

Special Topic Conference

STC 2019



ICT FOR HEALTH SCIENCE RESEARCH

07th - 10th APRIL 2019 • HANOVER

PROGRAM



gmds

Deutsche Gesellschaft für
Medizinische Informatik,
Biometrie und
Epidemiologie e.V.



M-H Hannover Medical School

Welcome Address



Welcome to EFMI STC 2019!

Welcome to PLRI!

Welcome to Hanover!

Dear colleagues and friends,

It is a great pleasure for me to host an EFMI Special Topic Conference again in Germany (15 years ago in 2004, there was an STC in Munich). Moreover, I am honored that this meeting is dedicated to one of the most important pioneers in medical informatics, Peter L. Reichertz, who became professor at Hannover Medical School in 1969, 50 years ago. Peter Reichertz is also the name giver of PLRI, the hosting institute of this conference, so far the only joint institution of TU Braunschweig and Hannover Medical School.

Already 50 years ago, Professor Reichertz has started to use computers to support health care in Germany. Despite the former limitations in computational power, storage capacities and communication bandwidth, Peter Reichertz fostered the use of informatics in the health sciences with research targeting at data analytics for computer-supported diagnosis. Today, after 50 years of research and development, medical informatics still is an active academic discipline facing new challenges to transform health systems into our digital world. Accordingly, the oral presentations of this STC are organized into the following topics and sessions:

- Digitization of systems medicine
- Data quality, privacy, and security
- Health interoperability through standards
- Medical registries and clinical trials
- Interfaces with diagnostic or therapeutic systems
- Novel approaches in ICT for health research
- Big data analytics
- Towards interoperable health information systems
- Improving the understanding of health data
- Data-driven decision support in systems medicine
- Mobile data capture and electronic patient reported outcomes (ePRO)
- ICT for clinical trials

Let me quote Christian Lovis, the former EFMI President: “We shall no longer work on the same problems without talking with each other. The time has come, to not only share data, but also concepts and experiences.” This EFMI STC aims at providing a platform for this exchange to all the delegates: So far, we have more than 120 registrations from all over Europe, the Americas, Asia and Africa. I wish you all a pleasant stay and satisfying conference with latest results from our community, interesting discussions and fruitful collaboration.

Further, I am grateful to all of you for coming to Hanover. I am sure that you all will actively participate, either by giving a presentation or by discussing the addressed topics. I want to thank all, who actively contributed in preparing this conference, as well as to my team for making this event happen.

Sincerely yours,

Thomas Deserno

Head of Conference

Prof. Dr. Thomas M. Deserno

Deputy Director, Director Campus Braunschweig
Peter L. Reichertz Institute for Medical Informatics
of TU Braunschweig and Hannover Medical School, Germany
On behalf of GMDS.

Members of the Scientific Program Committee (SPC)

Amnon Shabo (Shvo), Haifa, Israel (Chair)
Inge Madsen, Aarhus, Denmark (Co-Chair)
Hans-Ulrich Prokosch, Erlangen, Germany
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Matthias Löbe, Leipzig, Germany

Members of the Local Organizing Committee (LOC)

Under the patronage of the GMDS, this STC is organized by the Peter L. Reichertz Institute for Medical Informatics of TU Braunschweig and Hannover Medical School.

Thomas M. Deserno, PLRI Campus Brunswick, Germany (Chair)
Michael Marschollek, PLRI Campus Hanover, Germany (Co-Chair)
Martin Dugas, University of Munster, Germany
Jürgen Stausberg, University of Duisburg-Essen, Germany
Alfred Winter, University of Leipzig, Germany

Members of the PLR Symposium Committee (PSC)

The Peter L. Reichertz Symposium is organized by the PLRI in honor of Peter Leo Reichertz, who was a pioneer in applying information and communication technology (ICT) not only to health care but also to health science research.

Reinhold Haux, Brunswick, Germany (Chair)
Otto Rienhoff, Göttingen, Germany
Rolf Engelbrecht, Munich, Germany

Members of the STC Conference Team

Alexej Hecht, Jamie-Céline Heintzig, Malte-Levin Jauer, Noah Maxen, Maraike Müller, Sven Neumann, Aaron Wiora, *Peter L. Reichertz Institute for Medical Informatics of TU Braunschweig and Hannover Medical School*

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Internet / WiFi

In both the conference venues, eduroam WiFi is available. In addition, a dedicated wireless network is setup in the Leibniz House. As conference participant, you can connect using the following log-in information, or simply by scanning the QR-code:

Network name (SSID): *UHEvent*
Password (WPA2): *D2jLpQ7X*



Proceedings

The conference proceedings are published by IOS Press. The URL is:

<http://ebooks.iospress.nl/ISBN/978-1-61499-959-1>

Photos

At the event photos, will be taken for the purpose of documentation. The photos of the event will be used as printed copies as well as uploads on the website. If you don't want to be photographed, please take a seat in the rows at the back.

Program Overview

Lunch and coffee breaks will be served in the basement (Hannah-Arendt-Room)

Time	Leibniz-Room	Karmarsch-Room	Other
Saturday, 6th April 2019			
15:00 - 15:30			Welcoming EFMI Board (Foyer)
15:30 - 18:30		EFMI Board Meeting	
19:30 - 22:00			EFMI Board Dinner (Restaurant "6 Sinne")
Sunday, 7th April 2019			
10:00 - 10:30			Welcoming EFMI Council (Foyer)
10:30 - 12:30		EFMI Council Meeting	
12:30 - 13:00		Light Lunch	
13:00 - 15:00		EFMI Council Meeting	
15:00 - 15:20		Coffee Break	
15:20 - 17:00		EFMI Council Meeting	
19:00 - 21:00	Registration & Welcome Reception		EFMI Council Dinner (Brauhaus Ernst-August)
21:00 - 22:00			
Monday, 8th April 2019			
08:00 - 08:30			Reception (Foyer)
08:30 - 09:00	Opening & Welcome Session		
09:00 - 10:00	Keynote 1: Raising the impact of real world evidence		
10:00 - 10:20	Coffee Break		
10:20 - 12:00	Session 1a: Towards Interoperable Health Information Systems	Session 1b: Improving the Understanding of Health Data	
12:00 - 12:30			Poster Session (Hannah-Arendt-Room)
12:30 - 13:30	Lunch Break		WG Education Meeting (Kersting Room)
13:30 - 14:50	Session 2a: Digitization of Systems Medicine	Session 2b: Data Quality, Privacy, and Security	
14:50 - 15:00	Break		
15:00 - 16:20	Session 3: Interfaces with Diagnostic or Therapeutic Systems		
16:20 - 16:40	Coffee Break		
16:40 - 18:00	Session 4: Novel Approaches in ICT for Health Science Research		
19:00 - 22:00	Gala Dinner (Altes Rathaus)		

Time	Leibniz-Room	Karmarsch-Room	Other
Tuesday, 9th April 2019			
08:30 - 09:50	Session 5: Big Data Analytics		
09:50 - 10:00	Break		
10:00 - 11:00	Workshop A: The European FAIR4Health Initiative	Workshop B: The National Core Data Set of the German Medical Informatics Initiative	
11:00 - 11:20	Coffee Break		
11:20 - 12:40	Session 6a: Health Interoperability Through Standards	Session 6b: Medical Registries and Clinical Trials	
12:40 - 13:40	Lunch Break		WG EFMI THI Meeting (Kersting Room)
13:40 - 15:00	Session 7a: Data-Driven Decision Support in Systems Medicine	Session 7b: Mobile Data Capture and Electronic Patient Reported Outcomes (ePRO)	
15:00 - 15:10	Break		
15:10 - 16:30	Session 8: ICT for Clinical Trials		
16:30 - 16:50	Coffee Break		
16:50 - 17:50	Keynote 2: How to harness big data for the benefit of patients		
17:50 - 18:00	Break		
18:00 - 20:00	Peter L. Reichertz Reception		

Time	Hannover Medical School (MHH), Lecture Hall A, Building J2		
Wednesday, 10th April 2019			
Peter L. Reichertz Symposium			
08:00 - 08:30	Registration		
08:30 - 10:00	Session 9: Peter L. Reichertz Symposium (Reinhold Haux)		
10:00 - 10:30	Break		
10:30 - 12:00	Session 10: Peter L. Reichertz Symposium (Thomas M Deserno)		
12:00 - 13:00	Lunchtime Snack		

Keynote 1



Title: Raising the impact of real world evidence

Time: Monday, 8th April 2019, 09:00 - 10:00

Room: Leibniz-Room

Speaker: Prof. Dipak Kalra

President of the European Institute for Innovation through Health Data

Chair: Amnon Shabo (Shvo)

Abstract

In an environment in which most regulatory and authoritative health strategy decisions are made on the basis of randomised control trials, real-world evidence (RWE), primarily derived from electronic health records, remains a second-class citizen. Real world evidence is widely taken to include Pragmatic clinical trials and insights derived from the distributed analysis of large volumes of routinely collected health data and registry data (so called big data). This presentation will look at the growing scale and reputation of big health data, the ways in which good governance principles and better quality data are creating reusable data at scale, how platforms and tools are enabling better quality evidence generation, and the perspectives of different stakeholders towards the positioning of RWE in decision making: by regulators, health technology assessment agencies, outcomes benchmarking and value based care. This talk will review how we are presently able to generate trustworthy real world evidence, what we mean by that, and the barriers that remain to trusting it. These remaining barriers will need to be tackled by future health informatics research.

Keynote 2



Title: How to harness big data for the benefit of patients
Time: Tuesday, 9th April 2019, 16:50 - 17:50
Room: Leibniz-Room

Speaker: Dr. Pierre Meulien
Executive Director of The Innovative Medicines Initiative (IMI)

Chair: Inge Madsen

Abstract

IMI is a large public private partnership which has committed Euro 5 Billion from the European Commission, the European Pharmaceutical sector and other partners, to enable and accelerate bringing medical innovation to patients. IMI is now 10 years old and already has changed the ecosystem and way of working in developing innovative medicines across the public /private divide.

Big data represents a significant piece of this investment and projects in this area are attempting to provide solutions to major challenges including:

1. Data integration from many sources across many jurisdictions and institutions and which need to be validated with regard to their quality and robustness
2. Data interfaces, for example, between research and clinical data and how to overcome the challenges around data protection and access
3. Data standards and who establishes these and how they are deployed
4. How do we scale and sustain some of the successful pilots to ensure the value of the investment?
5. How do we take advantage of the digital revolution to enable more relevant and accurate data capture in the real world?

Much has been done already through IMI projects and beyond and now we need to consolidate through intelligent implementation across the European landscape. With a mixture of generic and disease specific investments, and although many challenges remain, significant progress has been made and examples of success will be described.

Workshop A



Title: The European FAIR4Health Initiative
Time: Tuesday, 9th April 2019, 10:00 - 11:00
Room: Leibniz-Room

Chair: Prof. Carlos Luis Parra Calderón
Servicio Andaluz de Salud
Sevilla, Spain

Vision

The FAIR4Health vision for the year 2020 is a vast, open community of EU health research institutions fully engaged to the Horizon 2020 ORD Mandate enhancing their knowledge-based economy and their research excellence thanks to the application of the FAIR data guiding principles. High-quality health research and routine care data will be shared and reused in a secure, controlled and legally compliant environment in order to accelerate knowledge discovery while reducing the bias and enhancing the strength and quality of the scientific evidence raised by the FAIR4Health community members.

Furthermore, a community of data scientists from both public research institutions and private companies will be attracted to develop advanced analytical solutions able to intercommunicate in order to provide data-driven innovative services that will enable a seamless application of the new evidence raised into the clinical practice.

Objective

This session has the following objectives:

- To engage stakeholders by providing training and awareness raising on the FAIR data principles and its potential impact in the Health research domain.
- To receive feedback from key stakeholders regarding the challenges posed in the application of the FAIR data principles in Health research and how to overcome them.
- To gather expressions of interest for FAIRification of Health research datasets beyond the FAIR4Health partnership.
- Expected Impacts

This session will impact on the following points related to the strategy to adopt the FAIR data policy at EU level:

- Increase in the awareness of the potential benefits in adopting this strategy among key involved stakeholders
- Contribution to the definition of the overcoming mechanisms for tackling the challenges posed by the adoption of the FAIR data policy, and in the definition of the policy guidelines in the long term.

Target Audience

This session is open to any STC attendee and addressed to the following profiles:

- Researchers
- Research managers (Foundations, Institutes, etc)
- Policymakers
- Data-driven industry

Workshop B



Title: The National Core Data Set of the German Medical Informatics Initiative
Time: Tuesday, 9th April 2019, 10:00 - 11:00
Room: Karmarsch-Room

Chairs: **Matthias Löbe**
Institut für Medizinische Informatik, Statistik und Epidemiologie (IMISE)
Universität Leipzig, Germany

Prof. Dr. Thomas Ganslandt
Heinrich-Lanz-Zentrum für Digitale Gesundheit
Universitätsmedizin Mannheim, Germany

Background

One primary aim of the German Medical Informatics Initiative (MII) is to make data from the Hospital Information Systems of the university hospitals available for research. The patient data, however, are usually stored in different formats, in different IT systems and in different levels of detail and quality. In order to ensure interchangeability and comparability, cross-location specifications to ensure technical and semantic interoperability of the data are required.

All consortia members of the MII agreed on the concept of a joint national core data set. In addition to master data, the minimum data set includes case data, diagnoses, procedures, laboratory values, and medication. In the medium term, it will be extended by more specific modules e.g. for microbiology, oncology, radiology or imaging together with the corresponding medical societies.

Currently, medical concepts are captured and organized in information modeling tools and annotated with medical terminologies such as ICD-10, LOINC or SNOMED CT. Parallel to this, implementations as FHIR profiles are under development in cooperation with HL7 Germany.

Objective

The workshop will address the following points:

- Presentation of the content of the current dataset specification and ideas for further development and governance
- Formalization and modeling of the individual data elements in ART-DECOR and technical implementation and provision with Simplifier.net
- Use of the core data set in first research projects ("demonstrator study", overarching use cases)
- Outlook on the regulations for access to data by external researchers

Expected Impacts

The workshop will try:

- To raise awareness of the existence and manifestation of the MII National Core Data Set
- To show the current state of implementation utilizing international standards
- To get feedback or expression of interest from the audience

Target Audience

The workshop is intended for STC attendees who have to provide or want to use data elements of the core data set in their own projects, especially:

- Medical Informatics Scientists
- Data Scientists
- Health Care Researchers
- Industry

Detailed Session Program

*** (x) ***

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

Opening	Welcome Adresses Chair: Thomas M. Deserno
08:30 - 08:40	Prof. Michael P. Manns President of Hannover Medical School (MHH)
08:40 - 08:50	Prof. Lăcrămioara Stoicu-Tivadar President of EFMI,
08:50 - 09:00	Prof. Alfred Winter Vice President of GMDS

Session 1a	Towards Interoperable Health Information Systems Chair: John Mantas
10:20 - 10:40	Maryna Khvastova, Michael Witt, Dagmar Krefting (Germany) Towards Interoperability in Clinical Research: Enabling FHIR on the Open Source Research Platform XNAT
10:40 - 11:00	Sebastian Stäubert, Alexander Strübing, Johannes Drepper, Bjoern Bergh, Alfred Winter, Angela Merzweiler (Germany) Towards a Software Tool for Planning IHE-compliant Information Systems
11:00 - 11:20	Anna Lackerbauer, Oliver Krauss, Emmanuel Helm (Austria) Automated Verification of Structured Questionnaires Using HL7® FHIR®
11:20 - 11:40	Georg Fette, Mathias Kaspar, Leon Liman, Georg Dietrich, Maximilian Ertl, Jonathan Krebs, Stefan Störk, Frank Puppe (Germany) Query Translation Between openEHR and i2b2
11:40 - 12:00	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

Session 1b	Improving the Understanding of Health Data Chair: Brigitte Seroussi
10:20 - 10:40	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
10:40 - 11:00	Jon Haël Brenas, Eun Kyong SHIN, Arash Shaban-Nejad (United States) An Ontological Framework to Improve Surveillance of Adverse Childhood Experiences (ACEs)
11:00 - 11:20	Jonathan Mang, Stefanie Schild, Hans-Ulrich Prokosch, Christian Jeleazcov, Anne Heinrich, Dennis Toddenroth (Germany) Evaluation of a Patient-facing Digital Prototype for Perioperative Risk Assessment
11:20 - 11:40	Yulia Lenivtseva, Georgy Kopanitsa (Russian Federation) Investigation of Content Overlap in Proprietary Medical Mappings
11:40 - 12:00	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

12:00 - 12:30	
Poster Session	
Chair: Michael Marschollek	
P1	Arriel Benis, Almog Boim, Amos Notea (Israel) A Social Networks Data Historian Supporting Research in Emergency & Disaster Medicine and Management: The First Steps
P2	Thomas Boillat, Nadim Al-Duaij, Frederic Ehrler (Switzerland) Time is Life! Using Smartwatches to Deliver Laboratory Results in Emergency Departments
P3	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
P4	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
P5	Sarah Riepenhausen, Julian Varghese, Philipp Neuhaus, Michael Storck, Alexandra Meidt, Stefan Hegselmann, Martin Dugas (Germany) Portal of Medical Data Models: Status 2018
P6	Nicole Hechtel (Germany) Wearable Sensors for Nurses: Which Requirements Have to be Considered?
P7	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
P8	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
P9	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
P10	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
P11	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
P12	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
P13	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
P14	Blanca Flores, Matthias Ganzinger, Aleksei Dudchenko, Petra Knaup (Germany) Establishment of the Danube Medical Informatics Network: Experiences and Current State
P15	Mert Baskaya, Mustafa Yuksel, Gökce Banu Laleci Erturkmen, Miriam Cunningham, Paul Cunningham (Turkey) mHealth4Afrika: Supporting Standards based Integration of Medical Sensor Data
P16	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

Session 2a	
Digitization of Systems Medicine	
Chair: Anne Moen	
13:30 - 13:50	Dominik Wolff, Michael Marschollek, Thomas Kupka (Germany) <i>On the Trustworthiness of Soft Computing in Medicine</i>
13:50 - 14:10	Sven Van Laere, Pieter Cornu, Evy Dreesen, Jan Lenie, Ronald Buyl (Belgium) <i>Electronic Prescriptions: Why Community Pharmacists Still Treat them as Paper-based?</i>
14:10 - 14:30	Priscila Maranhão, Ana Margarida Pereira, Tiago Silva-Costa, Ricardo Cruz-Correia (Portugal) <i>The Impact of Electronic Obstetric Records using the ObsCare Software on Scientific Production</i>
14:30 - 14:50	Brigitte Seroussi, Coralie Prebet, Charlotte Ngo, Luis Teixeira, Gilles Guezennec, Jacques Bouaud (France) <i>Using the Recommendations Inferred by a Decision Support System to Compare Breast Cancer Clinical Practice Guidelines</i>

Session 2b	
Data Quality, Privacy, and Security	
Chair: Kaija Saranto	
13:30 - 13:50	Masoumeh Sarbaz, Fereshte Manouchehri, Alireza Banaye Yazdipour, Khalil Kimiafar (Iran) <i>Views of Health Information Management Staff on Non-technical Security Management Factors in Mashhad, Iran</i>
13:50 - 14:10 *** (1) ***	Marvin Kampf, Detlef Kraska, Hans-Ulrich Prokosch (Germany) <i>An Analysis of Erlangen University Hospital's Billing Data On Utility-based De-identification</i>
14:10 - 14:30	Jaime Delgado, Silvia Llorente, Daniel Naro (Spain) <i>Adding Security and Privacy to Genomic Information Representation</i>
14:30 - 14:50	Erik Tute, Antje Wulff, Michael Marschollek, Matthias Gietzelt (Germany) <i>Clinical Information Model Based Data Quality Checks: Theory and Example</i>

Session 3	
Interfaces with Diagnostic or Therapeutic Systems	
Chair: Alfred Winter	
15:00 - 15:20 *** (2) ***	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) <i>Approaching Clinical Data Transformation from Disparate Healthcare IT Systems Through a Modular Framework</i>
15:20 - 15:40	Tobias Brix, Philipp Neuhaus, Michael Storck, Iñaki Soto-Rey, Martin Dugas (Germany) <i>Reviving 30 Year Old Technology: Lessons Learned from Exporting EHR Patient Data using Generic Data Matrices</i>
15:40 - 16:00	Al Hassim DIALLO, Gaoussou CAMARA, Jean-Baptiste LAMY, Moussa LO, Ibrahima DIAGNE, Demba MAKALOU, Mamadou DIOP, Dominique DOUPA (Senegal) <i>Towards an Information System for Sickle Cell Neonatal Screening in Senegal</i>
16:00 - 16:20	Masoumeh Sarbaz, Nafiseh Sadat Hoseini, Khalil Kimiafar (Iran) <i>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 Chair: Lacramioara Stoicu-Tivadar
16:40 - 17:00	Masoumeh Sarbaz, Alireza Banaye Yazdipour, Khalil Kimiafar (Iran) Use of Social Networks for Learning Purposes Among Medical and Paramedical Sciences Students, Mashhad, Iran
17:00 - 17:20 *** (3) ***	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
17:20 - 17:40 *** (4) ***	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
17:40 - 18:00	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

Session 5	Big Data Analytics Chair: Patrick Weber
08:30 - 08:50	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
08:50 - 09:10	Inna Skarga-Bandurova, Tetiana Biloborodova (Ukraine) EEG Data Fusion for Improving Accuracy of Binary Classification
09:10 - 09:30	Francisco Bischoff, Maria do Carmo Koch, Pedro Pereira Rodrigues (Portugal) Predicting Blood Donations in a Tertiary Care Center using Time Series Forecasting
09:30 - 09:50	Nagarajan Ganapathy, Ramakrishnan Swaminathan (India) Emotion Recognition using Electrodermal Activity Signals and Multiscale Deep Convolution Neural Network

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

Session 6b	Medical Registries and Clinical Trials Chair: Martin Dugas
11:20 - 11:40	Moritz Kaspar Strickler, Chantal Zbinden, Ramon Saccolotto, Kerstin Dencke (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 Chair: Klaus-Hendrik Wolf
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 Marscholke, 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) Chair: Jürgen Stausberg
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	Stefan Kraus, Hans-Ulrich Prokosch (Germany) <i>Complementing Medical Records With Precalculated Data Items to Facilitate Decision Support and Phenotyping</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 Chair: Mira Hercigonja-Szekeres
15:20 - 15:40	Matthias Löbe, Frank Meineke, Alfred Winter (Germany) Scenarios for Using OpenClinica in Academic Clinical Trials
15:40 - 16:00	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
16:00 - 16:20 *** (9) ***	Sattar Rahimbayli, Thomas M Deserno, Jens Lehmann (Germany) Pay for Performance in Electronic Data Capture for Clinical Trials and Medical Registries
16:20 - 16:40	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

Session 9	Peter L. Reichertz Symposium Chair: Reinhold Haux
08:30 - 09:00	Andrea Aulkemeyer (Vice-President, Hannover Medical School) Ulrich Reimers (Vice-President, TU Braunschweig) Alfred Winter (Vice-President, GMDS) Welcome Addresses
09:00 - 09:30	Rolf Engelbrecht (Munich) On MHH's Medical Informatics Early Life as an Institute: Are there Lessons for the Future?
09:30 - 10:00	Otto Rienhoff (Göttingen) Medical Informatics as a Dynamic Discipline: The MHH with Reichertz as an Early Driving Force

Session 10	Peter L. Reichertz Symposium Chair: Thomas M. Deserno
10:30 - 11:00	Reinhold Haux (Braunschweig) On Analyzing the Scientific Publications of Peter Reichertz: Reflections in the Light of Medical Informatics Knowledge Today
11:00 - 11:20	Wolfgang Kilian (Hannover) Who is interviewed by Joana Warnecke (Braunschweig) Data Protection in Healthcare: On Collaborating with Medical Informatics.
11:20 - 11:50	Michael Marschollek (Hannover) The Peter L. Reichertz Institute for Medical Informatics: Challenges for Today
11.50 - 12:00	Closing Ceremony and Awarding of the EFMI Peter L. Reichertz Prize

EFMI Satellite Events

Within the frame of the STC conference, several working group (WG) meetings and satellite events are organized. Please note that all WG meetings are open to the public while the other events are by special invitation only.

Date	Time	Topic	Location
Saturday, 06 th Apr	15:30 - 18:30	EFMI Board Meeting	Leibniz House Karmarsch-Room
	19:30 - 22:00	EFMI Board Dinner	Downtown Hanover Restaurant 6 Sinne
Sunday, 07 th Apr	10:30 - 17:00	EFMI Council Meeting	Leibniz House Karmarsch-Room
	19:00 - 22:00	EFMI Council Dinner	Downtown Hanover Brauhaus Ernst-August
Monday, 08 th Apr	12:30 - 13:30	EFMI WG Education Meeting	Leibniz House Kersting-Room
Tuesday, 09 th Apr	09:00 - 17:00	EFMI-EUSEM Joint Task Force	Hannover Medical School MHH Building J6 Level S0, Room 4112a (follow the signs)
	12:40 - 13:40	EFMI WG THI Meeting Translational Health Informatics	Leibniz House Kersting-Room

Presentation Guidelines

Oral Presentations

The scientific talks should not exceed 15 minutes in order to have sufficient time for discussion. The session chair will signal the speaker after 15 minutes and end the talk after 18 minutes to allow questions from the audience.

Presentations are accepted in PowerPoint, ODT, or PDF format. The speakers shall deliver their presentation to the Speakers Desk in **Iffland-Room** (1. Obergeschoss / 2nd Floor) not later than 20 minutes before the corresponding session will start.

Please also contact your session chair at least 5 minutes before your session starts.

Poster Presentations

Please bring your poster presentation already printed, preferably in format A0, Portrait. The posters are displayed in the **Hannah-Arendt-Room** (Untergeschoss / Basement) during the entire conference.

Installation of posters is on Monday, 08th of April from 8:00 am to 8:30 am. The poster boards are numbered. Please check your poster number in this program and find the appropriate place. Dismount of posters is scheduled on Tuesday, 09th of April after 17:50 pm. Remaining posters will be destroyed.

The Poster Session is scheduled on Monday, 08th of April from 12:00 noon to 12:30 pm. Poster presenters shall stay at their posters within this time slot. However, it might be smart to be available at your poster also in the breaks to get in contact with interested colleagues.

Locations and Directions

Regarding all locations and directions, see also the information on our website:
<http://stc2019.plri.de>

Leibniz House

The main part of the STC conference takes place in the “Leibnizhaus”. This original building has recently been moved into the downtown area.

Address:

Holzmarkt 5, 30159 Hanover

Reaching Leibnizhaus from the Central Station:

Take subway number 3, 7, or 9 (in the direction of Wettbergen, Empelde) to the second stop (‘Markthalle/ Landtag’). Leave the subway station at the exit towards ‘Marktkirche’. Walk past the church and then turn left into ‘Kramerstraße’. At the end of the street, you will find the ‘Holzmarkt’, the fountain and the historical facade of Leibnizhaus.

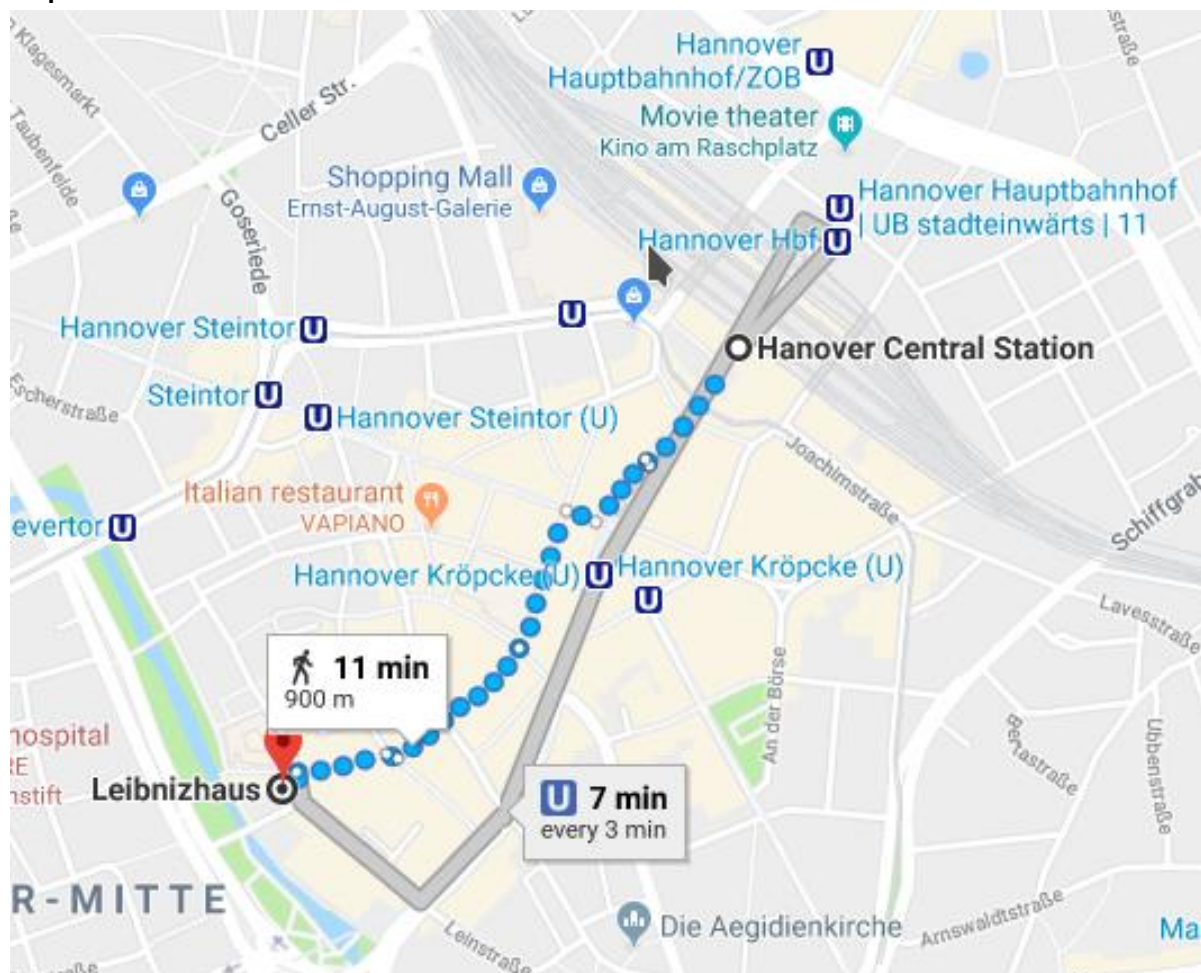
Parking garage near Leibniz House:

Osterstraße 42, 30159 Hanover

1,10€ per hour

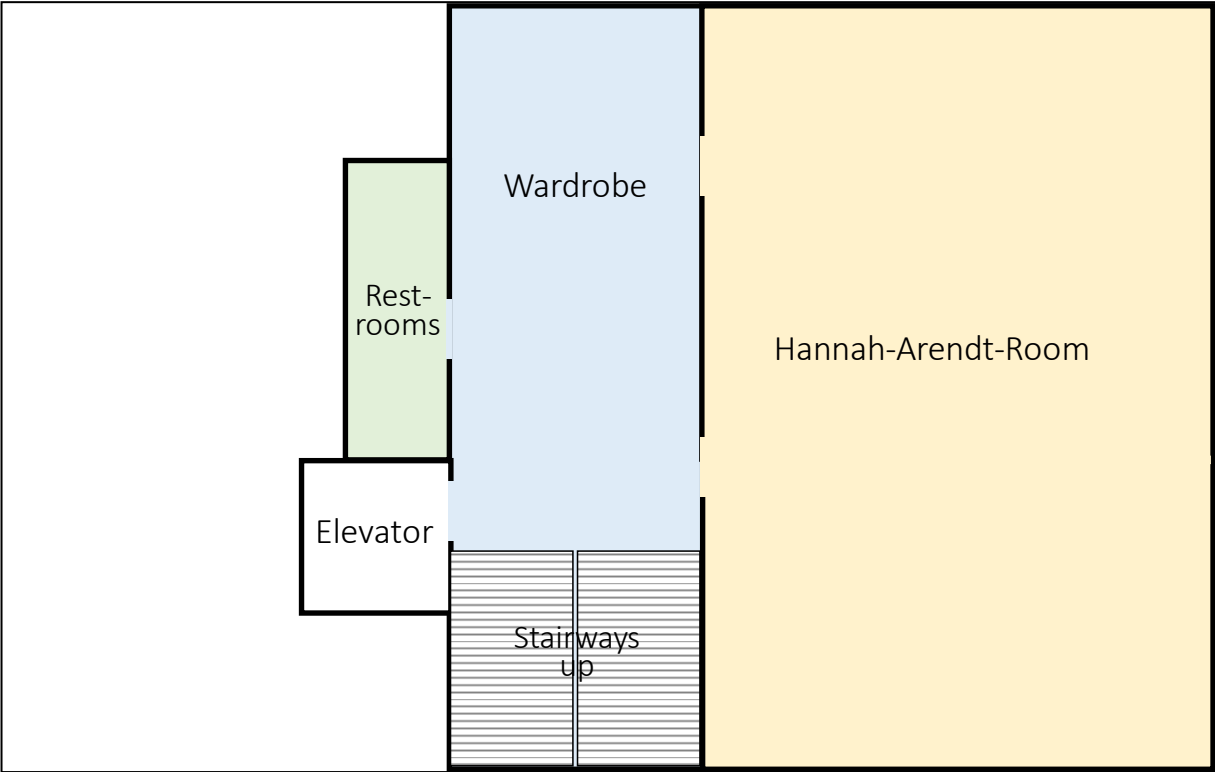
11,00€ per day

Map:

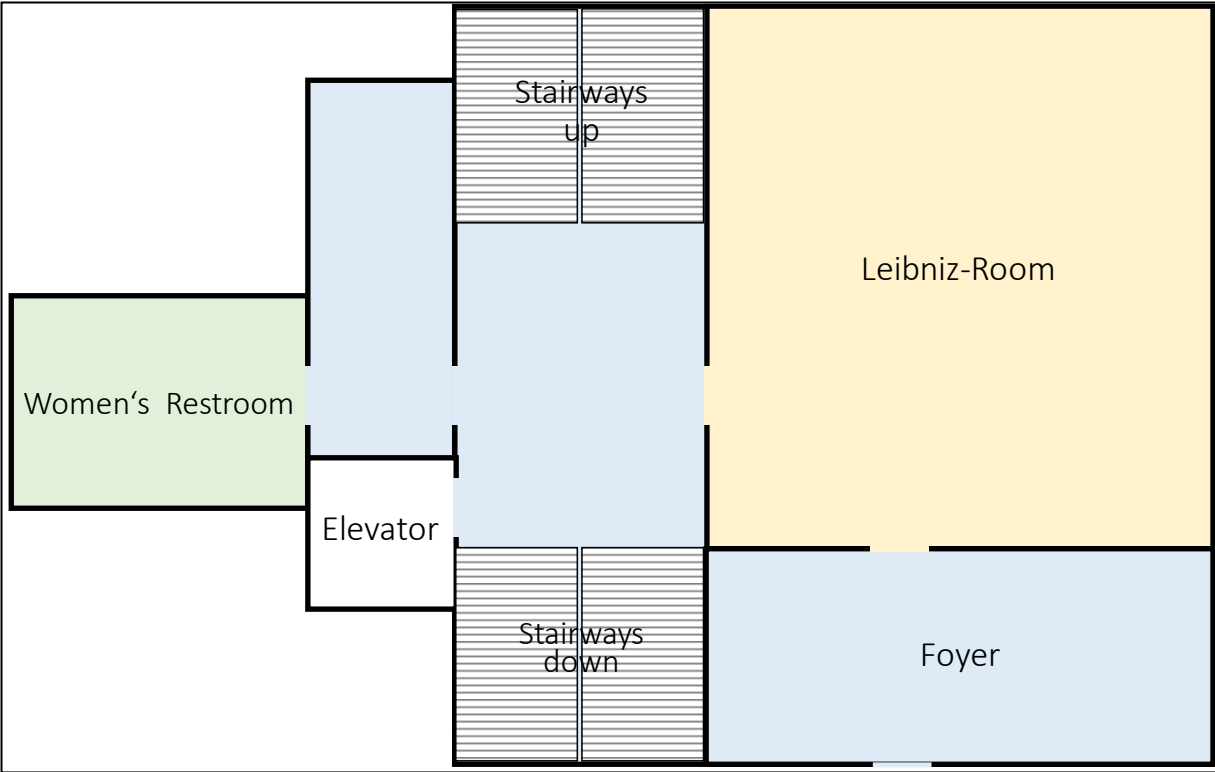


Leibnizhaus - Floor Plans

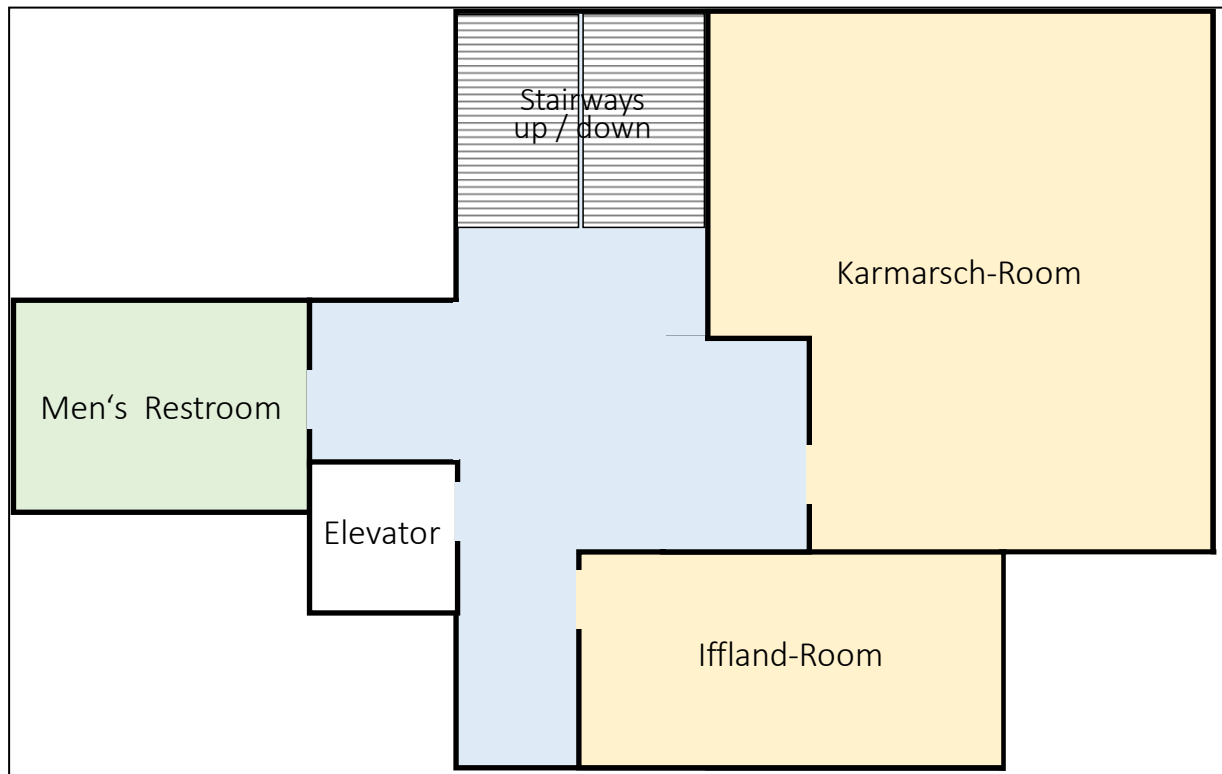
Untergeschoss / Basement



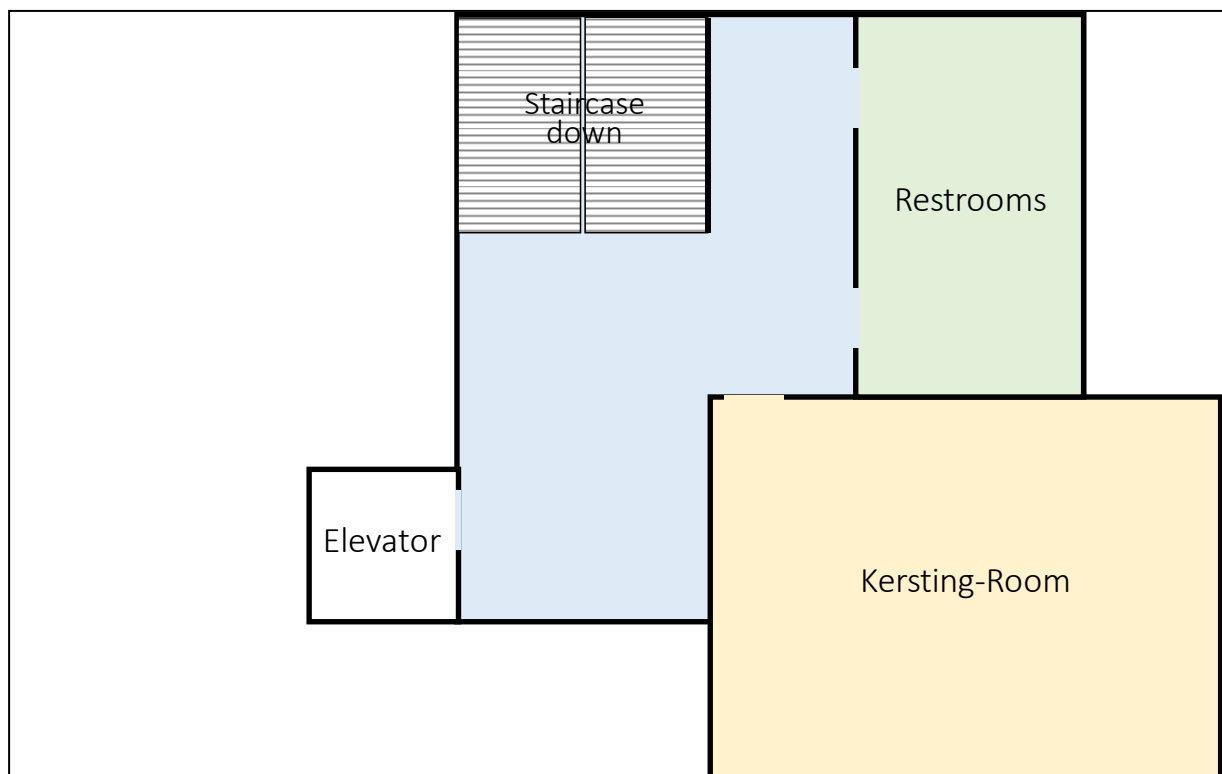
Erdgeschoss / 1st Floor



1. Obergeschoss / 2nd Floor





2. Obergeschoss / 3rd Floor



Hanover Center: Dinner Restaurants

The EFMI Board and Council Dinners, will take place in the following locations, which are in close walking range from the Leibnizhaus:

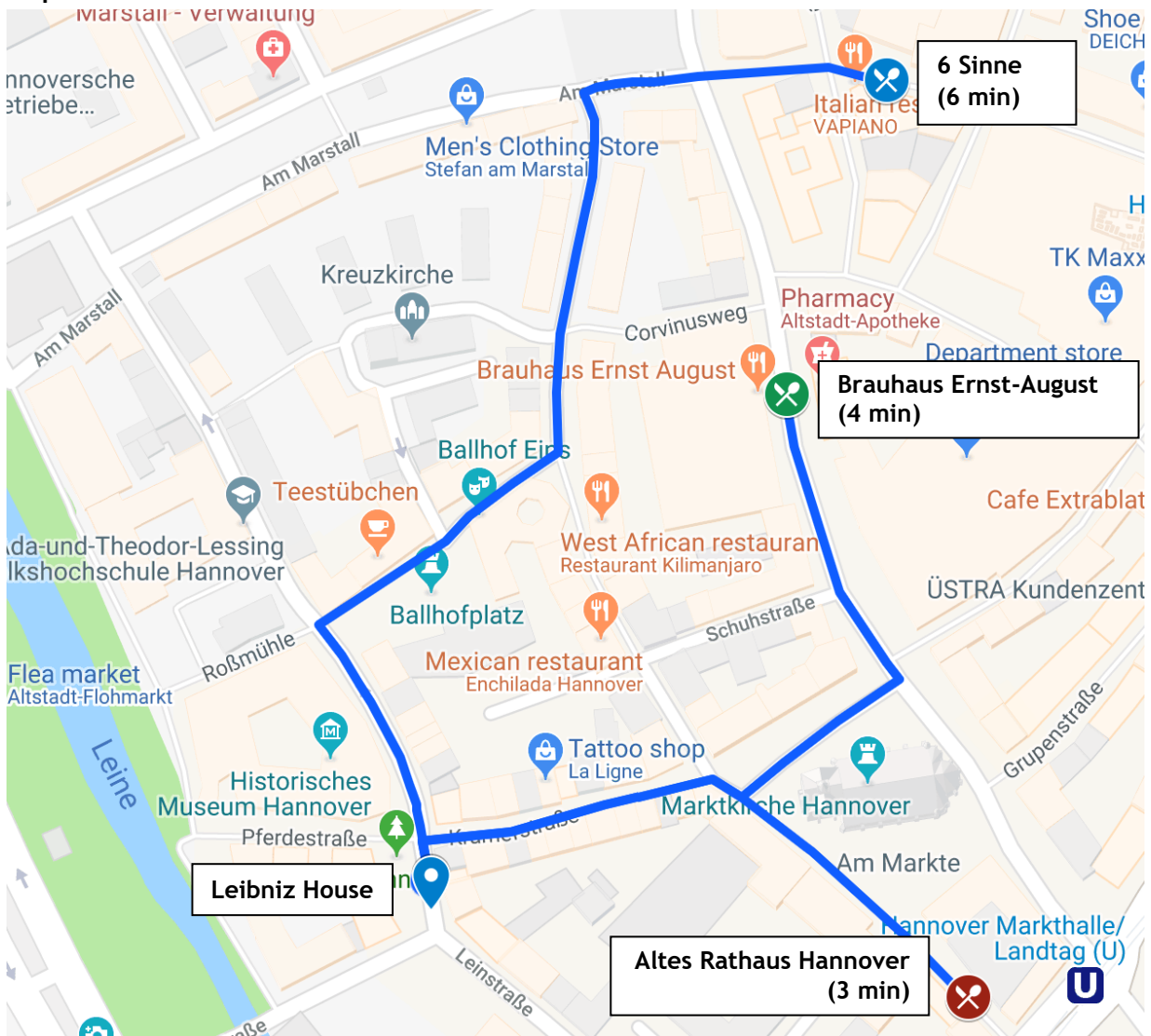
EFMI Board Dinner 	Restaurant 6 Sinne	Heiligerstraße 15 -16, 30159 Hanover
EFMI Council Dinner 	Brauhaus Ernst August	Schmiedestraße 13, 30159 Hanover

Gala Dinner

The Gala Dinner will be held in the historic city hall (Altes Rathaus Hannover), which is as well in close vicinity to the conference location.

Date: 07.04.2019, 7:00 - 10:00 pm
Restaurant: Altes Rathaus Hannover
Address: Köbelingerstraße 4, 30159 Hanover
URL: <https://www.altes-rathaus-hannover.de/>

Map:



Hannover Medical School

The Peter L. Reichertz Symposium is hosted in the Hannover Medical School, Lecture Room A in Building J2.

Address:

Carl-Neuberg-Straße 1, D-30625 Hanover, Germany

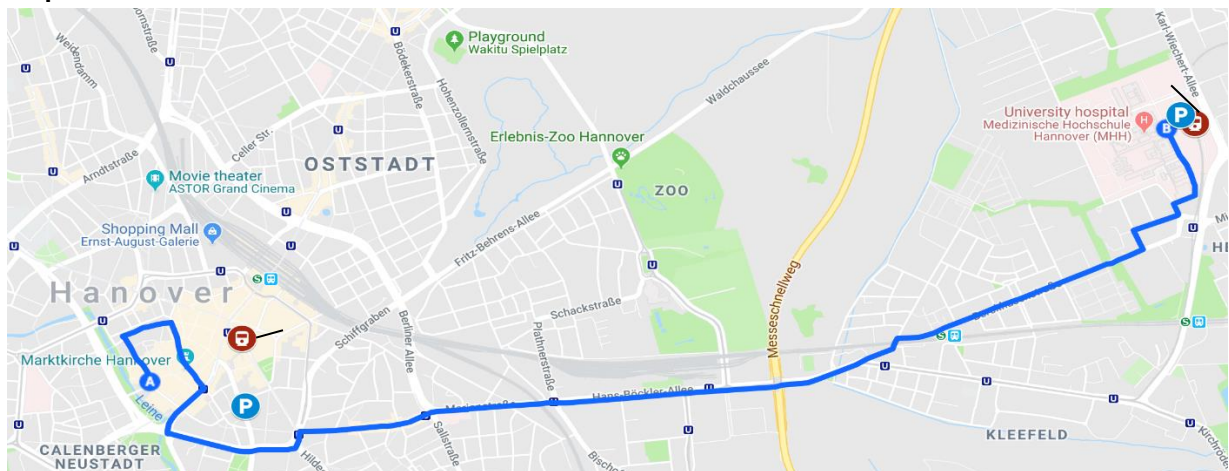
Metro:

Metro train U4 from „Kröpcke (U)“ to „Medizinische Hochschule (U)“ station.
Duration: 15 minutes (departs every 10 minutes).

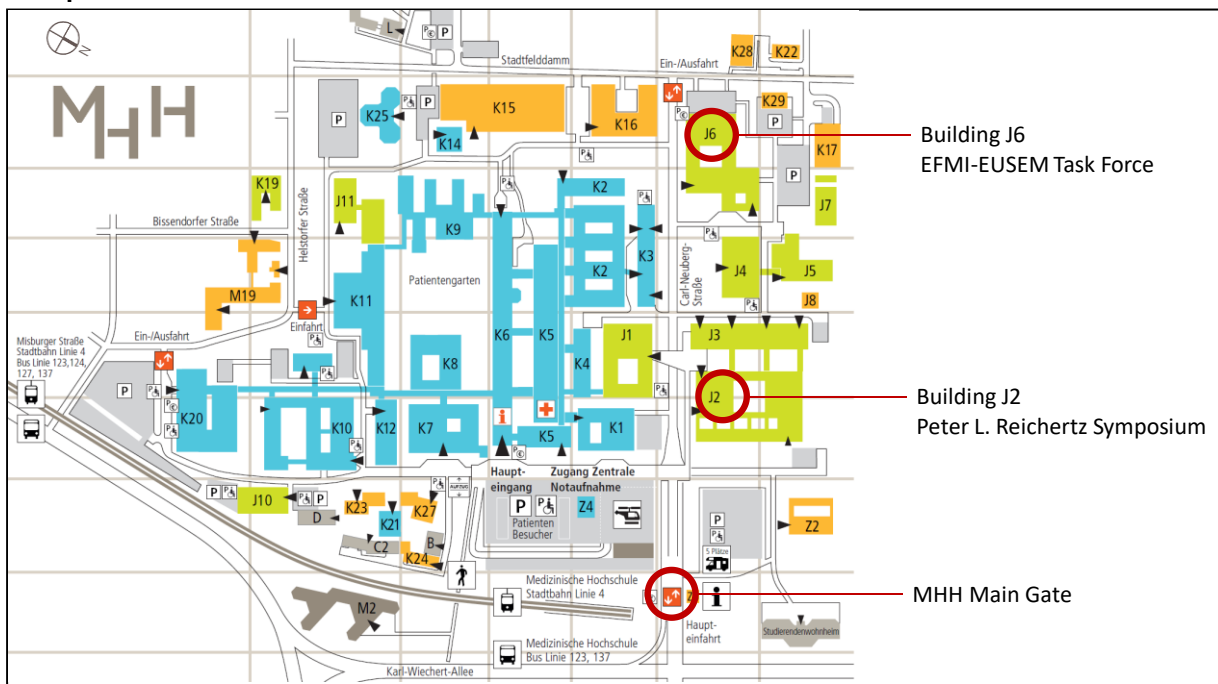
By Car:

Route from Leibniz-Haus (A) to MHH (B) 20 minutes by car.
Parking at MHH: 1,10€ per hour, 8,00€ for the whole day

Map:



Campus-Plan:



Building J6
EFMI-EUSEM Task Force

Building J2
Peter L. Reichertz Symposium

MHH Main Gate

Imprint
Peter L. Reichertz Institute for Medical Informatics
of TU Braunschweig and Hannover Medical School
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Deutsche Gesellschaft für
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