

Preliminary Overview

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| 07.04.2019 | Sunday |
| 19:00 – 21:00 | Welcome Reception |
| 08.04.2019 | Monday, STC Day 1 |
| 08:00 – 08:30 | Reception |
| 08:30 – 09:00 | Opening and Welcoming Session |
| 09:00 – 10:00 | Keynote 1 |
| 10:00 – 10:20 | Coffee break |
| 10:20 – 12:00 | Session 1a, Session 1b |
| 12:00 – 12:30 | Poster Session |
| 12:30 – 13:30 | Lunch break |
| 13:30 – 14:50 | Session 2a, Session 2b |
| 14:50 – 15:00 | Break |
| 15:00 – 16:20 | Session 3 |
| 16:20 – 16:40 | Coffee break |
| 16:40 – 18:00 | Session 4 |
| 19:00 – 21:00 | Gala Dinner |
| 09.04.2019 | Tuesday, STC Day 2 |
| 08:30 – 09:50 | Session 5 |
| 09:50 – 10:00 | Break |
| 10:00 – 11:00 | Workshop a, Workshop b |
| 11:00 – 11:20 | Coffee break |
| 11:20 – 12:40 | Session 6a, Session 6b |
| 12:40 – 13:40 | Lunch break |
| 13:40 – 15:00 | Session 7a, Session 7b |
| 15:00 – 15:10 | Break |
| 15:10 – 16:30 | Session 8 |
| 16:30 – 16:50 | Coffee Break |
| 16:50 – 17:50 | Keynote 2 |
| 17:50 – 18:00 | Break |
| 18:00 – 20:00 | Peter L. Reichertz Reception |
| 10.04.2019 | Wednesday, Peter L. Reichertz Symposium |
| 08:00 – 08:30 | Registration |
| 08:30 – 10:00 | Session 9 (Chair: Reinhold Haux) |
| 10:00 – 10:30 | Break |
| 10:30 – 12:00 | Session 10 (Chair: Thomas M Deserno) |
| 12:00 – 13:00 | Lunchtime Snack |

Preliminary Sessions

| Session 1a | Towards Interoperable Health Information Systems |
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| 10:20 – 10:40 | <i>Maryna Khvastova, Michael Witt, Dagmar Krefting (Germany) Towards Interoperability in Clinical Research: Enabling FHIR on the Open Source Research Platform XNAT</i> |
| 10:40 – 11:00 | <i>Sebastian Stäubert, Alexander Strübing, Johannes Drepper, Bjoern Bergh, Alfred Winter, Angela Merzweiler (Germany) Towards a Software Tool for Planning IHE-compliant Information Systems</i> |
| 11:00 – 11:20 | <i>Anna Lackerbauer, Oliver Krauss, Emmanuel Helm (Austria) Automated Verification of Structured Questionnaires Using HL7® FHIR®</i> |
| 11:20 – 11:40 | <i>Georg Fette, Mathias Kaspar, Leon Liman, Georg Dietrich, Maximilian Ertl, Jonathan Krebs, Stefan Störk, Frank Puppe (Germany) Query Translation Between openEHR and i2b2</i> |
| 11:40 – 12:00 | <i>Matteo Gabetta, Marco Mirabelli, Catherine Klersy, Valeria Musella, Gianpiero Rizzo, Paolo Pedrazzoli, Nicola Barbarini, Riccardo Bellazzi, Cristiana Larizza (Italy) An Extension of the i2b2 Data Warehouse to Support REDCap Dynamic Data Pull</i> |

| Session 1b | Improving the understanding of health data |
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| 10:20 – 10:40 | <i>Philipp Unberath, Hans-Ulrich Prokosch, Stefan Kraus (Germany) A REST Service for the Visualization of Clinical Time Series Data in the Context of Clinical Decision Support</i> |
| 10:40 – 11:00 | <i>Jon Haël Brenas, Eun Kyong SHIN, Arash Shaban-Nejad (United States) An Ontological Framework to Improve Surveillance of Adverse Childhood Experiences (ACEs)</i> |
| 11:00 – 11:20 | <i>Stefan Kraus, Hans-Ulrich Prokosch (Germany) Complementing Medical Records With Precalculated Data Items to Facilitate Decision Support and Phenotyping</i> |
| 11:20 – 11:40 | <i>Yulia Lenivtseva, Georgy Kopanitsa (Russian Federation) Investigation of Content Overlap in Proprietary Medical Mappings</i> |
| 11:40 – 12:00 | <i>Philipp Unberath, Christian Knell, Hans-Ulrich Prokosch, Jan Christoph (Germany) Developing New Analysis Functions for a Translational Research Platform: Extending the cBioPortal for Cancer Genomics</i> |

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This notation indicates papers which are considered for the EFMI Peter L. Reichertz Young Scientist Prize

| Session 2a | | Digitization of Systems Medicine | |
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| 13:30 – 13:50 | | <i>Dominik Wolff, Michael Marschollek, Thomas Kupka (Germany) On the Trustworthiness of Soft Computing in Medicine</i> | |
| 13:50 – 14:10 | | <i>Sven Van Laere, Pieter Cornu, Evy Dreesen, Jan Lenie, Ronald Buyl (Belgium) Electronic Prescriptions: Why Community Pharmacists Still Treat them as Paper-based?</i> | |
| 14:10 – 14:30 | | <i>Priscila Maranhão, Ana Margarida Pereira, Tiago Silva-Costa, Ricardo Cruz-Correia (Portugal) The Impact of Electronic Obstetric Records using the ObsCare Software on Scientific Production</i> | |
| 14:30 – 14:50 | | <i>Brigitte Seroussi, Coralie Prebet, Charlotte Ngo, Luis Teixeira, Gilles Guezennec, Jacques Bouaud (France) Using the Recommendations Inferred by a Decision Support System to Compare Breast Cancer Clinical Practice Guidelines</i> | |
| Session 2b | | Data Quality, Privacy, and Security | |
| 13:30 – 13:50 | | <i>Masoumeh Sarbaz, Fereshte Manouchehri, Alireza Banaye Yazdipour, Khalil Kimiafar (Iran) Views of Health Information Management Staff on Non-technical Security Management Factors in Mashhad, Iran</i> | |
| 13:50 – 14:10 *** (1) *** | | <i>Marvin Kampf, Detlef Kraska, Hans-Ulrich Prokosch (Germany) An Analysis of Erlangen University Hospital's Billing Data On Utility-based De-identification</i> | |
| 14:10 – 14:30 | | <i>Jaime Delgado, Silvia Llorente, Daniel Naro (Spain) Adding Security and Privacy to Genomic Information Representation</i> | |
| 14:30 – 14:50 | | <i>Erik Tute, Antje Wulff, Michael Marschollek, Matthias Gietzelt (Germany) Clinical Information Model Based Data Quality Checks: Theory and Example</i> | |
| Session 3 | | Interfaces with Diagnostic or Therapeutic Systems | |
| 15:00 – 15:20 *** (2) *** | | <i>Lo An Phan-Vogtmann, Alexander Helhorn, Henner M. Kruse, Eric Thomas, Andrew J. Heidel, Kutaiba Saleh, Florian Reißner, Martin Specht, Andreas Henkel, André Scherag, Danny Ammon (Germany) Approaching Clinical Data Transformation from Disparate Healthcare IT Systems Through a Modular Framework</i> | |
| 15:20 – 15:40 | | <i>Tobias Brix, Philipp Neuhaus, Michael Storck, Iñaki Soto-Rey, Martin Dugas (Germany) Reviving 30 Year Old Technology: Lessons Learned from Exporting EHR Patient Data using Generic Data Matrices</i> | |
| 15:40 – 16:00 | | <i>Al Hassim DIALLO, Gaoussou CAMARA, Jean-Baptiste LAMY, Moussa LO, Ibrahima DIAGNE, Demba MAKALOU, Mamadou DIOP, Dominique DOUPA (Senegal) Towards an Information System for Sickle Cell Neonatal Screening in Senegal</i> | |
| 16:00 – 16:20 | | <i>Masoumeh Sarbaz, Nafiseh Sadat Hoseini, Khalil Kimiafar (Iran) Views of Users Towards the Quality of Picture Archiving and Communication System (PACS) in a Developing Country</i> | |

| Session 4 | Novel Approaches in ICT for Health Science Research |
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| 16:40 – 17:00 | <i>Masoumeh Sarbaz, Alireza Banaye Yazdipour, Khalil Kimiafar (Iran) Use of Social Networks for Learning Purposes Among Medical and Paramedical Sciences Students, Mashhad, Iran</i> |
| 17:00 – 17:20 *** (3) *** | <i>Timo Michelsen, Christian Lins, Stefan Gudenkauf, Andreas Hein, Christian Lüpkes (Germany) Privacy by Design for Integrated Case and Care Management: Receiver-oriented Encryption in STROKE OWL</i> |
| 17:20 – 17:40 *** (4) *** | <i>Julian Gruendner, Hans-Ulrich Prokosch, Sebastian Schindler, Stefan Lenz, Harald Binder (Germany) A Queue-poll Extension and DataSHIELD: Standardised, Monitored, Indirect and Secure Access to Sensitive Data</i> |
| 17:40 – 18:00 | <i>Hoang Phi Le, Siegfried Hackel, Andreas Günther, Raimar Goldschmidt, Melhem Daoud, Thomas M Deserno (Germany) International Standard Accident Number: A Master Case Index Linking Accident & Emergency with Medical Data</i> |

| Session 5 | Big Data Analytics |
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| 08:30 – 08:50 | <i>Gleb Danilov, Konstantin Kotik, Michael Shifrin, Yulia Strunina, Tatyana Pronkina, Alexander Potapov (Russian Federation) Prediction of Postoperative Hospital Stay with Deep Learning based on 101 654 Operative Reports in Neurosurgery</i> |
| 08:50 – 09:10 | <i>Inna Skarga-Bandurova, Tetiana Biloborodova (Ukraine) EEG Data Fusion for Improving Accuracy of Binary Classification</i> |
| 09:10 – 09:30 | <i>Francisco Bischoff, Maria do Carmo Koch, Pedro Pereira Rodrigues (Portugal) Predicting Blood Donations in a Tertiary Care Center using Time Series Forecasting</i> |
| 09:30 – 09:50 | <i>Nagarajan Ganapathy, Ramakrishnan Swaminathan (India) Emotion Recognition using Electrodermal Activity Signals and Multiscale Deep Convolution Neural Network</i> |

| Session 6a | Health Interoperability Through Standards |
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| 11:20 – 11:40 | <i>Michael Storck, Luca Hollenberg, Martin Dugas, Iñaki Soto-Rey (Germany) Interoperability Improvement of Mobile Patient Survey (MoPat) Implementing Fast Health Interoperability Resources (FHIR)</i> |
| 11:40 – 12:00 *** (5) *** | <i>Antje Wulff, Kim Sommer, Sarah Ballout, HiGHmed Consortium, Birger Haarbrandt, Matthias Gietzelt (Germany) A Report on Archetype Modelling in a Nationwide Data Infrastructure Project</i> |
| 12:00 – 12:20 | <i>Andrea Haberson, Christoph Rinner, Walter Gall (Austria) Standardizing Austrians Claims Data using the OMOP Common Data Model: A Feasibility Study</i> |
| 12:20 – 12:40 | <i>Priscila Maranhão, Ana Margarida Pereira, Gustavo Bacelar-Silva, Duarte Ferreira, Pedro Vieira-Marques, Tiago Silva-Costa, Ricardo Cruz-Correia (Portugal) From ObsCare Software to an openEHR Platform: Modelling Obstetric Archetypes</i> |

| Session 6b | Medical Registries and Clinical Trials |
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| 11:20 – 11:40 | Moritz Kaspar Strickler, Chantal Zbinden, Ramon Saccilotto, Kerstin Denecke (Switzerland) <i>A Concept for a Data Dictionary System Supporting for Clinical Research</i> |
| 11:40 – 12:00 | Julian Varghese, Michael Fujarski, Martin Dugas (Germany) <i>StudyPortal: A Novel Method to Visualize Study Research Networks</i> |
| 12:00 – 12:20 | Marcus Sommer, Melanie Kirchner, Christian Gulden, Sainab Egloffstein, Michael Patrick Lux, Matthias Wilhelm Beckmann, Andreas Mackensen, Hans-Ulrich Prokosch (Germany) <i>Design and Implementation of a Single Source Multipurpose Hospital-wide Clinical Trial Registry</i> |
| 12:20 – 12:40 *** (6) *** | Melhem Daoud, Hoang Phi Le, Thomas M Deserno (Germany) <i>Registries for Research and Quality Management in Emergency Care</i> |
| Session 7a | Data-Driven Decision Support in Systems Medicine |
| 13:40 – 14:00 | Jack Dowie, Mette Kjer Kaltoft (United Kingdom) <i>Uncertainty-adjusted Translation for Preference-sensitive Decision Support</i> |
| 14:00 – 14:20 *** (7) *** | Matthias Katzensteiner, Wolfram Ludwig, Michael Marschollek, Oliver Bott (Germany) <i>Results of a Literature Review to Prepare Data Modelling in the Context of Kidney Transplant Rejection Diagnosis</i> |
| 14:20 – 14:40 | José Antonio Vera Ramos, Markus Kreuzthaler, Stefan Schulz (Austria) <i>Supervised ICD Code Assignment to Short Clinical Problem List Entries</i> |
| 14:40 – 15:00 | Adnan Kulenovic, Azra Kulenovic (Canada) <i>Discovering Monogenic Causes of Multi-diseases by Mining Electronic Medical Records and Genetics Repositories</i> |
| Session 7b | Mobile Data Capture and Electronic Patient Reported Outcomes (ePRO) |
| 13:40 – 14:00 | Roman Hauber, Maximilian Schirm, Felix Herrmann, Frank Puppe (Germany) <i>Evaluation of Patient's Attitude Towards Computer Supported History Taking</i> |
| 14:00 – 14:20 | Carolin Rauter, Sabine Wöhlke, Silke Schicktanz (Germany) <i>Organizations towards "Big Data"-driven Approaches in Personalized Medicine? An Empirical-ethical Study in Health-related IT</i> |
| 14:20 – 14:40 | Jonathan Mang, Stefanie Schild, Hans-Ulrich Prokosch, Christian Jeleazcov, Anne Heinrich, Dennis Toddenroth (Germany) <i>Evaluation of a Patient-facing Digital Prototype for Perioperative Risk Assessment</i> |
| 14:40 – 15:00 *** (8) *** | Ju Wang, Joana Warnecke, Thomas M Deserno (Germany) <i>The Vehicle as a Diagnostic Space: Efficient Placement of Accelerometers for Respiration Monitoring during Driving</i> |

| Session 8 | ICT for Clinical Trials |
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| 15:20 – 15:40 | <i>Matthias Löbe, Frank Meineke, Alfred Winter (Germany) Scenarios for Using OpenClinica in Academic Clinical Trials</i> |
| 15:40 – 16:00 | <i>Hanna Hasselblatt, Johanna Andrae, Adrian Tassoni, Kai Fitzer, Thomas Bahls, Hans-Ulrich Prokosch, Martin Boeker (Germany) Establishing an Interoperable Clinical Trial Information System within MIRACUM</i> |
| 16:00 – 16:20 *** (9) *** | <i>Sattar Rahimbayli, Thomas M Deserno, Jens Lehmann (Germany) Pay for Performance in Electronic Data Capture for Clinical Trials and Medical Registries</i> |
| 16:20 – 16:40 | <i>Christian Gulden, Inge Landerer, Azadeh Nassirian, Fatma Betül Altun, Johanna Andrae (Germany) Extraction and Prevalence of Structured Data Elements from Free-Text Clinical Trial Eligibility Criteria</i> |
| Session 9 | Peter L. Reichertz Symposium (Chair: Reinhold Haux) |
| 08:30 – 09:00 | <i>Andrea Aulkemeyer (Vice-President, Hannover Medical School) Ulrich Reimers (Vice-President, TU Braunschweig) Alfred Winter (Vice-President, GMDS) Welcome Addresses</i> |
| 09:00 – 09:30 | <i>Rolf Engelbrecht (Munich) On MHH's Medical Informatics Early Life as an Institute: Are there Lessons for the Future?</i> |
| 09:30 – 10:00 | <i>Otto Rienhoff (Göttingen) Medical Informatics as a Dynamic Discipline: The MHH with Reichertz as an Early Driving Force</i> |
| Session 10 | Peter L. Reichertz Symposium (Chair: Thomas M Deserno) |
| 10:30 – 11:00 | <i>Reinhold Haux (Braunschweig) On Analyzing the Scientific Publications of Peter Reichertz: Reflections in the Light of Medical Informatics Knowledge Today</i> |
| 11:00 – 11:20 | <i>Wolfgang Kilian (Hannover) Who is interviewed by Joana Warnecke (Braunschweig) Data Protection in Healthcare: On Collaborating with Medical Informatics.</i> |
| 11:20 – 11:50 | <i>Michael Marschollek (Hannover) The Peter L. Reichertz Institute for Medical Informatics: Challenges for Today</i> |
| 11.50 – 12:00 | <i>Closing Ceremony and Awarding of the EFMI Peter L. Reichertz Prize</i> |

Poster Session

*Arriel Benis, Almog Boim, Amos Notea (Israel)
A Social Networks Data Historian Supporting Research in Emergency & Disaster Medicine and Management: The First Steps*

*Thomas Boillat, Nadim Al-Duaij, Frederic Ehrler (Switzerland)
Time is Life! Using Smartwatches to Deliver Laboratory Results in Emergency Departments*

*Sandra Kühnel, Milan Jovanovic, Henry Hoffmann (Germany)
Introduction of a Pathophysiology-based Diagnostic Decision Support System and its Potential Impact on the use of AI in Healthcare*

Marina Fotteler, Felix Holl, Christopher Käsbach, Jürgen Schlegel, Walter Swoboda (Germany)

Using Confocal Endomicroscopy for Digital Biopsy During Brain Surgery: Presentation of a Study Protocol

Sarah Riepenhausen, Julian Varghese, Philipp Neuhaus, Michael Storck, Alexandra Meidt, Stefan Hegselmann, Martin Dugas (Germany)

Portal of Medical Data Models: Status 2018

Nicole Hechtel (Germany)

Wearable Sensors for Nurses: Which Requirements Have to be Considered?

Ravi Dadsena, Rohini Palanisamy, Ramakrishnan Swaminathan (India)

Proposal of a Machine Learning Approach to Differentiate Mild and Alzheimer's Condition in MR Images using Shape Changes in Corpus Callosum

Anneka Sargeant, Tatiana von Landesberger, Claas Baier, Franz Bange, Alexander Dalpke, Tim Eckmanns, Stephan Glöckner, Gerard Krause, Michael Marschollek, Brandon Malone, Mathias Niepert, Sabine Rey, HiGHmed Consortium, Antje Wulff, Simone Scheithauer (Germany)

Early Detection of Infection Chains & Outbreaks: Use Case Infection Control

Johanna Fiebeck, Matthias Gietzelt, Sarah Ballout, Martin Christmann, Maikel Fradziak, Hans Laser, Julia Ruppel, Norman Schönfeld, Sonja Teppner, Svetlana Gerbel (Germany)

Implementing LOINC: Current Status and Ongoing Work at the Hannover Medical School

Spencer Thomas, Nadia Smith, Simon de Lusignan, Valerie Livina, Ivelina Yonova, Rebecca Webb (United Kingdom)

Analysis of Primary Care Computerised Medical Records with Deep Learning

Jonathan Krebs, Markus Krug, Georg Fette, Georg Dietrich, Maximilian Ertl, Gülmisal Güder, Frank Puppe, Mathias Kaspar (Germany)

Identifying Heart Failure Patients by Medical Text Classification

Francisco José Núñez Benjumea, Jesus Moreno Conde, Sara González García, Alberto Moreno Conde, Jose Luis López, María José Ortiz Gordillo, Carlos Parra (Spain)

Comparison of Feature Selection Methods for Predicting RT-induced Toxicity

Parisis Gallos, Santiago Aso Lete, Serge Autexier, Arturo Brotons, Antonio De Nigro, Gregor Jurak, Athanasios Kiourtis, Dimosthenis Kyriazis, Mitja Luštrek, Andrianna Magdalinou, Ilias Maglogiannis, John Mantas, Andreas Menychtas, Lydia Montandon, Manuel Perez, Gregor Starc, Tanja Tomson (Greece)

CrowdHEALTH: Big Data Analytics and Holistic Health Records

Blanca Flores, Matthias Ganzinger, Aleksei Dudchenko, Petra Knaup (Germany)

Establishment of the Danube Medical Informatics Network: Experiences and Current State

Mert Baskaya, Mustafa Yuksel, Gökce Banu Laleci Erturkmen, Miriam Cunningham, Paul Cunningham (Turkey)

mHealth4Afrika: Supporting Standards based Integration of Medical Sensor Data

Anne Quesnel-Barbet, Julien Soula, Pierre Bazile, Eric-André Sauleau, Pierre Parrend (France)

PoleSat_2018: A Strategic IT Tool for Spatial Simulation Modelling of Hospital Planning