permissible under applicable laws, no responsibility is assumed by the Owner, the Publisher or the Licensee for any injury and/or damage to persons or property as a result of any actual or alleged libelous statements, infringement of intellectual property or privacy rights, or products liability, whether resulting from negligence or otherwise, or from any use or operation of any ideas, instructions, procedures, products or methods contained in the material therein.

The publication of an advertisement in the POD Edition does not constitute on the part of the Owner, the Publisher or the Licensee a guarantee or endorsement of the quality or value of the advertised products or services described therein or of any of the representations or the claims made by the advertisers with respect to such products or services.

Copyright© (2024) by the authors
Open access publication under the CC-BY-NC-ND License
<https://creativecommons.org/licenses/by-nc-nd/4.0/>
All rights reserved.

Printed with permission by Curran Associates, Inc. (2025)

For permission requests, please contact the publisher, Elsevier Limited
at the address below.

Elsevier Limited
The Boulevard, Langford Lane
Kidlington
Oxford OX5 1GB UK

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Socio-Economic Benefit Analysis of Breast Cancer Screening Program Changes in New Zealand.....	1
<i>Jessica Fitzjohn, Cong Zhou, J. Geoffrey Chase</i>	
International Results for Breast Cancer Screening System Survey	7
<i>Samantha Couper, Leah Landry, Jessica Fitzjohn, Cong Zhou, J. Geoffrey Chase</i>	
Ergonomic Comfort and Tolerance Trial Results for Digital Imaging Elasto Tomography (DIET)	
Breast Cancer Screening.....	13
<i>Samantha Couper, Jessica Sewell, Esther Blain, Bruin Dorler, J. Geoffrey Chase</i>	
Extracting Features and Sentiment from Text Posts and Comments Relating to Polycystic Ovary Syndrome	19
<i>Rebecca H. K. Emanuel, Paul D. Docherty, Helen Lunt, Rebecca E. Campbell, Knut Moeller</i>	
A Switched System for Modeling the Interaction of Pleasure and Pain in Vaginal Dilation Exercises	25
<i>Roxanne R. Jackson, Damiano Varagnolo, Marieke Dewitte, Steffi Knorn</i>	
Understanding and Addressing ACL Tears in Female Football Athletes: A Comprehensive Analysis.....	31
<i>Jessica Sewell, J. Geoffrey Chase, Cong Zhou</i>	
Model-Based Control Algorithm for Lung and Diaphragm Protective Ventilation.....	37
<i>K. Lindup, F. Padula, M. Bertoni, N. Latronico, A. Visioli</i>	
Towards a Digital Twin Based Monitoring Tool for Ventilated Patients	43
<i>Carlotta Hennigs, Julia Sauer, Alexander Bigalke, Tim Hardel, Philipp Rostalski</i>	
Unified Mathematical Model Structure for in Silico Simulations	49
<i>F. Bilda, C. Hennigs, E. Teifke, B. Gebel, P. Rostalski</i>	
Estimating Cardiac Mechanical Efficiency in a Porcine Ex Situ Working Heart Model.....	55
<i>Henry Pigot, Stig Steen, Kristian Soltesz</i>	
Modeling and Control of an Automated Hemolysis Test Bench.....	61
<i>Patrick Borchers, Steffen Leonhardt, Marian Walter</i>	
Brittleness Characterisation of Rigid Polyurethane Foam Artificial Bone for Biomechanical Testing	66
<i>Jack Wilkie, Paul D. Docherty, Georg Rauter, Knut Möller</i>	
In-Parallel Co-Ventilation – A Preliminary Experimental Study	70
<i>Ee Gee Tee, Wen Peng Ting, Kay Chi Tham, Christopher Yew Shuen Ang, J. Geoffrey Chase</i>	
Rapid Expiratory Occlusion to Determine Dynamic Lung Elastance and Response to PEEP	76
<i>Ella F. S. Guy, Jaimey A. Clifton, Trudy Caljé-Van Der Klei, Jennifer L. Knopp, J. Geoffrey Chase</i>	
Validation of a Low-Cost, High-Quality, Equity-Enhancing, PAP Device.....	82
<i>Jordan F. Hill, Samuel Jackson, Mia Uluilelata, Samrath Sood, J. Geoffrey Chase</i>	
Performance Evaluation of a Mechanical Test Lung Prototype for Lung Mechanics Research.....	88
<i>Wei Yang Tay, Yeong Shiong Chiew, Christopher Yew Shuen Ang, J. Geoffrey Chase</i>	

Virtual Clinical Trials for Mechanically Ventilated Respiratory Failure Patients Under Volume-Controlled Ventilation – the Challenges of Volume-Control Protocols	94
<i>Christopher Yew Shuen Ang, Yeong Shiong Chiew, Xin Wang, Ean Hin Ooi, J. Geoffrey Chase</i>	
Comparative Virtual Trials: Pressure-Controlled Versus Volume-Controlled Stochastic Integrated Model-Based Mechanical Ventilation Protocols.....	100
<i>Christopher Yew Shuen Ang, Yeong Shiong Chiew, Xin Wang, Ean Hin Ooi, J. Geoffrey Chase</i>	
Test Bench for Measuring the Effects of Contact Pressure in cECG Measurements*	106
<i>Jannik Prüßmann, Steffen Leonhardt, Markus Lüken</i>	
Online Removal of Cardiac Artifacts from Respiratory Surface Electromyograms	111
<i>J. Petrick, J. Sauer, J. Graßhoff, P. Rostalski</i>	
Dispelling Four Challenges in Inertial Motion Tracking with One Recurrent Inertial Graph-Based Estimator (RING)	117
<i>S. Bachhuber, I. Weygers, T. Seel</i>	
Evaluating the Explainable AI Method Grad-CAM for Breath Classification on Newborn Time Series Data.....	123
<i>Camelia Oprea, Mike Grüne, Mateusz Buglowski, Lena Olivier, André Stollenwerk</i>	
Retrospective Classification of ARDS in ICU Time-Series Data Using Random Forest with a Focus on Data Pre-processing.....	129
<i>Simon Fonck, Sebastian Fritsch, Hannes Pieper, Alexander Baron, André Stollenwerk</i>	
A Robust and Semi-Automated Method for the Quantification of Recirculation in Artificial Lung Support	135
<i>Marc Wiartalla, Moritz Hüllmann, Michael Lamberti, Cavan Lübke, André Stollenwerk</i>	
Application of Super-Resolution-Based Networks to Enhance Images in Electrical Impedance Tomography.....	141
<i>Alexandre S. Bastos, Guilherme C. Duran, Edson K. Ueda, Thiago C. Martins, Marcos S. G. Tsuzuki</i>	
Using Redistribution Index to Identify an Outdated Detail Prior in the DCT-Based 3D EIT Algorithm	146
<i>Rongqing Chen, Sabine Krueger-Ziolek, Alberto Battistel, Stefan J. Rupitsch, Knut Moeller</i>	
Influence of Changes in Functional Residual Capacity on EIT Imaging in Spontaneous Breathing.....	151
<i>M. García Hermosa, B. Laufer, S. Krueger-Ziolek, M. Termenon, K. Moeller</i>	
EIT Complex Admittance Reconstruction Through Intervalar Evaluation.....	157
<i>Thiago C. Martins, Marcos S. G. Tsuzuki</i>	
Air Distribution in the Lungs During Abdominal and Chest Breathing	163
<i>B. Laufer, S. Krueger-Ziolek, K. Moeller</i>	
Influence of Electrode-Tissue Contact on Necrosis Formation in Soft Coagulation Using a Finite Element Model	169
<i>Christoph Busch, Stefan J. Rupitsch, Knut Moeller</i>	
Denoising by Spectral Selections of SVD Representations of Hankel Matricificated Data with Application to PPG Signals	175
<i>Fars Samann, Thomas Schanze</i>	

A Simplified Hyper-Viscoelastic Modelling Approach for Creep Response of Urethra Based on Ex-vivo Tissue Data	181
<i>A. Bhawe, J. Joshi, V. Yache, S. Rupitsch, K. Möller</i>	
Non-Invasive Patient Breathing Effort Identification: A B-spline and Mixed Integer Solution	187
<i>K. Lindup, J. G. Chase, C. Zhou, M. Bertoni, A. Visioli</i>	
Identifiable Model Derivation and Verification for a 2D Knee Joint Analysis	193
<i>Jessica Sewell, Cong Zhou, J. Geoffrey Chase</i>	
Development of Assistive Technology Using Gametherapy for Congenital Clubfoot Treatment	199
<i>Nicholas M. Shiroma, Laura F. A. Ferreira, Jose R. Pecora, Antonio L. C. Mariani, Marcos S. G. Tsuzuki</i>	
Evaluation of Emotional Everyday Scenarios for the Development of a Digital Health Application	205
<i>Ramona Schmid, Effi F. Picka, Herag Arabian, Knut Möller, Verena Wagner-Hartl</i>	
Metabolic State of Bacterial Cells: Deciphered Through a Simple Mathematical Model	211
<i>Manika Kargeti, Abhinita Borah</i>	
An Adaptive Control Structure to Mitigate Lack of Feasibility in Systems with Poor Identifiability. Case Study on General Anesthesia	216
<i>Clara M. Ionescu, Robin De Keyser, Erhan Yumuk, Dana Copot, Martine Neckebroek</i>	
Estimation of Muscle Fatigue Progression Based on Modified Lempel Ziv Complexity	222
<i>Sowmya Sundar, Ramakrishnan Swaminathan</i>	
An Explainable Machine Learning Model for Differentiation of Glioma Sub-Types Using MR Image Texture Analysis of Cerebral Edema	227
<i>Subham Chakraborty, Swathi Sudhakar, Ramakrishnan Swaminathan</i>	
Aeration with Increasing PEEP in Smokers, Vapers, and Asthmatics	233
<i>Jaimey A. Clifton, Ella F. S. Guy, Rongqing Chen, Trudy Caljé-Van Der Klei, J. Geoffrey Chase</i>	
Reducing Exercise-Related Hypoglycemia in Automated Insulin Delivery with Reinforcement Learning	239
<i>Dana Zimmermann, Hans-Michael Kaltenbach</i>	
Attention Networks for Personalized Mealtime Insulin Dosing in People with Type 1 Diabetes	245
<i>Anas El Fathi, Elliott Pryor, Marc D. Breton</i>	
Advancing Personalized Diabetes Management: Enabling Research-Driven Closed-Loop Control with AndroidAPS	251
<i>László Szász, Barbara Simon, Lehel Dénes-Fazakas, László Szilágyi, György Eigner</i>	
Insulin on Board Safety Constraint Effect in a CHoKI-Based MPC for Artificial Pancreas	257
<i>Beatrice Sonzogni, José María Manzano, Fabio Previdi, Antonio Ferramosca</i>	
Safe and Effective Glycaemic Control for Minimal Workload in Critically Ill Patients: Virtual Trials Analysis on Performance and Safety	263
<i>Marie Seret, Vincent Uyttendaele, Thomas Desaive, J. Geoffrey Chase</i>	
Analysis on the Practical Identifiability of the Subcutaneous Oral Glucose Minimal Model	269
<i>María F. Villa-Tamayo, Jacopo Pavan, Marc Breton</i>	

Model Predictive Controller-Based Levothyroxine Dosing Strategy for Patients Suffering from Hashimoto's Thyroiditis.....	275
<i>Ravi Sharma, Simon Lucas Goede, Verena Theiler-Schwetz, Markus Reichhartinger</i>	
Closed-Loop Control of Arterial CO ₂ for Neonatal Mechanical Ventilation: In-Vivo Interaction with Spontaneous Breathing.....	281
<i>Valerie Pfannschmidt, Mateusz Buglowski, Matthias Hütten, Stefan Kowalewski, André Stollenwerk</i>	
Interfacing with Prototype Instrumented Smart Screwdriver for Bone Screw Torque Regulation.....	287
<i>Jack Wilkie, Georg Rauter, Knut Möller</i>	
Cognitive Stress Detection During Physical Activity Using Simultaneous, Mobile EEG and ECG Signals.....	291
<i>Maria Sara Nour Sadoun, Juan Manuel Vargas, Mohamed Mouad Boularas, Arnaud Boutin, Taous-Meriem Laleg-Kirati</i>	
A Review on the Use of Adjunctive Therapies in Artificial Pancreas Systems	297
<i>Clara Furió-Novejarque, José-Luis Díez, Jorge Bondia</i>	
Design of High Sensitivity Split Ring Resonator Sensor for Invasive Blood Glucose Monitoring.....	303
<i>Ameer B. Alsultani, Omer S. Alkhafaf, Ákos Szlávecz, J. Geoffrey Chase, Balázs Benyó</i>	
A Modular Open-Source Framework for In-Browser Diabetes Simulation	309
<i>Heiko Peuscher, Tim Schrills, Manuel Eichenlaub, John Bagterp Jørgensen</i>	
Online Estimation of Insulin Sensitivity in Diabetes Type 1 Patients During Menstrual Cycles Using Extended Kalman Filtering.....	315
<i>Jörg Kunkelmoor, Ann-Kathrin Klinger, Paolo Mercorelli, Benedikt Haus</i>	
Meal-Related Glycemic Trend Information to Assist Bolus Decision-Making in People with Type 1 Diabetes.....	321
<i>C. Builes-Montaña, L. Lema-Perez, H. Alvarez, J. Garcia-Tirado</i>	
Multi-Dimensional Quantile Regression Using Polynomial Function Fitting for Insulin Sensitivity Forecasting	327
<i>Bálint Szabó, Petra Pintér, Ákos Antal, Ákos Szlávecz, Balázs Benyó</i>	
Predictive Framework for Electrical Stimulation Cycling in Spinal Cord Injury.....	332
<i>Ana Carolina Cardoso De Sousa, Josep M. Font-Llagunes</i>	
A Mechanomyography-Based System for Application and Tuning of Transcutaneous Spinal Cord Stimulation	338
<i>E. L. Spieker, A. Dvorani, C. Salchow-Hömmen, C. Wiesener, T. Schauer</i>	
Feasibility of IMU-Based Leg Movement Detection in Infants	344
<i>Vivian Waldheim, Katharina Lorenz, Christina Mittag, Natalie Jankowski</i>	
FES- and Camera Sensor- Based Estimation of Knee and Ankle Stiffness.....	350
<i>Chenglin Lyu, Marlon Nievenheim, L. Cornelius Bollheimer, Steffen Leonhardt, Philip Von Platen</i>	
Epilepsy Seizure Detection Based on EEG QuPWM Features and Logistic Regression	356
<i>Maria De Los Angeles Gómez Castillo, Taous-Meriem Laleg Kirati</i>	
Investigating the Usability of XAI in AI-Based Image Classification.....	362
<i>Jan Stodt, Christoph Reich, Nathan Clarke</i>	

In-Silico Validation of Insulin Sensitivity Prediction by Neural Network-based Quantile Regression.....	368
<i>Omer S. Alkhafaf, Ameer B. Alsultani, Alaa N. Roel, Bálint Szabó, Balázs Benyó</i>	
Cardiovascular Model Identification Using Neural ODE.....	374
<i>Bálint Szabó, Ákos Antal, Ákos Szlávecz, Béla Paláncz, Balázs Benyó</i>	
Autonomous Iterative Motion Learning (AI-MOLE) of a SCARA Robot for Automated Myocardial Injection.....	380
<i>Michael Meindl, Raphael Mönkemöller, Thomas Seel</i>	
Laparoscopic Tool Classification in Gynaecological Images Using Convolutional Neural Network and Attention Modules	386
<i>T. Abdulbaki Alshirbaji, N. A. Jalal, H. Arabian, P. D. Docherty, K. Möller</i>	
Tool Classification in Laparoscopic Images Using Feature Fusion Convolutional Neural Networks: A Single Label Classification Approach.....	391
<i>H. Elmoaqet, H. Qaddoura, T. Almasri, T. Abdulbaki Alshirbaji, K. Möller</i>	
MiniLiVE: Miniaturized Light- and Video-unit for a Wireless and Networkable Medical Video Endoscope	397
<i>Horim Bae, Mike Fornefett</i>	
Safe Multi-Patient Ventilator Use: Custom Control with the Novel ACTIV System.	403
<i>Lui Holder-Pearson, J. Geoffrey Chase, Geoffrey Shaw</i>	
Assessing Accuracy of a Wrist-Worn Wearable Device Over Changing Levels of Activity	409
<i>Isaac L. Flett, Yunpeng Su, Chris Cameron, Cong Zhou, J. Geoffrey Chase</i>	
Generation of Design Inputs for Diabetes Technology Using Co-Design Methodology.....	415
<i>Samuel L. S. Hastings, Lucy A. Jessep, Jake Campbell, Jennifer Hoi Ki Wong, J. Geoffrey Chase</i>	
Integrating Handwritten Data Entry and Real-Time Data Streaming for Enhanced Medical Device Closed Loop Control and Signal Visualization in Digitalized ICU Charts.....	421
<i>Yunpeng Su, Jordan Hill, Ella Fs Guy, Jaimey A Clifton, J. Geoffrey Chase</i>	
Identifying the Late Systolic Shoulder and Its Determinants	427
<i>James Cushway, J. Geoffrey Chase, Thomas Desai, Liam Murphy</i>	
Image Pre-Processing Effects on Attention Modules in Facial Emotion Recognition.....	433
<i>H. Arabian, V. Wagner-Hartl, K. Moeller</i>	
Decoding Emotions: How Temporal Modelling Enhances Recognition Accuracy	439
<i>S. Chandrasekharan, H. Arabian, K. Moeller</i>	
Digital Applications for Mental Health: Use of a User-Centered Design Process to Develop an mHealth App for Aftercare of Eating Disorder Patients	443
<i>Céline Vinçon, Verena Wagner-Hartl</i>	
Exploring Virtual Reality Avatars: Assessing Basic Emotion Representations for Mental Health Applications.....	448
<i>Verena Wagner-Hartl, Marcel Igel, Ramona Schmid, Katharina Gleichauf, Philipp Hartz</i>	
Measuring Stress Using Wearable Devices	454
<i>Isaac L. Flett, Yunpeng Su, Wade Bennett, Harris Oon, J. Geoffrey Chase</i>	

Experimental Assessment of Facial Emotion Recognition Model Accuracy and Potential Using the Oulu-CASIA Database	460
<i>Dael S. Summerhays-Sunnex, Lui R. Holder-Pearson, Knut Moeller, J. Geoffrey Chase, Yunpeng Su</i>	
Experimental Results of an Optimized PID Controller for General Anesthesia with Adjustable Opioid-Hypnotic Balance	466
<i>Michele Schiavo, Nicola Latronico, Massimiliano Paltenghi, Antonio Visioli</i>	
Symbolic Neural Networks for Automated Covariate Modeling in a Mixed-Effects Framework.....	472
<i>Jesper Sundell, Ylva Wahlquist, Kristian Soltesz</i>	
Analysis of the Performance Achievable with a PID2 α Controller for Depth of Hypnosis in Total Intravenous Anesthesia.....	478
<i>Marco Milanese, Nicola Paolino, Michele Schiavo, Fabrizio Padula, Antonio Visioli</i>	
Identification of PK-PD Insulin Models Using Experimental GIR Data.....	484
<i>Kirstine Sylvest Freil, Liv Olivia Fritzen, Dimitri Boiroux, Tinna B. Aradottir, John Bagterp Jørgensen</i>	
Minimizing Epistemic Uncertainty for Predictive Control of General Anesthesia.....	490
<i>Clara M. Ionescu, Robin De Keyser, Dana Copot, Erhan Yumuk, Martine Neckebroek</i>	
A Minimum Time-To-Target MPC Approach for Depth of Hypnosis in Total Intravenous Anesthesia	496
<i>Marco Milanese, Luca Consolini, Giulia Di Credico, Mattia Laurini, Antonio Visioli</i>	
Mechanical Ventilation Mode Classification: A Dual-Input Convolutional Neural Network Approach with Class Activation Mapping.....	502
<i>Zu Hui Hor, Christopher Yew Shuen Ang, Yeong Shiong Chiew, Mohd Basri Mat Nor, J. Geoffrey Chase</i>	
Respiratory Parameters Via Tilt Angles at the Human Upper Body	508
<i>B. Laufer, R. Murray, P. D. Docherty, S. Krueger-Ziolek, K. Moeller</i>	
PEEP Selection: Dynamic Elastance Versus an Over-Distension Measurement	514
<i>Qianhui Sun, J. Geoffrey Chase, Cong Zhou, Merryn H. Tawhai, Thomas Desaive</i>	
Functional Residual Capacity Predictions Through Three Personalized Basis Functions in a Virtual Patient Model for VCV.....	520
<i>Trudy Caljé-Van Der Klei, Qianhui Sun, Cong Zhou, Geoff Chase, Thomas Desaive</i>	
Functional Residual Capacity Predictions Through Three Personalized Basis Functions in a Virtual Patient Model for PCV	526
<i>Trudy Caljé-Van Der Klei, Qianhui Sun, Cong Zhou, Geoff Chase, Thomas Desaive</i>	
Identification of Airway Resistance in Spontaneous Breathing with and Without CPAP	532
<i>Ella F. S. Guy, Jaimey A. Clifton, Trudy Caljé-Van Der Klei, Jennifer L. Knopp, J. Geoffrey Chase</i>	
Estimation and Control of Simultaneous Activation of Two Independent Instruments at One Electrosurgical Generator	538
<i>I. Wange Pinto, F. Janich</i>	
Material Properties Characterization for the 4D Printing of the Hand Orthosis Utilized for Cerebral Palsy Treatment	544
<i>Mohsen Barmouz, Iraide Rodríguez Boo, Armin Siahsharani, Bahman Azarhoushang</i>	

Personalized Therapy Using Drug Delivery Devices	550
<i>Dániel A. Drexler, Borbála Gergics, Melánia Puskás, Tamás P. Haidegger, Levente A. Kovács</i>	
Static In-Line Gas Mixer for Physiological Capnogram Simulation.....	556
<i>Robin Brütt, Claudia Durasiewicz, Christina Hagen, Philipp Rostalski, Georg Männel</i>	
Simulated COPD in Healthy People with Increasing PEEP	562
<i>Jaimey A. Clifton, Ella F. S. Guy, Trudy Caljé-Van Der Klei, Lui Holder-Pearson, J. Geoffrey Chase</i>	
Integration Aspects of Smart Actuators in Active Medical Implants for Personalized Medicine	568
<i>Sonja Müller, Stefan J. Rupitsch, Ulrich Mescheder</i>	
B-Spline-based Modulating Function Method for Arterial Blood Flow's Estimations	573
<i>Mohamed Boukaf, Abderrahim Akhrouf, Messaoud Chakir, Zehor Belkhatir, Taous Meriem Laleg-Kirati</i>	
Non-Contact Acquisition of PPG Signal Using Chest Movement-Modulated Radio Signals	579
<i>Israel Jesus Santos Filho, Muhammad Mahboob Ur Rahman, Taous-Meriem Laleg-Kirati, Tareq Al-Naffouri</i>	
Model Parameter Identification as an Index of Fluid Responsiveness	584
<i>Nicolas A. C. Davey, Liam Murphy, J. Geoffrey Chase, Cong Zhou</i>	
Estimating Aortic Blood Pressure from Femoral Pressure Measurements Via an Arterial Transfer Function: A Gaussian Decomposition Approach.	590
<i>Liam Murphy, J. Geoffrey Chase, James Cushway, Thomas Desaive</i>	
Determining Distribution of a Seven-Dimensional Point Cluster with a Novel Hypersphere Method	596
<i>Nicolas A. C. Davey, J. Geoffrey Chase, Cong Zhou, Liam Murphy</i>	
Improved Control System for Digital Imaging Elasto-Tomography Breast Cancer Screening	602
<i>Henry W. Hall, Jessica Fitzjohn, Cong Zhou, J. Geoffrey Chase</i>	
Radio Frequency Measurements for Electrical Impedance Tomography	608
<i>Alberto Battistel, Jack Wilkie, Rongqing Chen, Ahmad Karime, Knut Möller</i>	
Self-Supervised DEnoising UltraSound Network (DEUS-Net)	614
<i>Christian Janorschke, Jan Meyer, Daniel Wulff</i>	
Skin Servo Control for Neonatal Incubators: A Novel Approach Using Infrared Thermography	620
<i>Florian Voss, Steffen Leonhardt, Markus Lueken</i>	
Quantitative Evaluation of Camera-Based 3D Reconstruction in Laparoscopy: A Review	625
<i>B. Göbel, A. Reiterer, K. Möller</i>	

Author Index