SUNDAY 28 AUGUST 2011

09:00-18:30 MIE2011 at Akerhus University Hospital (AHUS)
Transport from Radisson Blu Scandinavia Hotel, Oslo (the conference site). The activities at AHUS and transportation between the conference site and AHUS are included in the conference fee.

10:00 – 13:30 PARALLELL WORKSHOP SESSIONS
Each activity session is offered twice, at 10:00 and 12:00. You can consequently participate in two different activities. You choose your preferred activities when registering for the conference.

R: Fully Integrated Electronic Patient Record /Clinical Information System
R1: at 10:00 R2: at 12:00
Store auditorium
This activity will present and demonstrate the fully integrated hospital Electronic Patient Record system supporting health providers’ information handling and care documentation practices; profession specific documentation as well as collaborative information sharing within the hospital.

D: Diagnostic Imaging / Radiology
D1: at 10:00 D2: at 12:00
RAD (Radiologisk avdeling)
This activity offers a visit in the fully digitalized radiology department to introduce the visions, and discuss experiences and lesions learned in the on-going processes to establish and operate in a fully digitalized radiology department. Mobile X-ray and cooperation with primary care will be included.

L: Laboratory
L1: at 10:00 L2: at 12:00
LAB - på laben
This activity will explain the change to and include a visit to the fully automated laboratory for analysis, new tools and equipment in use and changes in the division of labor when the providers at the bedside collect the samples.

M: Medication automation
M1: at 10:00 M2: at 12:00
Seminarrom UiO S303.018
This activity will discuss and demonstrate experiences from the challenging transition to automate the medication chain, focusing on conditions for successful implementation and the different experiences towards that end. Participants will have the opportunity to see how the work at the clinical unit as well as in the pharmacy.

H: HealthCare of the future
H1: at 10:00 H2: at 12:00
NN4; HP helsesenter and Undervisingsrom NN404.051
This activity includes an orientation and tour of the “HP Global Center of excellence” that demonstrates actual use of ICT-based systems at a patient’s bedside and the health providers’ coordination center.

C: Collaboration and continuity, lessons from changing practices
C1: at 10:00  C2: at 12:00
Undervisningsrom 2 AV NNU0.014
This activity will highlight findings from research studies that have followed various aspects of the ongoing change and transformations of practice where the technologies’ new opportunities play a major part. The presentations are:

“Usability and automating medication change (TBC) Inger Sørby, Vivit/NTNU
“Standardized nurse – mission impossible?” Rune Pedersen, UiT/TTL
“Modeling workflow – implications for change (TBC)” Lene Berge Holm, Ahus

Chair: Kristin Bang

I: information exchange and cooperation across levels of care
I1: at 10:00  I2: at 12:00
Undervisningsrom 4 NNU0.064
This activity will discuss experiences and demonstrate information exchanges across levels of care. These achievements include order entry and results reporting from laboratory and radiology, referrals and discharge letters. The interoperability is established between information systems in the hospital, collaborating GPs, nursing home and community nursing.

P: Pathology
P1: at 10:00  P2: at 12:00
PAT patologen
This activity offers an insight in modern pathology using digital microscopy with all its advantages: morfometric analysis, pattern recognition, digital slide sharing, digital slide conferencing, etc.

T: Tour of the hospital
T1: at 10:00  T2: at 12:00
This activity offers a guided tour of the hospital, focusing on the “main street” (GLASSGATA) to give an overview of the hospital, explaining physical and technological infrastructure to handle all the logistics, including the robots, automatic transport (AGV) and tube system for transport.

N: Tour of the hospital — in Norwegian
N1: at 10:00  N2: at 12:00
Omvisning på sykehuset—med norsktalende guide. Detaljer som på den engelsktalende omvisingen.

Accompanying Persons program
A1: Join T1 - Tour of the hospital
A2: Join R2 – Electronic Patient Record

13:45 Lunch
13.40  EFMI Working Group Chairs meeting, Chaired by Patrick Weber

14:45 Opening Ceremony
Chair: Anne Moen  Co-chair: Stig Kjær Andersen
**Official opening**
Music: Bærum Vocalensemble, Conductor by Anine Kruuse
Welcome to Norway, MIE2011, by Petter Hurlen and Anne Moen
Official opening by Ministry of Health
Welcome to Ahus by Hospital CEO, Hulda Gunnlaugsdóttir.
EFMI welcome by John Mantas

**Hospital experiences**
The wired hospital - by Sverre Knutsen
Clinicians’ realities in a technological advances hospital - by Jan Petter Odden

Music: Bærum Vocalensemble, Conductor by Anine Kruuse

**Keynote**
Chair: John Mantas  \hspace{1cm} Co-chair: Alexander Horsch

Human Factors and Usability for complex Health Information Technologies: Why do you care?
By Marie-Catherine Beucart-Zéphir

---

**17:00 Get together – Reception**

---

**18:30 Bus to Oslo, Radisson Blu Scandinavia Hotel (conference hotel)**
MONDAY 29 AUGUST 2011

08:30 Plenary Keynote
Chair: Sabine Koch Co-chair: Etienne de Clercq
Room: Scandinaviahallen
New patient – new technologies, new networks by Susanna Palkonen

09:45 – 11:15 Parallel Paper Sessions

Session 1: Electronic Health Record, Workflow, Intra- and Interorganizational collaboration
Chair: Huibert Tange Co-chair: Berit Brattheim
Room: S2 København

Developing an electronic health record for intractable diseases in Japan
Eizen Kimura, Shinji Kobayashi, Yasuhiro Kanatani, Ken Ishihara, Tsuneyo Mimori, Ryousuke Takahashi, Tsutomu Chiba, Hiroyuki Yoshihara 255

Three Key Concerns for a Successful EPR Deployment and Usage
Rebecka Janols, Bengt Göransson, Bengt Sandblad 260

Implementation of an Open Source Provider and Organization Registry Service
Markus Birkle, Benjamin Schneider, Tobias Beck, Thomas Deuster, Markus Fischer, Florian Flatow, Robert Heinrich, Christian Kapp, Jasmin Riemer, Michael Simon, Björn Bergh 265

Implementation and Experimentation of TEDIS: an Information System Dedicated to Patients with Pervasive Developmental Disorders
Mohamed Ben Said, Laurence Robel, Erwan Vion, Antoine El Ghazali, Bernard Golse, Jean Philippe Jais, Paul Landais 270

Traceability of patient records usage: barriers and opportunities for improving user interface design and data management
Ricardo Cruz-Correia, Luís Lapão, Pedro Pereira Rodrigues 275

Important Ingredients for Health Adaptive Information Systems
Yalini Senathirajah, Suzanne Bakken 280

Session 2: Terminology, Ontologies and Standardization
Chair: Stefan Darmoni Co-chair: Room: S3 Stockholm

A Standard Based Approach for Biomedical Knowledge Representation
Ariel Farkash, Hani Neuvirth, Yaara Goldschmidt, Costanza Conti, Federica Rizzi, Stefano Bianchi, Erika Salvi, Daniele Cusi, Amnon Shab 689

Ontology-Based Framework for Electronic Health Records Interoperability
Carolina González, Bernd Blobel, Diego López 694

Ontology-based Knowledge Management for Personalized Adverse Drug Events Detection
Feng Cao, Xingzhi Sun, Xiaoyuan Wang, Bo Li, Jing Li, Yue Pan 699
A Formal Analysis of HL7 Version 2.x
Frank Oemig, Bernd Blobel

Simplifying HL7 Version 3 messages
Robert Worden, Philip Scott

Creating an ontology driven rules base for an expert system for medical diagnosis
Valérie Bertaud-Gounot, Valéry Donfack, Jérémy Lasbleiz, Annabel Bourde, Régis Duvaufrier

Session 3: Citizen-centred e-Health
Chair: Kaija Saranto  Co-chair: Room: S4 Oslo

A Unified Approach for Social-Medical Discovery
Haggai Roitman, Yossi Mesika, Yevgenia Tsimerman, Sivan Yogev

Information Provision for Adolescents With Cancer
Anna Shillabeer

Electronic Symptom Reporting by Patients: A Literature Review.
Monika Johansen, Eva Henriksen, Gro Berntsen, Alexander Horsch

Increasing Physical Activity through Health-Enabling Technologies: The Project “Being Strong Without Violence”
Corinna Scharnweber, Wolfram Ludwig, Michael Marschollek, Wolfgang Pein, Peter Schack, Reiner Schubert, Reinhold Haux

The value of role models in design of social media for elderly
Toril Knutshaug Nervik, Yngve Dahl, Anders Kofod-Petersen

Review of Mobile Terminal-Based Tools for Diabetes Diet Management
Eunji Lee, Naoe Tatara, Eirik Årsand, and Gunnar Hartvigsen

09:45 – 11:15 Panels & Workshops

Workshop Evaluation
Towards an International Minimum Dataset for Monitoring National Health Information System Implementations
Hannele Hyppönen, Elske Ammenwerth, Christian Nørh, Arild Faxvaag, Åke Walldius

Panel Translational Research
Translational Medicine - The Need for Integrative Informatics
Amnon Shabo, Henning Müller, Reinhold Haux, Dipak Kalra

Workshop Telemedicine and Mobile Health
Building a bridge between clinical pathways and ehealth solutions to manage chronic diseases and social care
Angelo Rossimori, Marta Mazzeo, Jacob Hofdijk, Albert Alonso, Michael Rigby
11:15 – 11:30 Break

11:30– 13:00 Parallel Paper Sessions

Session 4: Decision Support, Knowledge Management, Guidelines
Chair: Niels Peek  Co-chair: Pia Elberg  Room: S2 København

Next Generation Neonatal Health Informatics with Artemis
Carolyn McGregor, Christina Catley, Andrew James, James Padbury  115

Limitations in physicians' knowledge when assessing dementia diseases - an evaluation study of a decision-support system
Helena Lindgren  120

A Generic System for Critiquing Physicians' Prescriptions: Usability, Satisfaction and Lessons Learnt
Jean-Baptiste Lamy, Vahid Ebrahimini, Brigitte Seroussi, Jacques Bouaud, Christian Simon, Madeleine Favre, Hector Falcoff, Alain Venot  125

An OCL-compliant GELLO engine
Jing Mei, Haifeng Liu, Guotong Xie, Shengping Liu, Baoyao Zhou  130

Improvement of inter-services communication through a CDSS dedicated to myocardial perfusion scintigraphy
Julie Niès, Gersende Georg, Marc Faraggi, Isabelle Colombet, Pierre Durieux  135

Prognostic Data-Driven Clinical Decision Support - Formulation and Implications
Ruty Rinott, Boaz Carmeli, Carmel Kent, Daphna Landau, Yonatan Maman, Yoav Rubin, Noam Slonim  140

Session 5: Privacy and Security
Chair: Louise Pape-Haugard  Co-chair: Åke Walldius  Room S3 Stockholm

Healthcare professional's experiences with EHR-system access control mechanisms
Arild Faxvaag, Trond S. Johansen, Vigdis Heimly, Line Melby, Anders Grimsmo  601

Personal Health Information on Display: Balancing Needs, Usability and Legislative Requirements
Erlend Andreas Gjære, Inger Anne Tøndel, Maria B Line, Herbjørn Andresen, Pieter Toussaint 606

Watermarking - A new way to bring evidence in case of telemedicine litigation
Gouenou Coatrieux, Catherine Quantin, Francois Allaert, Bertrand Auverlot, Christian Roux  611

Sharing Sensitive Personal Health Information through Facebook: The Unintended Consequences
Mowafa Househ  616

End-to-End Security for Personal Telehealth
Paul Koster, Muhammad Asim, Milan Petkovic  621
Session 6: Information Modeling, Storage and Retrieval
Chair: William Goossen Co-chair: Ursula Hübner

Using multimodal mining to drive clinical guidelines development
Emilie Pasche, Julien Gobeill, Douglas Teodoro, Dina Vishnyakova, Arnaud Gaudinat, Patrick Ruch, Christian Lovis

Defining and Reconstructing Clinical Processes based on IHE and BPMN 2.0
Melanie Strasser, Franz Pfeifer, Emmanuel Helm, Andreas Schuler, Josef Altmann

Facilitating access to laboratory guidelines by modeling their contents and designing a computerized user interface
Mobin Yasini, Catherine Duclos, Jean-Baptiste Lamy, Alain Venot

Evaluation of Multi-Terminology Super-Concepts for Information Retrieval
Nicolas Griffon, Lina Fatima Soualma, Aurélie Névéol, Philippe Massari, Benoit Thirion, Badisse Dahamna, Stefan Darmoni

Framework Model And Principles for trusted Information sharing In Pervasive Health
Pekka Ruotsalainen, Bernd Blobel, Pirkko Nykänen, Antto Seppälä, Hannu Sorvari

Populating the i2b2 Database with Heterogeneous EMR Data: a Semantic Network Approach
Sebastian Mate, Thomas Bürkle, Felix Köpcke, Bernhard Breil, Bernd Wullich, Martin Dugas, Hans-Ulrich Prokosch, Thomas Ganslandt

11:30–13:00 Panels & Workshops

Workshop Terminology, Ontologies and Standardization
Ontological Realism for Biomedical Ontologies and Electronic Health Records
Werner Ceusters, Mathias Brochhausen, Stefan Schulz

Workshop Citizen-centred e-Health
Towards 'Ideal Healthcare': optimised and personalised future medicine
Anthony J. Brookes, Iain Buchan, Allan Hanbury, Peter Robinson

Workshop Telemedicine and Mobile Health
Global telemedicine services - what can be learned from telemedicine in Norway?
Gunnar Hartvigsen, Johan Gustav Bellika, Per E. Hasvold, Anne G. Ekeland, Eirik Årsand, Alexander Horsch, Steinar Pedersen

13:00 Lunch Break

14:00 – 15:00 Plenary Keynotes
Chair: Ronald Cornet Co-chair: Thomas Karopka
Stephen Kay: The Usability (or not) of Health Informatics Standards
Kirsten Haaland: Mastering Open Source Software challenges in a niche market.
15:30–17:00 Parallel Paper Sessions

Session 7: Telemedicine and Mobile Health
Chair: Elizabeth Borycki Co-chair: Osman Saka
Room: S2 København

Condyloma and direct teledermatology
Alexander Börve, Raquel Molina-Martinez

Data Privacy Preservation in Telemedicine: The PAIRSE Project
Ebrahim Nageba, Bruno Defude, Franck Morvan, Chirine Ghedira, Jocelyne Fayn

Relevance and Usability of a Computerized Patient Simulator for Continuous Medical Education of Isolated Care Professionals in Sub-Saharan Africa
Georges Bediang, Cheikh Oumar Bagayoko, Marc-André Raetzo, Antoine Geissbuhler

Applications of Medical Intelligence in Remote Monitoring
István Vassányi, György Kozmann, András Bánhalmi, Balázs Végső, István Kósa, Tibor Dulai, Zsolt Tarjányi, Gergely Tuboly, Péter Cserti, Balázs Pintér

Virtual TeleRehab: A Case Study
Lena Pareto, Britt Johansson, Sally Zeller, Katharina S Sunnerhagen, Martin Rydmark, Jurgen Broeren

Patient Empowerment by Increasing Information Accessibility In a Telecare System
Vasile Topac, Vasile Stoicu-Tivadar Presenter: Mihaela Vida

Session 8: Terminology, Ontologies and Standardization
Chair: Suzanne Bakken Co-chair: Cornelia Ruland
Room: S3 Stockholm

Development of a new international classification of health interventions based on an ontology framework
Béatrice Tromber-Paviot, Richard Madden, Lori Moskal, Albrecht Zaiss, Cédric Bousquet, Anand Kumar, Pierre Lewalle, Jean Marie Rodrigues

The revision of the Korean Classifications of Health Interventions based on the proposed ICHI semantic model and lessons learned
Boyoun Jung, Chae-young Jung, Jean Marie Rodrigues, Cédric Bousquet, Anand Kumar, Pierre Lewalle, Béatrice Trombet Paviot, Hooshik Yang, Sukil Kim

Web-based Collaboration for Terminology Application: ICNP C-Space
Claudia Bartz, Derek Hoy

Mapping Medical Records of Gastrectomy Patients to SNOMED-CT
Eun-Young So, Hyeoun-Ae Park

Terminology for the description of the diagnostic studies in the field of EBM
Natalia Grabar, Ludovic Trinquart, Isabelle Colombet
Representing knowledge, data and concepts for EHRS using DCM

William Goosens

Session 9: Electronic Health Record, Workflow, Intra- and Interorganizational collaboration (EHR, Workflow -1)

Chair: Gilad Kuperman Co-chair: Elin Børøsund

Mobile Patient Questionnaires - Implementing the Single Source Idea
Fleur Fritz, Markus Riek, Bernhard Breil, Sonja Ständer, Martin Dugas

Workflow dilemmas in lab results follow-up
Hallvard Lærum

The shift in workarounds upon implementation of computerized physician order entry
Heleen van der Sijs, Irene Rootjes, Jos Aarts

Task Analysis and Interoperable Application Services for Service Event Management
Juha Mykkänen, Hannu Virkanen, Pirirkko Kortekangas, Saara Savolainen, Timo Itälä

Improving Health Professionals Clinical Documentation in the Interdisciplinary Journal for a whole Hospital
Lise Margon Simonsen

Organs Transplantation - How to Improve the Process?
Viriato Ferraz, Gerardo Oliveira, Pedro Vieira-Marques, Ricardo Cruz-Correia

15:30 – 17:00 Panels & Workshops

Panel Evaluation

The Medical Device Directive and Software: The implications
Jan Talmon, Michael Rigby, Sylvia Pelayo, Elske Ammenwerth

Workshop Electronic Health Record, Workflow, Intra- and Interorganizational collaboration

Room: N5 Lofoten

Exchanging biomedical information at large scale using the Semantic Web
Rémy Choquet, Daniel Karlsson, Daniel Schober, Philipp Daumke, Patrick Ruch, Douglas Teodoro, Giovanni Mels, Ariane Assele, Dirk Colaert, Christian Lovis, Marie-Christine Jaulet, Hans Cools, Jos De Roo

Panel Imaging and Biosignals

Room: N6 Finmark

Patient Empowerment and High-Tech Imaging and Biosignal-Based Procedures - Contradiction or Challenge?
Alexander Horsch, Luca Mainardi

PARTNERSHIP IN INNOVATION

09:45 – 13:00 Chair: Catherine Chronaki

Healthcare Information Standards for Active Aging: State of Play for Patient Summaries
Catherine Chronaki, Christian Hay, Anne Moen on behalf of HL7 and GS1 in collaboration with FDH
15:30 – 18:30  Chair Pieter Toussaint
Future Health Services Infrastructure

Pieter Toussaint in collaboration with Siemens, Imatis, HP, Tieto, Sonitor

17:00  Special workshop: Convergence - by invitation only  Christian Lovis  N5 Lofoten

09.00 – 20.00 MIE Village of the Future (see page XXX)
Organized in collaboration by Oslo MedTech and FDH in Rooms N1 Skagen, N2 Eidsvold, N3 Bergen

EFMI Working Groups Business Meeting

EFMI Working Groups Business Meeting
17:00  Working Group MIP  Alexander Horsch  N4 Christiania
17:00  Working Group Social Media  Luis Fernandez-Luque  N6 Finmark

Posters, on display all day Monday

Information systems and Workflow
Acceptance and Use of Digital Pen in an Emergency Department
  Andrius Patapovas, Thomas Bürkle, Harald Dormann, Renke Maas, Hans-Ulrich Prokosch
Evaluation of an app Prototype for the Mobile Medical Round
  Benjamin Schneider, Björn Bergh
User-Driven Innovation as a Catalyst to Adopt Mobility Solutions in Healthcare
  Christian Koerner, Mads Stampe Fredriksen, Werner Sperschneider
Integrating the Electronic Health Record into Health Informatics Education
  Elizabeth Borycki, Andre Kushniruk, Brian Armstrong, Mu-Hsing Kuo
Bookmarking Service Considerations for an Archetype-Based EHR Using REST
  Erik Sundvall, Mikael Nyström, Martin Eneling, Daniel Karlsson, Häkan Örman
Primary care EHR and collaborative care
  Etienne De Clercq, J. Devlies, V. Van Casteren
Design and Implementation of a Clinical Trials Information System in a Networked Oncology Healthcare Setting
  Harald Aamot, Wolfgang Wick, Andreas Schneeweiss, Petra Knaup
Telehealth Enhances User Experience of Networked Specialist Care
  Karen Day, Patricia Kerr
Interoperability through an Architectural Paradigm Shift using Shared Medication Record as a case
  Louise Pape-Haugaard
Cloud-based Information Support for Emergency Healthcare
  Mikaela Poulymenopoulou, Flora Malamateniou, Despina Papakonstantinou, George Vassilacopoulos
Advanced ICT Improved the Research and Treatment Quality for a Rare Disease: the Italian Amyloidosis Network Experience
  Paolo Tormene, Paolo Russo, Riccardo Ferrari, Stefania Rubrichi, Giovanni Palladini, Giampaolo Merlini, Silvana Quaglini
A Proposed Desentralized Holter Diagnostic procedure
  Rune Fensli, Ingrid Svagård

Is the revised Medical Device Directive usable for Manufacturers?
Sabrina Bras Da Costa, Sylvia Pelayo, J. M. Christian Bastien, Mathieu Jeanne, Marie-Catherine Beuscart-Zephir
Application of Personas in User-Centered Design of Medical Informatics Systems and Services
Trine Krogstad, Tatjana M. Burkow, Luis Fernandez Luque
Identity and Access Management for a Hospital Information System
Walter Swoboda, Simon Leutner, Peter Klutke,

Patients and consumers
Approaching Personal Wellness Information Model
Antto Seppälä, Pirkko Nykänen, Pekka Ruotsalainen
The Role of Electronic Patient Record Systems in Clinical Handover Scenarios - What we can Learn from the Literature
Daniel Flemming, Ursula Hübner
Personalized Mobile Phone-based Tools for Type 1 Diabetes
Eirik Årsand, Stein Olav Skrøvseth, Taridzo Chomutare, Jonas Lauritzen, Gunnar Hartvigsen
Online Health Information Seeking Attitude of Middle Aged Turkish Citizens: A Case Study
Elif Çakir Turgut, Nazife Baykal
A Web Tool for Automated Adverse Drug Events Detection: the ADE Scorecards
Emmanuel Chazard, Adrian Băceanu, Romaric Marcilly, Stéphanie Bernonville, Grégoire Ficheur, Régis Beuscart
A pilot with Exergames in Elderly Homes
Huibert Tange, Simon van Genderen, Sanne van der Weegen, Albine Moser, Guy Plasqui
Automating Testcase Generation for Computer Interpretable Clinical Guidelines
JaeHoon Lee, HyunYoung Kim, JeongAh Kim, InSook Cho, Yoon Kim
Service Composition in GreenOlive Intelligent Living Platform
Liangzhao Zeng, Pei-Yun Hsueh, Xinxin Zhu, Henry Chang
Patient Empowerment Framework for Cardiac Patients
Robert Mulrenin, Manuela Plössnig, Mihai Radulescu, Gökçe Banu Laleci, Catherine Chronaki, Yildiray Kabak
User Training of Patient Information System - Longitudinal Study in Central Finland
Tuula Kuusela, Kaisa Lemmetty, Eija Häyrinen
08:30- 18:30 National eHealth Day “På Tvers” Room: Telemark

08:30 - 09:30
Felles Keynote m. MIE2011: Susanna Palkonen

Møteleder Bente Christiansen, leder NSFID

10:00 - 11:30
Helseportalen – et verktøy for å gi pasientene bedre medvirkning i helsetjenesten
  Christine Bergland, Helsedirektoratet
Etiske betraktninger knyttet til bruk av IKT som redskap for medvirkning
  Bjørn Hofmann, Universitetet i Oslo/Høgskolen i Gjøvik
Web Choice – når pasienten kan kommunisere med behandlingsapparatet på nett: En pasienterfaring
  Nan-Kirsti Holmenes,

11:30 – 12:30 Lunsj

12:30 - 14.00
"Det skulle være rart om pleietjenesten var den eneste sektoren som ikke kunne benytte seg av teknologi for å bedre sine ytelser…"
  Kåre Hagen, BI og leder av “Hagenutvalget”
Tele-dialysis in Scotland: The Nurses adaption to the Technology and their experience so far
  Bruce Honeyman, Caithness General Hospital, Wick
Kols-kofferten: Et nyskapende telemedisinsk prosjekt ved Dalane Lokalmedisinske senter
  Mariann Svanes, og Johannes Bergsåker-Aspøy,

14:30 - 16.00
Renewing Health: Oppfølging av blodsukker på mobiltelefon
  Astrid Grøttland, Nasjonal senter for samhandling og telemedisin
Pasienterfaringer knyttet til å be om kopi av egen journal
  Torunn Wibe, Utviklingscenter for sykehjem i Oslo
Min Journal- portal for både pasienter og helsepersonell
  Sissel Jor, Seksjon for forsknings- og pasienttjenester IT avdelingen, Oslo universitetssykehus HF

16:30 - 18.30 Generalforsamling for NSFID
TUESDAY 30 AUGUST 2011

08:30 – 09:15 Plenary keynote
Chair: Silvana Quaglini  Co-chair: Jacob Hofdijk  Room: Scandinaviahallen

Keynote: When the whole population contributes to knowledge. On health registries in Norway. Camilla Stoltenberg

09:15 – 09:45 Break

09:45 – 11:15 Parallel Paper Sessions

Session 10: Translational Research
Chair: Nicolette de Keizer  Co-chair: Espen Skorve  Room: S2 København

A Metadata-Based Patient Register for Cooperative Clinical Research: A Case Study in Acute Myeloid Leukemia
Anja Fischer, Ulrich Mansmann

De-identifying an HER Database – Anonymity, Correctness and Readability of the Medical Record
Kostas Pantazos, Søren Lauesen, Søren Lippert

Service Oriented Data Integration for a Biomedical Research Network
Matthias Ganzinger, Tino Noack, Sven Diederichs, Thomas Longerich, Petra Knaup

Adaption of the Identity Management Regarding new Requirements of a Long-Term Psychosis Biobank
Sara Y. Demiroglu, Daniela Skrowny, Thomas G. Schulze, Krister Helbing

Single source information systems can improve data completeness in clinical studies: an example from nuclear medicine
Susanne Herzberg, Martin Dugas

Reporting Qualitative Research in Health Informatics: REQ-HI Recommendations
Zahra Niazkhani, Habibollah Pirnejad, Jos Aarts, Samantha Adams, Roland Bal

Session 11: Terminology, Ontologies and Standardization
Chair: Eric Eisenstein  Co-chair: Ela Klecun  Room: S3 Stockholm

A Methodology and Supply Chain Management Inspired Reference Ontology for Modeling Healthcare Teams
Craig Kuziemsky, Sara Yazdi

Supporting openEHR Java Desktop Application Developers
Hajar Kashfi, Olof Torgersson
Large Scale Healthcare Data Integration and Analysis using the Semantic Web

John Timm, Sondra Renly, Ariel Farkash

ACGT: Advancing Clinico-genomic trials on cancer – Four years of experience

Luis Martin, Alberto Anguita, Norbert Graf, Manolis Tsiaknakis, Mathias Brochhausen, Stefan Rüping, Anca Bucur, Stelios Sfakianakis, Thierry Sengstag, Francesca Buffa, Holger Stenzhorn

Architectural Approach for Providing Relations in Biomedical Terminologies and Ontologies

Mathias Brochhausen, Bernd Blobel

Integration of classifications and terminologies in metadata registries based on ISO/IEC 11179

Sylvie Ngouongo Nguemegne, Jürgen Stausberg

Session 12: Evaluation

Chair: Elizabeth Cummings Co-chair: Line Melby Room: S4 Oslo

Making a web based ulcer record work by aligning architecture, legislation and users – a formative evaluation study

Anne G. Ekeland, Eva Skipenes, Beate Nyheim, Ellen Christiansen

Assessing the role of a site visit in adopting Activity Driven methods

Irmeli Luukkonen, Kajsa Saranto, Mikko Korpela

A Multi-method Study of Factors Associated with Hospital Information System Success in South Africa

Lyn Hanmer, Sedick Isaacs, J. Dewald Roode

Assessing Biocomputational Modelling in Transforming Clinical Guidelines for Osteoporosis Management

Rainer Thiel, Marco Viceconti, Karl Stroetmann

Application of the RE-AIM Framework to Synthesize the Evaluation of an Electronic Continuity of Care Document for PLWH

Suzanne Bakken, Eli Camhi, Ronald Hesse, Michelle Odhum, Rebecca Schall, Martha Rodriguez, Esmerlin Valdez, Peter Gordon

Technical Data Evaluation of a Palliative Care Web-Based Documentation System

Tobias Hartz, René Brüntrup, Frank Ückert

Session 13: Education – professional development

Chair: Assa Reichert Co-chair: Room: N1 Skagen

Push and Pull Models to Manage Patient Consent and Licensing of Multimedia Resources in Digital Repositories for Case-Based Reasoning

Andrzej Kononowicz, Nabil Zary, David Davies, Jörn Heid, Luke Woodham, Inga Hege
Next Steps in Evaluation and Evidence – from Generic to Context-Related
**Michael Rigby, Jytte Brender, Marie-Catherine Beuscart-Zephir, Hannele Hyppönen, Pirkko Nykänen, Jan Talmon, Nicolette de Keizer, Elske Ammenwerth** 208

Virtual Ward Round
**Michael Storck, Frank Ückert** 213

Professional Development Of Health Informatics In Northern Ireland
**Paul McCullagh, Gerry McAllister, Paul Hanna, Dewar Finlay, Paul Comac** 218

How Important is Theory in Health Informatics? A Survey of UK Academics
**Philip Scott, James Briggs, Jeremy Wyatt, Andrew Georgiou** 223

Better Quality in Healthcare Through Gamified Simulation Based Skill Training Application
**Weronika Tancredi, Mikael Wintell, Lars Lindsköld** 228

Session 14: Decision Support, Knowledge Management, Guidelines
Chair: Nathalie Souf Co-chair: Room: NS Lofoten

Knowledge-based Surveillance for Preventing Postoperative Surgical Site Infection
**Arash Shaban-Nejad, Gregory W. Rose, Anya Okhmatovskaia, Alexandre Riazanov, Christopher J.O. Baker, Robyn Tamblyn, Alan J. Forster, David L. Buckeridge** 145

Factors known to Influence Acceptance of Clinical Decision Support Systems
**Ellen Kilsdonk, Linda Peute, Sebastiaan Knijnenburg, Monique Jaspers** 150

Cross-frontier information provision in the ALIAS European project
**Frédérique Laforest, Atisha Garin-Michaud, Thierry Durand, Emmanuel Eyraud, Edouard Barthuet** 155

Event-driven Architecture for Health Event Detection from Multiple Sources
**Kerstin Denecke, Göran Kirchner, Peter Dolog, Pavel Smrz, Jens Linge, Gerhard Backfried, Johannes Dreesman** 160

Towards an interoperable information infrastructure providing decision support for genomic medicine
**Matthias Samwald, Holger Stenzhorn, Michel Dumontier, M. Scott Marshall, Joanne Luciano, Klaus-Peter Adlassnig** 165

Identifying patients for clinical trials using fuzzy ternary logic expressions on HL7 messages
**Raphael Majeed, Rainer Röhrig** 170

09:45 – 11:15 Panels & Workshops
Workshop Citizen-centred e-Health Room: N3 Bergen
Towards a Research Agenda for Social Media in Healthcare and Academia
**Peter J. Murray, Chris Paton, Margaret Hansen, Peter L. Elkin, Luis Fernandez-Luque**
Workshop Electronic Health Record, Workflow, Intra- and Interorganizational collaboration  

Christiania

International Perspectives on Information and Communication Technology for Support Nurses in Nursing Homes

Gregory L. Alexander, Mari S. Berge, Mariann Fossum, Nancy Staggers (Infrastructure)

11:15 – 11:30 Break

11:30—13:00 Parallel Paper Sessions

Session 15: Usability, HCI, Cognitive Issues

Chair: Thomas Wetter  Co-chair: Ines Langemeyer

Room: S2 København

Emerging Approaches to Usability Evaluation of Health Information Systems: Towards In-Situ Analysis of Complex Healthcare Systems and Environments

Andre Kushniruk, Elizabeth Borycki, Shigeki Kuwata, Joseph Kannry

Contextualization of automatic alerts during electronic prescription: Researchers’ and users’ opinions on useful context factors

Elske Ammenwerth, Werner O Hackl, Daniel Riedmann, Martin Jung

Reducing Clinicians’ Cognitive Workload by System Redesign a Pre-Post Think Aloud Usability Study

Linda Peute, Nicolette de Keizer, Eric van der Zwan, Monique Jaspers

Impact of Alert Specifications on Clinicians’ Adherence

Maurice Langemeijer, Linda Peute, Monique Jaspers

Medication decision-making on hospital ward-rounds

Melissa Baysari, Johanna Westbrook, Richard Day

A qualitative analysis of prescription activity and alert usage in a computerized physician order entry system

Rolf Wipfli, Mireille Betrancourt, Albero Guardia, Christian Lovis

Session 16: Evaluation

Chair: Pirkko Nykänen  Co-chair: Marc Oertle

Room: S3 Stockholm

Medical Providers’ Dental Information Needs: A Baseline Survey

Amit Acharya, Andrea Mahnke, Po-Huang Chyou, Carla Rottscheit, Justin Starren

What makes an information system more preferable for clinicians? A qualitative comparison of two systems

Habibollah Pirnejad, Zahra Niazkhani, Jos Aarts, Roland Bal

Does PACS facilitate work practice innovation in the intensive care unit?

Isla Hains, Nerida Creswick, Johanna Westbrook
Innovation in intensive care nursing work practices with PACS

Nerida Creswick, Isla Hains, Johanna Westbrook 402

Evaluation of telephone triage and advice services: a systematic review on methods, metrics and results

Sara Carrasqueiro, Mónica Oliveira, Pedro Encarnião 407

Human Factors based recommendations for the design of Medication related Clinical Decision Support Systems (CDSS)

Sylvia Pelayo, Romaric Marcilly, Stéphanie Bernonville, Nicolas Leroy, Marie-Catherine Beuscart-Zephir 412

Session 17: Citizen-centred e-Health

Chair: Lyn Hanmer Co-chair: Room: S4 Oslo
Interaction between COPD patients and healthcare professionals in a cross-sector telerehabilitation programme

Birthe Dinesen, Stig Kjær Andersen, Ole Hejlesen, Egon Toft 28

Enhancing self-efficacy for self-management in people with cystic fibrosis

Elizabeth Cummings, Jenny Hauser, Helen Cameron-Tucker, Petya Fitzpatrick, Melanie Jessup, E Haydn Walters, David Reid, Paul Turner 33

Evaluation of a Hyperlinked Consumer Health Dictionary for Reading HER Notes

Laura Slaughter, Karl Øyri, Erik Fosse 38

A pilot assessment of why patients choose not to participate in self-monitoring oral anticoagulant therapy

Morten Algy Bonderup, Stine Veje Hangaard, Pernille Heyckendorff Lilholt, Ole Hejlesen 43

Patients’ Needs for Information about Medicine During Hospitalization

Peter Skjøt, Kitta Lawton SC

Mobile Peer-Support in Diabetes

Taridzo Chomutare, Eirik Årsand, Gunnar Hartvigsen 48

Session 18: Natural Language Processing, Data Mining

Chair: Stefan Schulz Co-chair: Eva Henriksen Room: N1 Skagen
Medical Knowledge Evolution – Query Constraining Aspects

Ann-Marie Eklund 549

Optimal Asymmetrical SVM Using Pattern Search. A Health Care Application

Gilles Cohen, Rodolphe Meyer 554

Multi-label Classification of Clinical Text Documents considering the Impact of Text Pre-processing and Training size
Stephan Spat, Bruno Cadonna, Ivo Rakovac, Christian Gütl, Hubert Leitner, Günther Stark, Thomas R. Pieber, Peter Beck

Factuality Levels of Diagnoses in Swedish Clinical Text

Sumithra Velupillai, Hercules Dalianis, Maria Kvist

Network analysis of possible anaphylaxis cases reported to the US Vaccine Adverse Event Reporting System after H1N1 influenza vaccine

Taxiarchis Botsis, Robert Ball

Using Pharmacogenetics Knowledge to Increase Accuracy of Alerts for Adverse Drug Events

Yossi Mesika, Byung Chul Lee, Yevgenia Tsimerman, Haggai Roitman, Heon Kyu Park

11:30 - 13:00 Panels & Workshops

Workshop Information Modeling, Storage and Retrieval

Room: N3 Bergen

Aspects of Medical Information Search

Henning Müller, Allan Hanbury, Celia Boyer

Workshop Education – professional development

Room: N4 Christiania

Generating a research and education agenda for Critical Care Informatics

Reza Shahpori, Nicolette de Keizer, Ronald Cornet,

Workshop Electronic Health Record, Workflow, Intra- and Interorganizational collaboration

Room: N5 Lofoten

Holistic Health and Social Care – the Issues for Research, Informatics, Education and Care Delivery

Michael Rigby, Penny Hill, Hannele Hyppönen, Albert Alonso, Jacob Hofdijk, John Mantas, Angelo Rossimori, Francesc Saigí

09:15 – 13:00 Demonstrations

Room N2 Eidsvold

09:15  A Prototype of A Wireless Body Sensor Network for Healthcare Monitoring

Chen Chen, Andre Dias, Alois Knoll, Alexander Horsch

09:45  e-GuidesMed: Support for translation of clinical guidelines

Raul Barrena, Juan M. Pikatza, Ander Iruetaguena, Unai Segundo, David Buenestado, Javier Elorz, Luis Aldamiz-Echevarria

10:15  Translational Meta-Analysis Tool for Temporal Gene Expression Profiles

Guenter Tusch, Olvi Tole

10:45 – 11:00 Break

11:00  A new concept of Knowledge and Information management in an Imaging Department: How to make use of a Wiki.

Volker Lapczynski

11:30  iDoc24- Ask the dermatologist anonymously.

Alexander Börve

12:00  Connect 2.0: Supporting Self-management and Collaborative Care

Cornelia Ruland, Deede Gammon, Gro Berntsen, Haakon Bryhni, Jelena Mirkovic, Per Tømmer, Eva Skipnes, Ellen Kristiansen, Tor Andre Skjelbakken, Tone Nordøy, Idar Lettrem, Karin Sørli, David Kaufman, Justin Starren, Suzanne Bakken
12:30 MedWISE, a Highly User-configurable Web 2.0-based Electronic Health Record
Yalini Senathirajah, Suzanne Bakken

13:00 – 13:45 Lunch

13:45 – 15:15 Parallel Paper Sessions

Session 19: Decision Support, Knowledge Management, Guidelines
Chair: Berry de Bruyn Co-chair: Nadine Anani Room: S2 København
Towards a metadata registry for evaluating Augmented Medical Interventions
Anne-Sophie Silvent, Alexandre Moreau-Gaudry, Philippe Cinquin 175

A comparison of internal versus external risk-adjustment for monitoring clinical outcomes
Antonie Koetsier, Nicolette de Keizer, Niels Peek 180

Two-level Authoring of Computer-Interpretable Guidelines
David Buenestado, Juan Manuel Pikatza, Unai Segundo, Ander Iruetaguena, Raúl Barrena, Luis Aldámiz-Echevarría 185

Interoperability driven integration of biomedical data sources
Douglas Teodoro, Rémy Choquet, Daniel Schober, Giovanni Mels, Emilie Pasche, Patrick Ruch, Christian Lovis

Creating Knowledge Archive in the Internet Medical Consultant for Decision Support at the Point Of Care
Draško Nakić, Suzana Loškovska 190

Architecture of a Decision Support System to Improve Clinicians’ Interpretation of Abnormal Liver Function Tests
Raphael Chevrier, David Jaques, Christian Lovis 195

Session 20: Terminology, Ontologies and Standardization
Chair: Patrick Ruch Co-chair: Room: S3 Stockholm
Ontology-based automatic generation of computerized cognitive exercises
Giorgio Leonardi, Silvia Panzarasa, Silvana Quaglini 779

Creating a Magnetic resonance imaging ontology
Jeremy Lasbleiz, Hervé Saint-Jalmes, Regis Duvaufierrier, Anita Burgun 784

Validation of the openEHR Archetype Library by using OWL Reasoning
Marcos Menárguez-Tortosa, Jesualdo Tomas Fernandez-Breis 789

Grouping pharmacovigilance terms with semantic distance
Marie Dupuch, Magnus Lerch, Anne Jamet, Marie-Christine Jaulent, Reinhard Fescharek, Natalia Grabar 794
The archetype-enabled EHR system ZK-ARCHE - Integrating the ISO/EN 13606 standard and IHE XDS profile

*Michael Kohler, Christoph Rinner, Gudrun Hübner-Bloder, Samrend Saboor, Elske Ammenwerth, Georg Duftschnid*  
799

Using a Logical Information Model-Driven Design Process in Healthcare

*Yu Chye Cheong, Linda Bird, Ni Ni Tun, Colleen Brooks*  
804

Session 21: Usability, HCI, Cognitive Issues

Chair: Sylvia Pelayo  Co-chair: Vigdis Heimly  Room: S4 Oslo

Combining Usability Testing with Eye-Tracking Technology: Evaluation of a visualization support for antibiotic use in intensive care

*Aboozar Eghdam, J.Johanna Forsman, Magnus Falkenhav, Mats Lind, Sabine Koch*  
945

Design of a mobile, safety-critical in-hospital Glucose Management System

*Bernhard Höll, Stephan Spat, Johannes Plank, Lukas Schaupp, Katharina Neubauer, Peter Beck, Franco Chiarugi, Vasilis Kontogiannis, Thomas Pieber, Andreas Holzinger*  
950

Facilitating the Iterative Design of Informatics Tools to Advance the Science of Autism

*David Kaufman, Patrick Cronin, Leon Rozenblit, David Voccola, Amanda Horton, Alisabeth Shine, Stephen B. Johnson*  
955

Evaluation of Computer Usage in Healthcare Among Private Practitioners of NCT Delhi

*Ganesh Kumar, Arun Kumar Sharma, O.P. Rajoura*  
960

Contextual Inquiry Method for User-Centred Clinical IT System Design

*Johanna Viitanen*  
965

A method to measure the reduction of CO2 emissions in the e-health applications

*Paola Di Giacomo, Peter Håkansson*  
970

Session 22: Electronic Health Record, Workflow, Intra- and Interorganizational collaboration (EHR,Infrastruc)

Chair:  Co-chair: André Dias  Room: N2 Eidsvold

Conceptual Modeling of the Healthcare Ecosystem

*Luca Dan Serbanati, Andrei Vasilateanu*  
SC

A Reference Architecture for Integrated EHR in Colombia

*Edgar de la Cruz, Diego M. Lopez, Gustavo Uribe, Carolina Gonzalez, Bernd Blobel*  
305

Integration services to enable regional shared Electronic Health Records

*Ildio Oliveira, João P. S. Cunha*  
310

Towards Smart Environments using Smart Objects

*Martin Sedlmayr, Hans-Ulrich Prokosch, Ulli Münch*  
315
Interoperability in hospital information systems: a return-on-investment study comparing CPOE with and without laboratory integration  
Rodolphe Meyer, Christian Lovis  320

Building the Technical Infrastructure to Support a Study on Drug Safety in a General Hospital  
Melanie Kirchner, Thomas Bürkle, Andrius Patapovas, Anja Mathews, Reinhold Sojer, Fabian Müller, Harald Dormann, Renkec Maas, Hans-Ulrich Prokosch  325

Session 23: Public Health, Catastrophes, Outbreaks  
Chair: Andre Kushniruk  Co-chair: Room N1 Skagen

The Epidemiologic Surveillance of Dengue-Fever in French Guiana When achievements trigger higher goals  
Claude Flamand, Philippe Quenel, Vanessa Ardillon, Luisiane Carvalho, Sandra Bringay, Maguelonne Teisseire  629

Prescribing History to Identify Candidates for Chronic Condition Medication Adherence Promotion  
Jim Warren, Debra Warren, Hong Yul Yang, Thusitha Mabotuwana, John Kennelly, Tim Kenealy, Jeff Harrison  634

Challenges for Signal Generation from Medical Social Media Data  
Johannes Dressman, Kerstin Denecke  639

Providing trust and interoperability to federate distributed biobanks  
Martin Lablans, Sebastian Bartholomäus, Frank Ückert  644

Web 2.0 in Healthcare: State-of-the-Art in the German Health Insurance Landscape  
Mirko Kühne, Nadine Blinn, Christoph Rosenkranz, Markus Nuettgens  649

Improving the transparency of health information found on the internet through the HONcode: a Comparative Study  
Sabine Laversin, Vincent Baujard, Arnaud Gaudinat, Maria-Aña Simonet, Célia Boyer  654

13:45 – 15:15 Panels & Workshops  
Workshop Evaluation Room: N3 Bergen

Reporting of Health Informatics Evaluation Studies  
Jan Talmon, Michael Rigby, Nicolette de Keizer

Workshop Terminology, Ontologies and Standardization Room: N4 Christiania

CEN/ISO 13606 Implementation and Communication of Health Information  
David Moner, Gerard Freriks, José Alberto Maldonado, René Schippers, Montserrat Robles

Workshop Session Usability, HCI, Cognitive Issues Room: N5 Lofoten

Use of Grounded Theory in Health Informatics  
Elizabeth Borycki, Craig Kuziemsky, Elizabeth Cummings, Leonie Ellis
15:15 – 15:30 Break

15:30 – 17:00 Parallel Paper Sessions

Session 24: Natural Language Processing, Data Mining
*Chair: Riccardo Bellazzi Co-chair: Merete Lyngstad*  
*Room: S2 København*

*Schizophrenia Prediction with the AdaBoost Algorithm*
*Jan Hříček, Jiri Klema*  574

*Applying One-vs-One and One-vs-All Classifiers in k-Nearest Neighbour Method and Support Vector Machines to an Otoneurological Multi-Class Problem*
*Kirsi Varpa, Henry Joutsijoki, Kati Iltanen, Martti Juhola*  579

*Roogle: An information retrieval engine for Clinical Data Warehouse*
*Marc Cuggia, Nicolas Garcelon, Boris Campillo-Gimenez, Thomas Bernicot, Jean-François Laurent, Etienne Garin, André Happe, Régis Duvaufier*  584

*Truecasing Clinical Narratives*
*Markus Kreuzthaler, Stefan Schulz*  589

*Checking coding completeness by mining discharge summaries*
*Stefan Schulz, Thorsten Seddig, Susanne Hansen, Albrecht Zaiss, Philipp Daumke*  594

*LinkThemAll: Mining Hybrid Semantic Associations from Medical Publications*
*Xian Wu, Honglei Guo, Keke Cai, Li Zhang, Zhong Su* SC

Session 25: Education – professional development
*Chair: Simon de Lusignan Co-chair: Kirsti Elisabeth Berntsen*  
*Room: S3 Stockholm*

*Implementation of a web-based interactive virtual patient case stimulation as a training and assessment tool for medical students.*
*Arie Oliven, Rachel Nave, Dalia Gilad, Adam Baruch*  233

*Work-integrated technology-enhanced learning - a flexible means to reduce medication errors in hospitals?*
*Grete Netteland, Anne Moen* SC

*Online CME Usage Patterns*
*M. Cristina Mazzoleni, Carla Rognoni, Enrico Finozzi, Ines Giorgi, Marco Pagani, Marcello Imbriani*  238

*How do nursing students perceive the notion of EHR? An empirical investigation*
*Paris Gallos, Stelios Daskalakis, Maria Katharaki, Joseph Liaskos, John Mantas*  243

*Recording and podcasting of lectures for students of medical school*
*Pierre Brunet, Marc Cuggia, Pierre Le Beux*  248
Documentary study about the Teaching of Nursing Informatics in the two capitals of Brazil

**Polyanne Aparecida Alves Moita, Heloisa Helena Ciqueto Peres**

**Session 26: Citizen-centred e-Health**

*Chair: Michael Rigby  Co-chair:*

Evolution of Health Web certification through the HONcode experience

**Célia Boyer, Vincent Baujard, Antoine Geissbuhler**

Personal Health Data: Patient Consent in Information Age

**Dragana Martinovic, Victor Ralevich, Milan Petkovic**

Emotions and Personal Health Information Management: some Implications for Design

**Enrico Maria Piras, Alberto Zanutto**

Socio-technical challenges in designing a web-based communication platform

**Miria Grisot, Maja Van Der Velden, Polyxeni Vassilakopoulou**

Results of the 10th HON survey on health and medical Internet use

**Nataly Pletneva, Sarah Cruchet, Maria-Ana Simonet, Maki Kajiwara, Célia Boyer,**

Social connectedness through ICT and the influence on wellbeing: the case of the CareRabbit

**Sanne Blom, Magda Boere-Boonekamp, Robert Stegwee**

**Session 27: Translational Research**

*Chair:  Co-chair: Susanne Herzberg  Room: N2 Eidsvold*

Cell seeding of tissue engineering scaffolds studied by Monte Carlo simulations

**Andreea Robu, Adrian Neagu, Lacramioara Stoicu-Tivadar**

The ONCO-i2b2 project: Integrating biobank information and clinical data to support translational research in oncology

**Daniele Segagni, Valentina Tibollo, Ms, Arianna Dagliati, Leonardo Perinati, Alberto Zambelli, Silvia Priori, Riccardo Bellazzi**

IT-Infrastructure components to support clinical care and translational research projects in a comprehensive cancer center

**Hans-Ulrich Prokosch, Markus Ries, Alexander Beyer, Martin Schwenk, Christof Seggewies, Felix Köpcke, Sebastian Mate, Marcus Martin, Barbara Bärthlein, Matthias Beckmann, Michael Stürzl, Roland Croner, Bernd Wallich, Thomas Ganslandt, Thomas Bürkle**

Using a Robotic Arm to Assess the Variability of Motion Sensors

**Lukas Gorzelniak, Andre Dias, Hubert Soyer, Alois Knoll, Alexander Horsch**

The Single Source Architecture x4T to Connect Medical Documentation and Clinical Research
**Information technology solutions to support translational research on inherited cardiomyopathies**

**Riccardo Bellazzi**, Cristina Larizza, Matteo Gabetta, Giuseppe Milani, Mauro Bucalo, Francesca Mulas, Angelo Nuzzo, Valentina Favalli, Eloisa Arbustini

### 15:30 – 17:00 Panels & Workshops

**Workshop Information Modeling, Storage and Retrieval**  
Room: N1 Skagen  
Common Infrastructure Software for eHealth, Telemedicine and Ambient Assisted Living based on Open Source Software  
*Thomas Karopka, Elizabeth Cummings, Ståle Walderhaug, Erlend Stav*

**Workshop Usability, HCI, Cognitive Issues**  
Room: N3 Bergen  
Safety of Health Information Technology: Identifying and Mitigating Risks  
*Farah Magrabi, Jos Aarts, Marie-Catherine Beuscart-Zéphir, Christian Nøhr*

**Workshop Terminology, Ontologies and Standardization**  
Room: N4 Christiania  
From an ontology framework standard to terminologies  
*Jean Marie Rodrigues, Anne Casey, Richard Madden, Cédric Bousquet, Sukil Kim*

### PARTNERSHIP IN INNOVATION

09:45 – 15:30  
Room: S1 Helsinki  
Horizon 2020 – Partnering for EU Projects  
*Kathrine Myhre, on behalf of Oslo MedTech in collaboration with UiO*

15:30  
**Special workshop:** Convergence - by invitation only  
Room: N5 Lofoten  
*Christian Lovis*

### EFMI Working Groups Business Meetings

<table>
<thead>
<tr>
<th>Time</th>
<th>Group</th>
<th>Leader</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:00</td>
<td>EFMI Work Group LIFOS S</td>
<td><em>Thomas Karopka</em></td>
<td>N1 Skagen</td>
</tr>
<tr>
<td>17:00</td>
<td>EFMI Work Group Evaluation</td>
<td><em>Elske Ammenwerth</em></td>
<td>N2 Eidsvold</td>
</tr>
<tr>
<td>17:00</td>
<td>EFMI Work Group Primary Care</td>
<td><em>Simon de Lusigian</em></td>
<td>N3 Bergen</td>
</tr>
<tr>
<td>17:00</td>
<td>EFMI Work Group Nursie</td>
<td><em>Patrick Weber</em></td>
<td>N4 Christiania</td>
</tr>
<tr>
<td>17:00</td>
<td>EFMI Work Group Education</td>
<td><em>John Mantas</em></td>
<td>N6 Finmark</td>
</tr>
</tbody>
</table>

### Posters on Display all day Tuesday

**Knowledge Management and Decision Support**

Information Retrieval in Electronic Health Record: a feasibility study  
*Ahmed-Diouf Dirieh-Dibad, Nicolas Griffon, Saoussen Sakji, Suzanne Pereira, Philippe Massari, Stéfan Darmoni*

Clinical decision support for the choice of treatment using case-based reasoning  
*Alexander Serykh, Sergey Karas, A. Kazantceva, N. Menshib, G. Kopanitsa*

The specification of a Semantically Enriched eCRF tool
Anna Nixon Andreasson, Johan Ellenius, Lars Agréus, Brendan C. Delaney, Paul van Royen, Adel Tawee
detailed clinical models to facilitate inter-standard interoperability of data types
diego bosca, jose alberto maldonado, david moner, montserrat robles
empirical approach to event sequencing in automatic analysis of patient records
dimitar tcharakchiev, svetla boytcheva, galia angelova
Pathogens and Genome Normalization for Literature-based Knowledge Discovery
dina Vishnyakova, Emilie Pasche, Douglas Teodoro, Patrick Ruch, Christian Lovis
standardized nursing care set for asthma patients based on the clinical knowledge for nursing
Fumiko Wako, Makiko Uchiyama, Ryoma Seto, Eiko Okamine, Satoko Tsuru
Applying Fuzzy Logic and Linguistic Summarization for Monitoring Functional Decline of Elders
Gregory L. Alexander, Derek T. Anderson, Mihail Popescu, James M. Keller, Marjorie Skubic, Marilyn Rantz
Consuming Physicians’ Non-compliance with Clinical Guidelines: Other Side of Coin
Haifeng Liu, Jing Mei, Guotong Xie, Baoyao Zhou, Shengping Liu
Reaching out - A Multidisciplinary Master’s Program in Health Informatics
Kirsti Elisabeth Bernts en, Arild Faxvaag, Signe-Line Mjøen,
Using SNOMED CT for High Precision Entity Recognition in Swedish Clinical text
Maria Skeppstedt, Hercules Dalianis
Prototype Implementation of the Continua Design Guidelines: Experiences and Results
Tom Döhring, Martin Staemmlle
Introduction of a New Clinical Pathway for Neonatal Care by Application of PCAPS
Nodoka Miyazaki, Tetsuya Kokabu, Tomohiko Murase, Yasuyuki Kishigami, Hidenori Oguchi, Yumiko Iwao, Satoko Tsuru and Yoshinori Iizuka
Drug Labels Knowledge Representation
Peter L. Elkin, John S. Carter, Manasi Nabar, Mark Tuttle, Michael Lincoln, Steven H. Brown
A Systematic Comparison Of The Austrian Procedure Catalogue And The Classification Commune Des Actes Médicaux
Sabrina Barbara Neururer, Karl-Peter Pfeiffer
MOSAIC: Modular Ontology Semantics Architecture for Federated Biobanking
Sebastian Bartholomäus, Martin Lablans, Frank Ückert,
Using Business Intelligence and Reporting Tools for Supporting Nursing Leaders in Management of the Nursing Process
Werner O Hackl, Franz Rauchegger, Elske Ammenwerth

Simulations, Predictions and Statistics
A Method for Accurate Estimation of Busulfan AUC and Its Confidence Interval
Harukazu Tsuruta, Mariko Fukumoto, Leon Bax
A Taxonomy for Describing Transinstitutional Information System Architectures in Health Care
Nathalie Gusew, Reinhold Haux
Building a Circle of Trust for the Virtual Hospital Network of the ALIAS project
Emmanuel Eyraud, Thierry Durand, Edouard Barthuet, Romain Bochet, Frédérique Laforest
Clinical Data Modeling Using Archetype Technology for National Surveillance of Intractable Diseases in Japan
Shinji Kobayashi, Eizen Kimura, Takeki Yoshikawa, Hugh Leslie, Heather Leslie, Ken Ishihara, Masaki Yasukawa, Tomohiro Kuroda, Hiroyuki Yoshihara
Development of Data Models for Nursing Assessment of Cancer Survivors Using Concept Analysis
Myung Kyung Lee, Hyeoun-Ae Park

eHealth can mean Better Health for China

Shaobo Xiao, Gunnar O Klein

Human-Centered Design of a Scorecard tool for Adverse Drug Events

Romaric Marcilly, Werner O Hackl, Sylvia Pelayo, Sylvain Hassler, Costanza Riccioli, Marie-Catherine Beuscart-Zéphir

Insulin Dependent Diabetes Mellitus Rats and Autoimmune Diabetes

Rainer Schmidt, Georg Fuellen

Predicting Relapse of Schizophrenia

Petr Nalevka

SAS-MAP : A new Graphic Report for Sleep Apnea Syndrome

Adrien Ugon , Jean-Gabriel Ganascia, Carole Philippe, Hélène Amiel, Pierre Lévy

Staging disease with PROTEGE 4: Example of Multiple Myeloma

Eric Brillet, Valerie Bertaud Gounot, Olivier Decaux, Regis Duvauferrier, Jeremy Llasbleiz

Implementation of a CEN/ISO 13606 Platform for Medicines Reconciliation

David Moner, Marta Terrón, Carlos Angulo, Luis Lechuga, Pablo Serrano, José Alberto Maldonado, Francisco J. Farfán, Montserrat Robles

The need for SNOMED CT translations

Philipp Daumke, Josef Inggener, Christel Daniel, Lene Asholm, Stefan Schulz

Introduction to Health Informatics 2011

09:45-16:00 Chair: Arild Faxvaag

AFFILIATED EVENTS

Scandinavian Conference on Health Informatics (SHI2011)

09:45-16:00 Room: Telemark

09:45 – 11:20 Electronic Health Record systems and solutions

Chair Co-chair

How to Distinguish Double Documentation from Documentation of Distinct Data.

Gert Galster

Modeling human comprehension of Swedish medical records for intelligent access and summarization systems – Future vision, a physician’s perspective.

Maria Kvist, Maria Skeppelstedt, Sumithra Velupillai, Hercules Dalianis

Health Portals and Clinical Phenotypes – Recognition using SNOMED CT.

Dimitrios Kokkinakis

The Medical WhiteBoard Project – New Opportunities for Scheduling and Planning Clinical Work.

Thorhallur Gudmundsson, Inger Dybdahl Sørby
Trial on Use of Secondary Data for Extraction of Quality Indicators from the Inpatient Care Support System.

*Ryoma Seto, Sumie Ohashi, Kumiko Yamaguchi, Sayuri Yamashita*

11:20 Break

11:30 – 13:05 Security, usability, collaboration

*Chair* Co-chair

When security prevents efficient workflow, users don’t follow security rules

*Henriette Mabeck*

Balancing Machine Work, Comfort Work, and Sentimental Work: A Field Study of Patient Care in the Ambulance

*Maria Le Pedersen, Magnus Hansen, Morten Hertzum*

A Decision Support and Documentation System for Treatment of Chronic Ulcers

*Mikkel F. Andresen, Ann-Sofie H. Henriksen, Mette Dencker Johansen, Ole K. Hejlesen*

Evaluation of the Usability of a Care Plan Module Used by the Home Care Services

*Tordis Vibeke Iseivmo, Laila Merete Lindland, Siri Kolstad Aanesland, Mariann Fossum*

Exploring the Use of Educational Video Games as self-management tools for Children and Adolescents with Type 1 Diabetes Mellitus

*Jonas Lauritzen, Eirik Årsand, Alexander Horsch, Luis Fernandez-Luque, Taridzo Chomutare, Johan Gustav Bellika, Ole Hejlesen, Gunnar Hartvigsen*

13:10 Lunch

13:45 – 15:20 Home care solutions

*Chair* Co-chair

Improving Quality of Life through Early Detection of Incontinence Events.

*Gynter Schneider, Lasse Lefevre Samson, Jens Henrik Rauff Hansen, Hans Christian Riis, Birthe Dinesen, John Hansen*

Online prediction of Exacerbation in Patients with Chronic Obstructive Pulmonary Disease Using Linear Discriminant Pattern Classification.

*Morten Hasselstrøm Jensen, Simon Lebech Cichosz, Birthe Dinesen, Ole K. Hejlesen*

User requirements for a Personalized Electronic Community for Elderly People with Risk of Marginalization.

*Elin Thygesen, Marthe M.F. Fensli, Ragnhild Skaar, Hans Inge Sævareid, Yan Li, Rune Fensli*

Ethicsweb – information system for ethics in science.

*Jure Dimec, Brane Leskošek, Minja Zorc*

Experiences with Alarm and Warning Systems Used in Home Care Services.

*Erica Fredriksen, Cecilie Karlsen, Mariann Fossum*
15:20 Break

15:30 Workshop: Scandinavian openEHR and ISO13606 workshop

Nadim Anani, Johan Gustav Bellika, Knut Bernstein, Rong Chen, Daniel Karlsson, Louise Pape-Hauggaard, Erik Sundvall
08:30 – 09:15 Plenary keynote
Chair: Jos Aarts Co-chair: Heleen van der Sijs Room: Scandinaviahallen
Envisioning the patient, medicines, technology triad. Keynote by Nick Barber

09:45 – 11:15 Parallel Paper Sessions

Session 28: EFMI invited session; Health Informatics Research Management
Chair: John Mantas Co-chair: Room: S1 Helsinki
Medical Informatic Research Management in Academia - the Danish Setting
Stig Kjær Andersen
977
Research management in healthcare informatics — experiences from Norway
Arild Faxvaag, Pieter J Toussaint, Trond S Johansen
980
Research Management: the case of RN4CAST
Dimitrios Zikos, John Mantas
985
eMeasures: A standard format for Health Quality Measures
Catherine Chronaki, Charles Jaffe, Bob Dolin
989
Clinical information systems: cornerstone for an efficient hospital management
Christian Lovis
992
Patient Centered Integrated Clinical Resource Management
Jacob Hofdijk
996

Session 29: Electronic Health Record, Workflow, Intra- and Interorganizational collaboration (EHR,ProffUse-1)
Chair: Co-chair: Farah Magrabi Room: S2 København
Implementing change in a diverse and politicized landscape
Espen Skorve
330
Characteristics of German hospitals adopting health IT systems - results from an empirical study
Jan-David Liebe, Nicole Egbert, Andreas Frey, Ursula Hübner
335
Nursing Information System: a relevant substitute of the paper nursing record
Margreet B. Michel-Verkerke
339
GP Connector: A tool to enable access for general practitioners to a Standards-based Personal and Electronic Health Record in the Rhine-Neckar Region
Oliver Heinze, Holger Schmuhl, Björn Bergh
344
Proposal of an end-to-end Emergency Medical System

Samir El-Masri, Basema Saddik 349

The General Practitioner in the Giant's Web

Vigdis Heimly 354

Session 30: Terminology, Ontologies and Standardization

Chair: Margunn Aanestad   Co-chair: Olof Torgersson   Room: S3 Stockholm

SNOMED CT implementation: Implications of choosing Clinical findings or Observable entities

Anne Randoff Rasmussen, Kirstine Rosenbeck 809

What is the Coverage of SNOMED CT® on Scientific Medical Corpora?

Dimitrios Kokkinakis 814

Assisting the translation of the CORE Subset of SNOMED CT into French

Hocine Abdoune, Tayeb Merabti, Stéfan J. Darmoni, Michel Joubert 819

Creating a SNOMED CT Genetic Disorder Subset

John S. Carter, Manasi M. Nabar SC

Recording associated Disorders using SNOMED CT

Ronald Cornet, Nicolette de Keizer 824

SNOMED CT’s RF2: is the Future Bright?

Werner Ceusters 829

Session 31: Information Modeling, Storage and Retrieval

Chair: Mikhail Shifrin   Co-chair: Helena Lindgren   Room: S4 Oslo

A Novel Way of Standardized and Automized Retrieval of Timing Information along Clinical Pathways

Eva Gattnar, Okan Ekinci, Vesselin Detschew 507

Computing the Compliance of Physician Drug Orders with Guidelines Using an OWL2 Reasoner and Standard Drug Ressources

Joseph Noussa Yao, Brigitte Séroussi, Jacques Bouaud 512

Automatic definition of the oncologic EHR data elements from NCIT in OWL

Marc Cuggia, Annabel Boudré, Bruno Turlin, Sébastien Vincendeau, Valerie Bertaud, Catherine Bohec, Régis Duvaufierier 517

A Framework for Context Elicitation in Medicine.

Nathalie Bricon-Souf, Rodja Messai, Stephanie Bernonville, Romaric Marcilly, Jean-Marie Renard SC

Developing a model for the adequate description of electronic communication in hospitals

Samrend Saboor, Elske Ammenwerth 522

Contextualization in automatic extraction of drugs from Hospital Patient Records

Svetla Boytcheva, Dimitar Tcharaktchiev, Galia Angelova 527
Session 32: Citizen-centred e-Health  
Chair: Celia Boyer  
Co-chair: Sven Koch  
Room: N2 Eidsvold

Technological Choices for Mobile Clinical Applications
**Frederic Ehrler, David Issom, Christian Lovis**  
83

Modified Rand Method to Derive Quality Indicators: a Case Study in Cardiac Rehabilitation
**Mariëtte van Engen-Verheul, Harel Kemps, Roderik Kraaijenhagen, Nicolette de Keizer, Niels Peek**  
88

A cloud-based semantic wiki for user training in healthcare process management
**Despina Papakonstantinou, Mikaela Poulymenopoulou, Flora Malamateniou, George Vassilacopoulos**  
93

Reference Architecture of Application Services for Personal Wellbeing Information Management
**Mika Tuomainen, Juha Mykkänen**  
98

Development of a web-based decision support system for insulin self-titration
**Airin Simon, F. Holleman, J.B. Hoekstra, P.A. De Clercq, B.A. Lemkes, J. Hermanides, N. Peek**  
103

TreC - a REST-based Regional PHR
**Claudio Eccher, Enrico Maria Piras, Marco Stenico**  
108

09:45-11:15 Panels & Workshops

Panel Citizen-centred e-Health  
Room: N1 Skagen
What Works in User-Centered Health Informatics Evaluation?  
**Eric L. Eisenstein, Andre W. Kushniruk, Jos Aarts**

Panel Usability, HCI, Cognitive Issues  
Room: N3 Bergen
User-Centered healthcare IT: Meaningful or Meaningless?  
**Nick Barber, Tony Cornford, Ela Klecun, Valentina Lichtner, Amirhossein Takian**

Workshop Telemedicine and Mobile Health  
Room: N4 Christiania
The telemedicine and eHealth equation - proposal for an updated view on the Teorem of Medical Informatics  
**Johan Gustav Bellika, Per Erlend Hasvold, Anne G. Ekeland, Gunnar Hartvigsen**

Workshop Terminology, Ontologies and Standardization  
Room: N6 Finmark
The International Classification for Nursing Practice (ICNP): From theory to application  
**Ann Kristin Rotegård, Claudia Barz, Hyeoun-Ae Park, António Manuel V. A. da Silva, Alison Wallis, Kathryn Niemi Mølstad, Kay Jansen, Karen Marek, Gro Næss**

11:15 – 11:30 Break
**Session 33: Terminology, Ontologies and Standardization**

*Chair:* Co-chair: Anna Marie Høstgaard  
*Room:* S1 Helsinki

- **A Study of Archetype Development Processes**  
  *Alberto Moreno, Damon Berry, Carlos Parra*

- **Serious Adverse Event Reporting in a Medical Device Information System**  
  *Fabrizio Pecoraro, Daniela Luzi*

- **Metadata - an international standard for clinical knowledge resources**  
  *Gunnar O Klein*

- **Comparing existing national and international classification systems of surgical procedures with the CEN/ISO 1828 ontology framework standard**  
  *Jean Marie Rodriguos, Anne Casey, Cédric Bousquet, Anand Kumar, Pierre Lewalle, Béatrice Trombert Paviot*

- **Model Driven Development of Clinical Information Systems using openEHR**  
  *Koray Atalag, Hong Yul Yang, Ewan Tempero, Jim Warren*

- **Exchanging Data via openEHR for Patient-Specific Overviews in Intensive Care: A Case Study**  
  *Nadim Anani, Rong Chen, Sabine Koch, SC*

**Session 34: Electronic Health Record, Workflow, Intra- and Interorganizational collaboration (EHR,SocContext)**

*Chair:* Christian Nøhr  
*Co-chair:*  
*Room:* S2 København

- **When Information Sharing is not Enough**  
  *Berit Brattheim, Arild Faxvaag, Pieter Toussaint*

- **Information and communication needs of healthcare workers in the perioperative domain**  
  *Børge Lillebo, Andreas Seim, Arild Faxvaag*

- **Clinical situations and information needs of physicians during treatment of Diabetes mellitus patients: a Triangulation Study**  
  *Gudrun Hübner-Bloder, Georg Duftschmid, Michael Kohler, Christoph Rinner, Samrend Saboor, Elske Ammenwerth*

- **A constructivist approach? using formative evaluation to inform the Electronic Prescription Service implementation in Primary Care, England.**  
  *Jasmine Harvey, Anthony Avery, Justin Waring, Ralph Hibberd, Nicholas Barber*

- **Can Cloud Computing Benefit Health Services? - A SWOT Analysis**  
  *Mu-Hsing Kuo, Andre Kushniruk, Elizabeth Borycki*
Session 3: Information Modeling, Storage and Retrieval
Chair: Knut Bernstein  Co-chair:  Room: S4 Oslo

Revisiting the area under the ROC
Berry de Bruijn

A Quality Management System for Interoperability Testing
Ib Johansen, Morten Bruun-Rasmussen, Karima Bourquard, Eric Poiseau, Milan Zoric, Charles Parisot, Michael Onken

Markus Kreuzthaler, Marcus Bloice, Lukas Faulstich, Klaus-Martin Simonic, Andreas Holzinger

Service Delivery for e-Health Applications
Martin Staemmler

An Open, Trustworthy and Multilingual Search Engine for Medical Practitioners
Matthias Samwald, Marlene Kritz, Manfred Gschwandtner, Veronika Stefanov, Allan Hanbury

A KPI framework for process-based benchmarking of hospital information systems
Franziska Jahn, Alfred Winter

Session 36: Imaging and Biosignals
Chair: Thomas Bürkle  Co-chair:  Room: N2 Eidsvold

Extracting Gait Parameters from Raw Electronic Walkway Data
Andre Dias, Lukas Gorzelniak, Angela Döring, Gunnar Hartvigsen, Alexander Horsch

Safe Storage and Multi-modal Search for Medical Images
Jukka Mommeri, Marko Niinimäki, Henning Müller

Respiration tracking using the Wii Remote game-controller
Julian Guirao Aguilar, Johan Gustav Bellika, Luis Fernandez-Luque, Vicente Traver Salcedoc

A Nomenclature for the Analysis of Continuous Sensor and Other Data in the Context of Health-Enabling Technologies
Matthias Gietzelt, Klaus-Hendrik Wolf, Reinhold Haux

Image-based Classification of Parkinsonian Syndromes Using T2’-Atlases
Nils Daniel Forkert, Alexander Schmidt-Richberg, Brigitte Holst, Alexander Münchau, Heinz Handels, Kai Boelmans

Cell edge detection in JPEG2000 wavelet domain-analysis on sigmoid function edge model
Vytenis Punys, Ramunas Maknickas

11:30 – 13:00 Panels & Workshops
Workshop Translational Research
INBIOMEDvision: Promoting and Monitoring Biomedical Informatics in Europe
Ferran Sanz, Søren Brunak, Victoria López-Alonso

Workshop Citizen-centred e-Health
Smart Homes and Wearable Sensors in Healthcare - infrastructures and applications
Michael Marschollek, Feng Tian, Sabine Koch, Alexander Horsch, George Demiris

Workshop Electronic Health Record, Workflow, Intra- and Interorganizational collaboration
Room: N4 Christiania
Social Care Informatics - a new landscape in professionals' curriculum?
Albert Alonso, Francesca Saigi, Michael Rigby, John Mantas

EPOS workshop
Stockholm
EPOS – EFMI Professional Organised event System information advisory.
Stig Kjær Andersen

European Convergence Workshops
Room: N5 Lofoten
Christian Lovis on behalf of the CONVERGENCE network

Special Workshop: ICNP
Room: N6 Finmark
Ann Kristin Rotegård, Claudia Barz, Hyeoun-Ae Park, António Manuel V. A. da Silva, Alison Wallis, Kathryn Niemi Mølstad, Kay Jansen, Karen Marek, Gro Næss

13:00 PLENARY: Closing Ceremony
Chair: Petter Hurlen Co-chair: M. Cristina Mazzolini Room: København & Stockholm

Awards:
Rolf Hansen Prize Camilla Glasø
Pieter Reichert Prize Sabine Koch
Poster prize Elske Ammenwerth

EFMI activities:
John Mantas, EFMI President

Upcoming EFMI events:
STC2012
MIE2012

14:00 Lunch

Thank you for your contribution, good bye and see you at MIE2012!