

MIE
2012



XXIV Conference of the
European Federation
for Medical Informatics

Quality of Life
Through
Quality of Information

26 - 29 AUGUST
PISA ITALY

FINAL PROGRAMME

www.mie2012.it



UNIVERSITÀ DEGLI STUDI DI PAVIA



Nation Council of Research

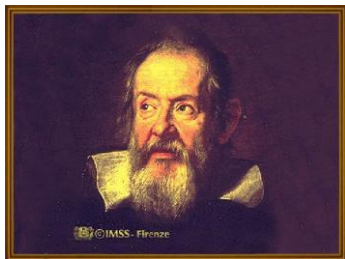


The image on the cover is drawn from Prosperità (Prosperity) by Gigi Pedrolì

The 24th Medical Informatics in Europe Conference (MIE2012) is organised by the European Federation for Medical Informatics (EFMI) with the collaboration of the Italian Medical Informatics Association (AIMM) and the e-health Italian Community.

The theme of the MIE2012 is Quality of Life through Quality of Information, and the conference focuses on the role of e-health in pursuing benefits in terms of quality of life for patients, health-care personnel, citizens and society. Across the many scientific sessions, the topic is analysed from many points of view, and MIE2012 provides a unique platform for the fruitful exchange of ideas and experiences among the actors and stakeholders of ICT supported healthcare.

Both methodologies and examples of applications form the basis for the discussion, and all of us will learn, not only from success stories in the field, but also from failures. The opinion and experiences of the designers and planners, and the addressers and users of e-health systems are of great importance when the target is the global improvement of quality of life, at both personal and public level. For this reason we encourage health professionals, policy makers and also patients and citizens' associations to take an active part in the conference and share their knowledge.



The hosting city is Pisa, well known, not only for its famous leaning tower, but also as the birthplace of Galileo Galilei, who some consider to be the father of modern science, and who introduced the notion of experimental proof in scientific research. It is this approach which is, without any doubt, crucial to our research in medical informatics. We need evidence before we

can apply our knowledge to health care; evidence-based medicine needs quality of information in order to lead to quality of health, and thus to quality of life.

The programme incorporates contributions related to the latest achievements in biomedical and health informatics in terms of major challenges, like interoperability, collaboration among healthcare professionals and coordination of patient oriented health care at the most appropriate level of care.

The presentations also provide new perspectives for the future of biomedical and health informatics, critical appraisals of strategies for user involvement, insights for design, deployment, and sustainable use of electronic health records, standards, social software, citizen centered e-health, and new challenges in rehabilitation and social care informatics, where health professionals collaborate in teams with colleagues and with their patients.

MIE2012 introduces the "Village of the Future"; a vibrant *agora* where national, regional and European projects, as well as other initiatives, present, demonstrate, discuss and share ideas and innovations in the 'eLounge', creating new coalitions for the future. The village is open to all 'citizens', with a focus on the younger generation, presenting new initiatives and results.

The Scientific Programme Committee of MIE2012 received 449 submissions. The selection process presented a major challenge for the SPC. Almost all submissions were reviewed by three reviewers and we

are indebted to the 205 colleagues who volunteered their time and energy to be involved in this peer review processes, which involved 1,077 individual reviews. Our five keynote speakers will provide with state-of-the-art presentations an important contribution to the many aspects of our domain.

This European conference commands an international audience, gathering participants from most parts of the world. This is reflected by the nationalities of the 1,016 contributing authors, originating from 43 countries in Europe, the Middle East, Asia and Africa, as well as North and South America and Australia.

Welcoming all the attendees, we wish each of you to get the best from this conference in terms of professional experience but not only that, so if you are a newcomer we hope you will enjoy the atmosphere and openness of the EFMI family, whereas if you are an "old friend" we hope you will reinforce your link to our community.

Welcome to Pisa.

Welcome to MIE2012.



M. Cristina Mazzoleni
Chair of the Local Organizing Committee



John Mantas
Chair of the Scientific Program Committee



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SPC - Scientific Programme Committee

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Co-Chairs: Stig Kjær Andersen, Bernd Blobel, Jacob Hofdijk, M. Cristina Mazzoleni, Anne Moen, Silvana Quaglini, Jana Zvarova.

Affiliate: Dimitrios Zikos.

SPC Members:

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Village of the Future Council

Michael Rigby, School of Public Policy and Professional Practice Keele University, United Kingdom.

Christian Lovis, University Hospitals of Geneva, Switzerland.

Reinhold Haux, Peter L. Reichertz Institut, University of Braunschweig, Germany.

Lisette van Gemert-Pijnen, eHealth Research Center University of Twente, The Netherlands.

Dipak Kalra, Centre for Health Informatics and Multi-professional Education UCL, London, UK.

Maria Cristina Mazzoleni, Fondazione Salvatore Maugeri, Pavia, Italy.

SM Pisa Chiel Bo, Founding Father eHealth Academy, The Netherlands.

Jacob Hofdijk, Partner in Casemix, Utrecht, The Netherlands.

GENERAL INFORMATION

Congress Venue

The convergence will take place in Pisa, Palazzo dei Congressi - www.palazzodeicongressi.pisa.it

Palazzo dei Congressi di Pisa

Via Matteotti, 1

56124 Pisa

Phone +39 050 598212 / +39 050 598213 – Mobile +39 335 1423824 – Fax +39 050 598019

e-mail: info@palazzodeicongressi.pisa.it

Congress secretariat

MGA Congressi

MIE2012@Mgacongressi.it

Tel. +39 06 398651

Opening hours: From Sunday August 26 to Wednesday August 29 from 8.30 to 18:30.

The Secretariat will be happy to help you with any questions that might arise

Official Language

English is the official language of the conference. Out of the touristic places, English is not very popular in Italy, but communication is not difficult anyway.

Badges

Please keep your badge visible during the conference, it will allow you to attend the sessions and access the coffee break and lunch area.

Certificate of Attendance

Certificates will be provided on request at the registration desk.

Tickets

Tickets for all social events must be presented upon notice. Please contact the Secretariat for available tickets for the social events.

Lunch & Dinner

Lunches are served within the conference venue. As regards dinners, the restaurants displaying MIE2012 logo offer special conditions for MIE2012 attendees. Remember to show your badge. A list of these restaurants is provided in the conference bag.

Wi-Fi

There is free access to wireless internet in all parts of the Venue. Please ask at the registration desk for the access code and be ready to show an identity document.

Money Exchange

The Euro (€ - EUR) is the national currency unit. Money can be exchanged at the airport, major hotels and banks. Credit cards and Traveler's checks are also widely accepted. Automatic Teller Machines (ATMs) are conveniently located throughout Italy.

Credit Cards

Major credit cards including American Express, Diners Club, Visa and Mastercard are honored throughout Italy at hotels, stores and restaurants. Taxis in Italy not always accept credit cards, check it before the run starts. At the registration desk credit card payments are not available.

International phone calls

To call abroad from Italy dial 00 followed by the country code. The country code of Italy is 39.

Time Zone

GMT/UTC +1 Daylight saving time in August.

Non-smoking policy

Please observe the non-smoking policy and that smoking is not permitted in-door in public areas in Italy.

Electricity

The electricity supply is 220 volts, 50-60 cycles. To operate small travel appliances such as irons, hair dryers or electric shavers, converters may be required.

Weather

Italy is at its best and brightest from May to September. Pisa experiences a Mediterranean climate, characteristic of Central and Southern Italy. Average temperature in Pisa in August is between 28.8°C-83.8°F (average max) and 16.7°C-62.1°F (average min).

Passports and Visas

All international visitors traveling to Italy must have a valid passport if coming from a country not included in the Schengen area. Visa might be required in some cases. Please check with the Italian Embassy/Consulate in your country regarding any specific visa requirements and travel restrictions.

Liability and Insurance

The Organizing Committee accepts no liability for personal injuries or loss or damage of property belonging to congress delegates, either during or as a result of the Congress or during any of the excursion tours. It is recommended that participants arrange for their own personal health, accident and travel insurance.

LOCAL MAPS



The conference venue is easily reachable via public transportation, using LAM BLU line or LINE 13.





Saturday 25 August

EFMI Board Meeting: It will take place at Hotel Bologna Via Giuseppe Mazzini 57 from 12:00 to 18:00.

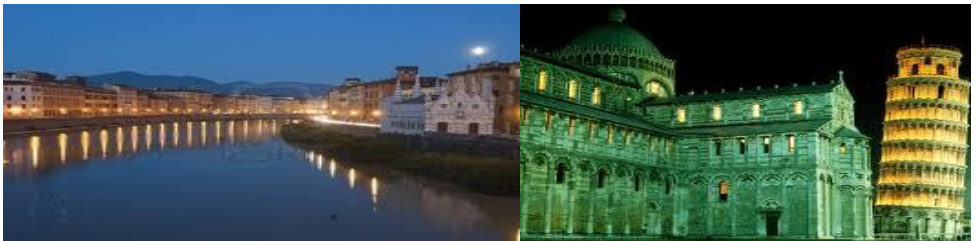
EFMI Council Dinner: Meeting point at Hotel Bologna at 18:00. After a short visit to murale by Keith Haring and Villa Mazziniana, transfer by Bus to San Giuliano Terme for the dinner. Departure from Hotel Bologna at 19:00.



Sunday 26 August

EFMI Council Meeting: It will take place at Pisa Palazzo dei Congressi, Room B, from 9:00 to 16:00.

MIE2012 Get-Together Party: Following the Official opening ceremony and keynote speech, MIE2012 cordially invites all registered participants and accompanying persons to a Get-together party at Santa Croce in Fossabanda. After the party a guided walk ending in the famous Piazza dei Miracoli will let you enjoy Pisa and its historical buildings.



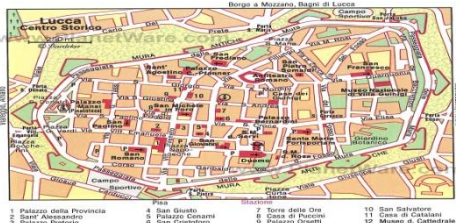
Monday 27 August

EN 13606 Renewal Meeting: (by invitation) it will take place in Room A at 9:15 (EN 13606 Association, Gerard Freriks).

EFMI Working Group Lunch Meeting: it will take place within the conference venue, close to Room Master at 13:00 (Patrick Weber, EFMI vice-President for Working Group).

EFMI and Clinical Genomic Meeting: it will take place in Room A at 14:45 (Amnon Shabo, IBM, EFMI Institutional Member).

Tuscany Dinner: A bus will leave from the conference venue at 18:30 and Hotel Bologna at 18:40. Transfer to Lucca for a short visit of the old city and walls. Dinner on the hills. At the registration desk, tickets are available until 14:00 for those people who haven't booked it in advance.



Tuesday 28 August

EFMI and Clinical Genomic Meeting: it will take place in Room A at 11:15 (Amnon Shabo, IBM, EFMI Institutional Member).

EFMI Nursing Informatics Working Group Lunch Meeting: it will take place within the conference venue, close to Room Master at 13:00 (Patrick Weber).

Conference Dinner: at 18:30 we will move on foot from the congress venue to the National Museum of San Matteo (Piazza San Matteo in Soarta Lungarno Mediceo) for a guided tour. At 19:30, transfer to Rigoli for the dinner in the famous Villa Corliano. A guided tour of the villa is planned. At the registration desk, tickets are available until 14:00 for those people who haven't booked it in advance.



Wednesday 29 August

Satellite workshop Computational Methods for Pharmacovigilance: MIE2012 hosts the workshop that is open to MIE attendees (see satellite events in www.MIE2012.it). Room A, 9:15 – 12:45.

Oral presentations

Each speaker is responsible to bring the PowerPoint presentation to the Slide Centre Technical Room, half a day in advance. USB memory key is the recommended support. The Slide Center Technical Room (first floor) is open on Sunday afternoon for presentations scheduled in the following morning.

Please, prepare your presentation in order to strictly observe time scheduling: a delay in your presentation affects the following speakers.

Full papers: 10 minutes for presentation and 3 minutes for questions.

Short communications: 8 minutes for presentation and 2 minutes for questions.

Posters

Posters (90x120 cm maximum, vertical) will be continually on display in the first floor Gallery, from Monday morning to Wednesday afternoon.

ID number identifies the place where a poster is expected to be displayed. Please follow the indications.

Parallel Poster tours are organized during Poster sessions on Monday and Tuesday (see detailed program).

The presenters of Poster and Short Communication Posters will have, respectively, 10 and 3 minutes to describe the main points of their contributions.

For further questions, please contact the MIE2012 speaker ready room or secretariat.

INFORMATION FOR SESSION CHAIRS

The session chairs have the following tasks; introduce speakers, monitor time and guiding questions and answers. We encourage chair and co-chair alternate each other in performing the tasks. There will be prepared a master slide with presentations and URLs to each of the presentations. Presenters should bring their presentation in the speaker ready room no later than 3 hours before their presentation, and there are no possibility to connect personal computers, memory stick etc. in the session room.

Preparing for the session

1. Download and read the papers/short communication in your session; available from Aug 20 at the following URL: <http://cd.mie2012.org/>
2. Be present 10 minutes before the session starts, meet with the staff person.
3. Check presence of speakers, and their introduction text. The staff person will check the availability of the presentations.

Chairing the sessions

1. Start the session on time; announce session name and any last minutes changes. In case of absence of an author, the chairperson decides adequate alternate timing of the presentations. Please observe that people might change room between individual slots - and others count on you keeping the schedule.
2. Announce speaker, affiliation and title of presentation.
3. Monitor time strictly; using signs for 5 minutes and 1 minute signs. Each presenter has 15 minutes in total. Presenters are advised to prepare for ten minutes presentation, and three minutes for Q & A.
4. Supervise Q & A's, by pointing to people and allow brief questions. It is a good habit of the chair person to have a question ready for each speaker.
5. For each presentation, consider any additional information that the authors may provide during the presentation, and decide if any of the papers of your session appears to be worthwhile to publish as a journal paper.

After the session

Fill in the provided evaluation form to

1. Nominate paper(s) for further evaluation and candidacy be published as an extended version in the next MIE Special Issue of Methods of Information in Medicine. The criteria for nomination are quality and appropriateness for an international journal as well as the interest demonstrated by the author during his/her presentation.
2. Provide some statistics specified in the evaluation form.

Bring the evaluation form to the MIE2012 secretariat at the registration desk.

PROGRAMME SUMMARY

SUNDAY, August 26

	Auditorium	Fermi	Pacinotti	Galilei	Master	Room B	Room A
09:00-12:00		Tutorial: Lessons Learned From Telemedicine in North Norway	Tutorial: Clinical Content Governance in Web2.0 environment		Tutorial: Realism-Based Ontology in Biomedical Data Repositories	EFMI Council Meeting	
13:00-16:00		Tutorial: openEHR - from Theory to Implementation	Tutorial: Writing Publications in Biomedical Informatics		Tutorial: Searching Text and Images in the Medical Domain		
17:00-18:00	Opening Ceremony						
18:00-18:45	T00.01 - Keynote: Francesco Pinciroli						

MONDAY, August 27

	Auditorium	Fermi	Pacinotti	Galilei	Master	Room B	Room A
08:30-9:10	T00.02 - Keynote: Finn Kensing						
09:15-10:45	T02.01 – Evaluation	T04.01 - Enhancing Research and Trials 1	T03.01 - Clinical Guidelines	T06.01 - Safety and Data Quality	T10.01 - Support: Focus on Process	T01.01 - Process, information and data Models	EN13606 Renewal Meeting (by invitation)
11:15-12:45	T02-Panel: Evaluation	T04.02 - Enhancing Research and Trials 2	T05.01 - Health and Patient Record 1	T11-Village of the Future - Technology	T10.02 - Support: Focus on Physicians Activities	T01.02 - Terminology and Ontology 1	CEN/ISO 13606, openEHR, HL7CDA meeting
LUNCH & POSTER SESSION A (Gallery)							
14:00-14:40	T00.03 - Keynote: Roberta Annicchiarico						
14:45-16:15	T09.01 – Education	T08.01 - Hints for thinking	T07.01 - Social Networking for Health 1	T11-Village of the Future - Integration and Semantics	T05-WS: Health and Patient Record	T01-WS: Process, information and data Models	EFMI for Clinical Genomics and Bioinformatics (I) meeting
16:45-18:15	T03.02 - Empowering Patient-Provider Interaction	T08-WS: Hints for Thinking	T05-Panel: Decision Support Systems	T11-Village of the Future - Human Machine interface	T05-WS: Health and Patient Record	T01.03 - Knowledge Representation 1	
18.30	Departure for Lucca and Tuscany dinner						

TUESDAY, August 28

	Auditorium	Fermi	Pacinotti	Galilei	Master	Room B	Room A
08:30-9:10	T00.04 - Keynote: Edward H. Shortliffe						
09:15-10:45	T02.02 - Usability Studies 1	T04.03 - Enhancing Research and Trials 3	T05.02 - Health and Patient Record 2	T11-Village of the future - People and Expectations	T01.04 - Biosignals and Advanced Algorithms	T01-WS: Process, information and data Models	Primary Care Informatics Working Group
11:15-12:45	T02.03 - Usability Studies 2	T08.02 - National Experiences	T05.03 - Support for Decisions	T11-Village of the Future - Social Incentive Framework	T01-WS: Information Storage and Retrieval	T01.05 - Terminology and Ontology 2	EFMI for Clinical Genomics and Bioinformatics (II) meeting
LUNCH & POSTER SESSION B (Gallery)							
14:00-14:40	T00.05 - Keynote: Sabine Koch						
14:45-16:15	T06-WS: Safety and Data Quality	T04-WS: Enhancing Research and Trials	T03.03 - Guidelines and Collaborative Work	T07.02 - Social Networking for Health 2	T10.03 - Support: Focus on Chronic Patients	T01.06 - Knowledge Representation 2	Tutorial: Advanced Security, Privacy and Trust for Personalized Pervasive Health
16:45-18.15	T09.02 - Distance Learning	T04.05 - Data Mining and Analysis	T03-WS: Empowering Patient-Provider Interaction	Evaluation Working Group	EFMI Invited Session: Quality in Selection of Papers	T01.07 - Information Storage and Retrieval 1	Tutorial: Advanced Security, Privacy and Trust for Personalized Pervasive Health
18:30	Departure for San Matteo National Museum and conference dinner						

WEDNESDAY, August 29

	Auditorium	Fermi	Pacinotti	Galilei	Master	Room B	Room A
08:30-09:10	T11-Village of the Future Round Table						
09:15-10:45	T08-WS: Hints for Thinking	T04.06 - Reuse of Data and Information	T03.04 - Telemedicine	T01.08 - Natural Language Processing	T06.02 - Security, Privacy, Ethics	T01-WS: Process, Information and data Models	Computational Methods for Pharmacovigilance (I) meeting
11:15-12:45	T07.03 - Health and the Web	T04-WS: Education	T06.03 - Patients' Safety	T01.10 - Reasoning and Decision Theory	T10.04 - Support: Focus on Nurses' Work	T01.09 - Information Storage and Retrieval 2	Computational Methods for Pharmacovigilance (II) meeting
13:15-13:45	Closing Ceremony						

DETAILED PROGRAM - SUNDAY, August 26

09:00-12:00

TUTORIAL – ROOM Fermi

Lessons Learned from 20 Years with Telemedicine in North Norway
Gunnar Hartvigsen

The tutorial offers a historical review of the pioneering activity in telemedicine in North Norway over the last 20 years and includes a presentation of the following telemedicine services: teleradiology, teleotorhinolaryngology (ENT), telepathology, teleophthalmology, teledermatology, telecardiology, telenephrology (teledialysis), teleobstetrics/prenatal telemedicine services, teleemergency service, teleoncology, telecare, teleodontology, tele endocrinology (telediabetes), telesurgery, telepsychiatry, telemedicine solutions for patient empowerment, maritime telemedicine, e-learning in medicine, videoconference in telemedicine services, messages and electronic communication in telemedicine services, and reimbursement. For each service, problem, solution, and lessons learned will be presented. Some of the services will be presented in detail. In addition, they will be illustrated by video-clips from real situations. At the end of the tutorial, we will try to summarize what we have learned about telemedicine services, and try to look into the future of such services. The tutorial is mainly based on a forthcoming book about telemedicine in North Norway over the last twenty years. The target audience for this tutorial is clinicians and other healthcare workers; informatics researchers; government healthcare representatives and policy makers; master students in health sciences, medical informatics and others who want to learn more about telemedicine in practice. Upon completion of the tutorial, participants will be able to:

- 1. Understand the role of telemedicine in health care service in general, and in specialist health care (in rural areas) in particular.*
- 2. Understand the role and impact of information technology in telemedicine.*
- 3. Understand the impact of the technology on patient empowerment, clinical outcomes, safety and quality of life in rural areas with basic health services only.*
- 4. Understand the design and implementation challenges associated with tele-medicine systems.*

TUTORIAL – ROOM Master

Realism-Based Ontology for Integrating Individually Compiled Biomedical Data Repositories
Werner Ceusters

Ontologies, when designed appropriately, are ideal candidates to make individually compiled data collections comparable and fit for semantic integration. Whereas semantic technologies can check whether formal representations produce interpretations that are outside the intended model, they do not provide much help to build such a model. This is where Ontological Realism comes into play. In this tutorial, using clinical research data collections about pain and its impact on mental health as an example, attendees will learn how to use formal methods and Ontological Realism as reliable tools to build ontologies that are faithful to reality and allow separate data collections to be semantically integrated.

TUTORIAL – ROOM Pacinotti

Clinical Content Governance in Web2.0 environment

Heather Leslie, Sebastian Garde, Ian McNicoll

Jurisdictions and organisations increasingly recognise the need for harmonisation and standardisation of clinical content specifications to support interoperability of health information. With the advent of the Web2.0 approach to broad, online community collaboration, it has now become possible to develop inclusive clinical content models, ensure validation of content models by experts as clinically appropriate for use in our electronic health records (EHRs) and avoid traditional pitfalls domain expertise, geographical and jurisdictional constraints. As a result, we need a new approach to clinical knowledge governance.

The intent of this tutorial is to share the experience of the authors in developing a clinical knowledge framework and use an online tool, the openEHR Clinical Knowledge Manager, to demonstrate practical governance of clinical knowledge assets – from management of a coherent library of clinical content models and related knowledge assets; through transparent and accountable facilitation of expert collaboration; to the generation of published outputs required by implementers.

The tutorial will provide practical insight into the issues and complexity of clinical knowledge governance, including development of management policies and quality processes to support each step in the clinical content lifecycle: development; validation & clinical verification; publication; and distribution of a range of clinical knowledge assets.

13:00-16:00

TUTORIAL – ROOM Fermi

openEHR - from Theory to Implementation

Ian McNicoll, Anže Droljc, Rong Chen

From its inception in 2003, and building on many previous years of academic research and practical experience, openEHR has steadily developed from a research-evidenced theoretical framework to deliver a set of practical technologies, methodologies and applications. These support the broad scope of e-health implementation, from clinical modelling and governance to full-scale, model-driven application development. In this tutorial attendees will be given an overview of the openEHR framework and associated methodologies, followed by practical examples of the ways in which the theoretical foundation flows through to implementation, drawing on real-world experience. The material will reflect the tutors broad practical experience of openEHR clinical content authoring, software development methodology and model-driven application development, underpinned by a commitment to building national and international interoperability standards.

TUTORIAL – ROOM Master

Searching Text and Images in the Medical Domain
Allan Hanbury, Henning Mueller

This tutorial introduces the topics of medical information retrieval and medical image retrieval. After covering the basics of information retrieval, search in the medical domain including end user requirements is covered. Medical image search is also covered from the point of view of available techniques and end user requirements. The tutorial also gives concrete suggestions for improving search in the medical domain, and discusses the challenges that are currently not solved by existing approaches. The tutorial is aimed at people outside the domain of information retrieval, but who are interested in how medical search engines function and how search can solve problems in their domain.

TUTORIAL – ROOM Pacinotti

Writing for Publication in Biomedical Informatics
Dominik Aronsky, Nicolette de Keizer, Jan Talmon

Participants will learn how to plan and prepare manuscripts, select an appropriate audience, decide on a suitable type of publication, understand the submission, peer review, and editorial decision making process, and learn how to reply to reviewers' comments. Manuscript preparation will include a detailed explanation of the various sections of a manuscript, elements of writing style, use of abbreviations, formatting of tables, preparing of figures, creating bibliographies, and common errors to avoid. Ethical considerations, such as authorship responsibilities, conflict of interest, duplicate submissions, plagiarism, prepublication, etc., will be discussed. For authors whose primary language is not English, the tutorial will provide advice on the general aspects of writing scientific English.

17:00-18:00

Opening Ceremony - ROOM Auditorium

Welcome from the LOC

John Mantas - EFMI president and Chair of the MIE2012 Scientific Program Committee

**Informatics in Biomedical Research: Vision of the Italian Ministry of Health.
Gaetano Guglielmi. General Direction Scientific Research and Innovation. Ministry of Health**

**The Institute of Clinical Physiology at CNR, Innovation for Better Patient Care: Past, Present and Future.
Giovanni Pioggia. National Council of Research, Pisa**

18:00-18:45

ROOM Auditorium

Keynote: Francesco Pinciroli - Politecnico of Milano, Italy

Challenges of the e-Health Curricular Education in Bio-Medical Engineering and in Medicine



FRANCESCO PINCIROLI is Full Professor and Head of the eHealthLABat the Politecnico di Milano, Italy, where he is in charge of the eHealth track in the curriculum of Biomedical Engineering. He gives courses on BioMedical Informatics, Health Information Systems and Telemedicine, Biolanguages and Bioarchives. Also he is Honorary Visiting Professor at the Centre for Health Informatics, City University London, UK. His research interests cover the areas of medical databases, biosignals and bioimages digital archives, electronic medical records, medical lexicons and terminologies, sustainable privacy of patient digital

data, continuing education for healthcare chief information officers. More recent interests are for Media Tablets and Apps for Medicine, Health and Home-Care.

He established long lasting cooperations with Cilea Interuniversity Consortium for Information and Communication Technologies and the Institute for Biomedical Engineering of the Italian National Research Council. He started and coordinated the Visible Human Dataset Milano Mirror Site, built up as a cooperation between Politecnico di Milano and the US National Library of Medicine. He advises companies, governmental bodies, and public and private hospitals as well. He is active in the international scientific publishing community. He edited of several books, including "Elementi di Informatica BioMedica" (Elements of BioMedical Informatics), and "Applicazioni di Sanità Digitale" (eHealth Applications), translations of which are on the way. He is author of hundreds of scientific papers, frequently appeared in top level journals

MIE2012 Get-Together Party at Santa Croce in Fossabanda

DETAILED PROGRAM - MONDAY, August 27

08:30-9:10

ROOM Auditorium

Keynote: Finn Kensing - University of Copenhagen, Denmark

Personal Health Record



FINN KENSING is a professor and director at the Center for IT Innovation at University of Copenhagen. He has published explorative, experimental and interventionist research within Health Informatics, Participatory Design, Computer Supported Cooperative Work, and Human Computer Interaction. His recent work on Personal Health Records has been published in International Journal of Medical Informatics, in Proceedings from the Workshop on Interactive Systems in Healthcare at the 2011 conference of the American Medical Informatics

Association, and in Proceedings of Infrastructures for Healthcare 2011. He is the co-editor of a special issue of the CSCW journal on Information Infrastructures for Health Care: Connecting practices across institutional and professional boundaries, and he is currently co-editing a special issue of International Journal of Medical Informatics on the same topic. He is the co-author of "Participatory IT Design -Designing for business and workplace realities" that present theory, method, and practices for introducing sustainable IT in organizations. Over the years he has had research collaboration with Stanford University, Xerox Palo Alto Research Center, IBM Research, Fujitsu Laboratories, and several private companies and public agencies. He is currently leading an interdisciplinary group of computer scientists, sociologists and cardiologists that address the problems of shared care and IT support for communication across institutional and professional boundaries in a heterogeneous and distributed network of healthcare professionals and patients.

09:15-10:45

T02.01 - Evaluation – ROOM Auditorium

chaired by Jos Aarts, Silvana Quaglini

09:15	eHealth Indicators: Results of an Expert Workshop Hannele Hypponen, Elseke Ammenwerth, Christian Nøhr, Arild Faxvaag, Åke Walldius
09:30	Exploring a Methodology for eHealth Indicator Development Hannele Hypponen, Elseke Ammenwerth, Nicolette de Keizer
09:45	Challenges in Evaluating Telehealth through RCT-the Problem of Randomisation Urvashi Sharma
10:00	Quality Assurance and Effectiveness of the Medication Process through Tablet Computers? Amanda Buus, Sisse Heiden, Louise Nyvang, Louise Pape-Haugaard
10:15	Population-Based Clinical Decision Support: A Clinical and Economic Evaluation Eric Eisenstein, Kevin Anstrom, Rex Edwards, Janese Willis, Jessica Simo, David Lobach
10:30	eHealth Interoperability Evaluation Using a Maturity Model Wided Guedria, Hanan Bouzid

09:15-10:45

T04.01 - Enhancing Research and Trials 1 – ROOM Fermi chaired by Thomas Karopka, Jan Talmon	
09:15	The Electronic Healthcare Record for Clinical Research (EHR4CR) Information Model and Terminology Christel Daniel, David Ouagne, Sajjad Hussain, Marie-Christine Jaulent, Eric Sadou
09:30	Key-Linked On-line Databases for Clinical Research Thomas Müller
09:45	A Loosely Coupled Framework for Terminology Controlled Distributed EHR Search for Patient Cohort Identification in Clinical Research Lei Zhao, Sarah Lim Choi Keung, Adel Taweel, Edward Tyler, Ire Ogunsina, James Rossiter, Brendan Delaney, Kevin Peterson, Richard Hobbs, Theodoros Arvanitis
10:00	Standardised Representation of Healthcare Information in Secondary Care Research: A Central England Case Study Sarah Lim Choi Keung, Ire Ogunsina, James Rossiter, Gavin Langford, Edward Tyler, Theodoros Arvanitis
10:15	Quality of Information for Pruritus Research through Single Source Fleur Fritz, Philipp Bruland, Sebastian Balhorn, Martin Dugas Short communication (Oral)
10:25	Integration of a Commercial DICOM Viewer into the i2b2 Workbench Benjamin Baum, Otto Rienhoff, Ulrich Sax, Matthias Quade Short communication (Oral)

09:15-10:45

T06.01 - Safety and Data Quality – ROOM Galilei chaired by Ragnar Nordberg, Fabrizio Ricci	
09:15	Indicators of Data Quality: Revision of a Guideline for Networked Medical Research Jürgen Stausberg, Ron Pritzkeleit, Carsten Schmidt, Thomas Schrader, Michael Nonnemacher
09:30	Miss Marjan Askari
09:45	Organizing Data Quality Assessment of Shifting Biomedical Data Carlos Sáez, Juan Martínez-Miranda, Juan Miguel García-Gómez, Montserrat Robles
10:00	The Role of Electronic Checklists - Case Study on MRI-Safety Andreas D. Landmark, May-Britt Selnes, Elisabeth Larsen, Astrid Svensli, Linda Solum, Berit Brattheim
10:15	Safety of a Web-Based Insulin Titration System for Patients with Type 2 Diabetes Mellitus - Pilot study Airin Simon, Wouter Gude, Niels Peek
10:30	Quality Assessment of Automatically Extracted Data from GPs' EPR Etienne De Clercq, Sarah Moreels, Viviane Van Cateren, Nathalie Bossuyt, Geert Goderis, Stefaan Bartholomeeusen

09:15-10:45

T10.01 - Support: Focus on Process – ROOM Master chaired by Petter Hurlen	
09:15	Measuring Health Care Process Quality with Software Quality Measures Özkan Yildiz
09:30	Analyzing Primary Care Data to Characterize Inappropriate Emergency Room Use Justin St-Maurice, Alex Mu-Hsing Kuo
09:45	Flexible Medical Image Management Using Service-Oriented Architecture Oded Shaham, Alex Melament, Yuval Barak-Corren, Igor Kostirev, Noam Shmueli, Yardena Peres
10:00	COCPIT: A Tool for Integrated Care Pathway Variance Analysis John Ainsworth, Iain Buchan
10:15	An Integration of Emergency Department Information and Ambulance Systems Samir El Masri, Nada Al-Harbi, Basema Saddik
10:30	Understanding Clinical Communication in Intensive Care Unit Saif Khairat Short communication (Oral)
10:40	A Pervasive System for Communicating Urgency Cues to Health Care Workers Joakim Klemets, Lill Kristiansen Short communication (Oral)

09:15-10:45

T03.01 - Clinical Guidelines – ROOM Pacinotti chaired by Simon De Lusignan, Vincenzo Della Mea	
09:15	An Engine for Clinician Guideline Compliance Checking Jing Mei, Haifeng Liu, Guotong Xie, Geetika Lakshmanan
09:30	Application of the Logical Elements Rule Method for Formalization of Clinical Rules: Case Study of ACOVE-NLI Stephanie Medlock, Saeid Eslami, Dedan Opondo, Marjan Askari, Sophia E. de Rooij, Ameen Abu-Hanna
09:45	Ontology-Based Computerization of Acute Coronary Syndrome Clinical Guideline for Decision Support in the Emergency Department Syed Sibte Raza Abidi, Mostafa Omaish, Samina Abidi
10:00	Computerized Clinical Guidelines: Current Status & Principles for Future Research Haridimos Kondylakis, Manolis Tsiknakis
10:15	A Semantic Wiki for Editing and Sharing Decision Guidelines in Oncology Thomas Meilender, Jean Lieber, Fabien Palomares, Gilles Herengt, Nicolas Jay
10:30	Clinical Guideline Representation in a CDS: a Human Information Processing Method Ellen Kilsdonk, Rinke Riezebos, Leontien Kremer, Linda Peute, Monique Jaspers

09:15-10:45

T01.01 - Process, information and data Models – ROOM B chaired by Brigitte Seroussi	
09:15	Using Archetypes for Defining CDA Templates David Moner, Alberto Moreno, Jose Alberto Maldonado, Montserrat Robles, Carlos Parra
09:30	Data Definition Ontology for Clinical Data Integration and Querying Ariane Assélé Kama, Audi Primadhanty, Rémy Choquet, Douglas Teodoro, Frank Enders, Catherine Duclos, Marie-Christine Jaulent
09:45	Using Enterprise Ontology for Improving Emergency Management in Hospitals David Galego Dias, Luís Velez Lapão, Miguel Mira da Silva
10:00	Conceptual Modeling for Prospective Health Technology Assessment Marion Gantner-Bär, Anatoli Djanatliev, Hans-Ulrich Prokosch, Martin Sedlmayr
10:15	Quality Requirements for EHR Archetypes Dipak Kalra, Archana Tapuria, Tony Austin, Georges De Moor
10:30	Migration Path for Structured Documentation Systems Including Standardized Medical Device Data Ann-Kristin Kock, Josef Ingenerf, Stoyan Halkaliev, Heinz Handels

9:15-10:45

EN13606 Renewal Meeting (by invitation) – ROOM A

10:45 – 11:15 COFFEE BREAK

11:15-12:45

T04.02 - Enhancing Research and Trials 2 – ROOM Fermi chaired by Jana Zvarova, Fabrizio Ricci	
11:15	Validation and Discovery of Genotype-Phenotype Associations in Chronic Diseases Using Linked Data Jyotishman Pathak, Richard Kiefer, Robert Freimuth, Christopher Chute
11:30	A DICOM Architecture for Clinicians and Researchers Michael Onken
11:45	Ophiucus: RDF-Based Visualization Tool for Health Simulation Models Andrew Sutcliffe, Anya Okhmatovskaia, Arash Shaban-Nejad, David L. Buckeridge
12:00	Harnessing Linked Data for the Consumption and Pub Alejandro Rodríguez González, Miguel Angel Mayer, Juan Miguel Gomez Berbis, Angel García Crespo Short communication (Oral)
12:10	x4T-EDC: A Prototype for Study Documentation Based on the Single Source Concept Philipp Bruland, Christian Forster, Martin Dugas Short communication (Oral)
12:20	A Generic Software Architecture for Patient Recruitment Systems Using Hospital Information System Tools Benjamin Trinczek, Felix Köpcke, Thomas Leusch, Raphael W Majeed, Björn Schreiwais, Joachim Wenk, Martin Dugas Short communication (Oral)

11:15-12:45

T10.02 - Support: Focus on Physicians Activities – ROOM Master chaired by Assa Reichert	
11:15	Ontology-Supported Clinical Profiling for the Evaluation of Obesity and Related Comorbidities. Paolo Luigi Scala, Davide Di Pasquale, Daniele Tresoldi, Claudio L. Laforluna, Giovanna Rizzo, Marco Padula
11:30	Texture Analysis Software: Integration with a Radiological Workstation Regis Duvauferrier, Johanne Bezy, Valerie Bernard-Gounot , Jeremy Lasbleiz
11:45	Do Worklists Work? Petter Hurlen
12:00	Bringing Research to the Point of Care: Hypergenes Project Study Edward Vitkin, Hani Neuvirth-Telem, Boaz Carmeli, Amnon Shabo, Ariel Farkash
12:15	Log Analysis to Understand Medical Professionals' Image Searching Behaviour Theodora Tsirikla, Henning Mueller, Charles Kahn

11:15-12:45

T05.01 - Health and Patient Record 1 – ROOM Pacinotti chaired by George Mihalas, Marcello Melgara	
11:15	Archetype Based Search in an IHE XDS Environment Christoph Rinner, Michael Kohler, Gudrun Hübner-Bloder, Samrend Saboor, Elske Ammenwerth, Georg Duftschmid
11:30	The FBE Development Project: Toward Flexible Electronic Standards-Based Bio-Psycho-Social Individual Records Lucilla Frattura, Andrea Simoncello, Giovanni Bassi, Andrea Soranzio, Stefano Terreni, Fulvio Sbroiavacca
11:45	Standardized Electronic Health Record Interoperability Advantages towards the Global Village Hasan Veseli, Georgy Kopanitsa, Hans Demski
12:00	Enhancing the many-to-many Relations across IHE Document Sharing Communities Luís S. Ribeiro, Carlos Costa, Jose Luis Oliveira
12:15	Concepts for a Personal Health Record Cândido Santos, Tiago Pedrosa, Carlos Costa, Jose Luis Oliveira
12:30	Co-Summary. A Shared Care Record for ICD Patients Erling C. Havn, Jørgen P. Banskler, Troels Mønsted Short communication (Oral)
12:40	EHR Navigator - A Concept and First Prototype Using Mobile Devices to Access an IHE-based Electronic Health Record Oliver Heinze, Holger Schmuhl, Peter Moll, Björn Bergh Short communication (Oral)

11:15-12:45

T01.02 - Terminology and Ontology 1 – ROOM B chaired by Stefan Darmoni	
11:15	Mapping SNOMED CT to ICD-10 Kathy Giannangelo
11:30	Automatic Generation of MedDRA Terms Groupings Using an Ontology Gunnar Declerck, Cédric Bousquet, Marie-Christine Jaulent
11:45	An Information Artifact Ontology Perspective on Data Collections and Associated Representational Artifacts Werner Ceusters
12:00	Formal Specification of an Ontology-Based Service for EHR Interoperability Carolina Gonzalez Serrano, Bernd Blobel, Diego Lopez
12:15	A ClaML-Based Interface for the Import of Monohierarchical Classifications Sylvie Marie-Noel Nguoungo, Jürgen Stausberg
12:30	Rare Diseases Knowledge Management: the Contribution of Proximity Measurements in OntoOrpha and OMIM. Xavier Aimé, Jean Charlet, Ferdinand Dhombres

11:15-12:45

T02-Panel: Evaluation – ROOM Auditorium	
Development of Indicators to Monitor Availability and Use of EHR, HIE and PHR Systems Christian Nøhr, Arild Faxvaag, Hannele Hypponen, Søren Vingtoft, Åke Walldius	

11:15-12:45

T11-Village of the Future – Pillar 1 Technological Interoperability – ROOM Galilei chaired by Reinhold Haux	
DialBetics: Smartphone-Based Self-Management for Type 2 Diabetes Patients Kayo Waki, Hideo Fujita, Yuji Uchimura, Eiji Aramaki, Koji Omae, Takashi Kadowaki, Kazuhio Ohe	
Decision Support System for Chronic Patient Monitoring Based on Wearable Sensors Presenter: Sara Colantonio	
SILAM: integrating Laboratory Information Systems within the Liguria Region Electronic Health Record. Presenter: Mauro Giacomini	
Media Tablets & Apps for Medicine, Health and Home Care Presenter: Sara Marceglia	
Michelangelo and Prima Pietra research projects: novel ICT-supported approaches in the assessment and treatment of autistic children Presenter: Lucia Billeci	

11:15-12:45

CEN/ISO 13606, openEHR, HL7CDA meeting – ROOM A	
12:45-14:00 LUNCH	
13:00-14:00 POSTER SESSION A (see page 48)	

14:00-14:40

ROOM Auditorium

Keynote: Roberta Annicchiarico - Fondazione Santa Lucia, Rome, Italy

Enhancing Service Delivering, Improving Quality of Life, Preserving Independence Through Assistive Technology



ROBERTA ANNICCHIARICO PhD, is a geriatrician. She is Medical Assistant at IRCCS Fondazione S. Lucia, Rome from 2002. She is contracted professor of Internal Medicine with focus on geriatrics at the school of Physiotherapy, Univ. Tor Vergata, Rome. She has been Teacher (2003) in the "European Master's Degree in Preventive and Adapted Physical Activity". She has been medical manager of the European Project "SHARE-it" (FP6). She has been chief of the Santa Lucia research unit of the European Project "K4CARE" (FP6). She has been Member of the Expert Group of the MARE project (FP7). She is chief of the Santa Lucia research unit of the European project "SOCIABLE" (FP7). She is chief of the Santa Lucia research unit of the European project "REMPARK" (FP7), "I-DON'T-FALL" (FP7), "FATE" (FP7). Her main research interests are the disability correlates of chronic diseases, and possible clinical applications of new technologies.

14:45-16:15

T09.01 - Education – ROOM Auditorium

chaired by Panagiotis Bamidis, Vincenzo Della Mea

14:45	Teaching Medicine with a Terminology/Ontology Portal Julien Grosjean, Tayeb Merabti, Nicolas Griffon, Badisse Dahamna, Stefan Darmoni
15:00	Nursing Informatics Competences still Challenging Nurse Educators Elina Rajalahti, Kaija Saranto
15:15	Assessment in Health Care Education - Modelling and Implementation of a Computer Supported Scoring Process Jayne Alfredsson, Patrick Plichart, Nabil Zary
15:30	eHealth Education of Professionals in the Baltic Sea Area Ann Bygholm, Julia Günther, Pernille Bertelsen, Christian Nøhr
15:45	Is it Worth Investing in Online Continuous Education for Healthcare Staff? M.Cristina Mazzoleni, Chiara Maugeri, Carla Rognoni, Alessio Cantoni, Marcello Imbriani

14:45-16:15

T08.01 - Hints for thinking – ROOM Fermi

chaired by Christian Nøhr, Francesco Pinciroli

14:45	A Culture and Power Perspective on the Management of Health Information Technology in Hospitals Lone Stub Petersen, Pernille Bertelsen
15:00	Economic Impact of a Nationwide Interoperable e-Health System Using the PENG Evaluation Tool Liisa Parv, Janek Saluse, Ain Aaviksoo, Madis Tiik, Ruth Sepper, Peeter Ross
15:15	Medical Device Software: A New Challenge Daniela Luzi, Fabrizio Pecoraro

15:30	The Nature of Unintended Benefits in Health Information Systems Craig Kuziemsky, Elizabeth Borycki, Elizabeth Cummings, Christian Nøhr
15:45	The Intellectual Property Management for Data Sharing in a German Liver Cancer Research Network Shan He, Matthias Ganzinger, Petra Knaup
16:00	How Should we Define eHealth, and Does the Definition Matter? Chris Showell, Christian Nøhr

14:45-16:15

T07.01 - Social Networking for Health 1 – ROOM Pacinotti chaired by John Mantas, Daniela Luzi	
14:45	On the Support of Flexible Patient Privacy Policies in Social-Medical Discovery Haggai Roitman, Sivan Yogev, Yevgenia Tsimmerman, Yardena Peres
15:00	Human Rights Monitoring Using Virtual Communities Christo El Morr
15:15	Impact of the Social Networking Applications for Health Information Management for Patients and Physicians Jian Liang, Tony Sahama
15:30	Mobile Social Networking Health (MSNet-Health): Beyond the mHealth Frontier Mowafa Househ
15:45	Architectural Approach for Quality and Safety Aware HealthCare Social Networks Diego Lopez, Bernd Blobel, Carolina Gonzalez Serrano
16:00	Technical Requirements of a Social Networking Platform for Senior Citizens Hans Demski, Claudia Hildebrand, José López Bolós, Winfried Tiedge, Stefanie Wengel, Daire Ó Broin, Ross Palmer

14:45-16:15

T11-Village of the Future - Pillar 2 Integration and Semantics – ROOM Galilei chaired by Dipak Kalra	
Clinical Content Governance in a Web 2.0 Environment Heather Leslie, Sebastian Garde, Ian McNicoll	
EN13606 Contribution to the Village of the Future Gerard Freriks	
epSOS Project: the large scale pilot to provide eHealth cross-border services to European citizens Presenter: Marcello Melgara	

14:45-16:15

T05-WS: Health and Patient Record – ROOM Master	
EHRs, Mobile Technologies and Policies on the Move to Pervasive Care Bernd Blobel, Francois Allaert, Dipak Kalra, Peter Pharow, Pekka Ruotsalainen, Stefan Sauermann, Şule Yildirim Yayilgan	

14:45-16:15

T01-WS: Process, Information and data Models – ROOM B	
Bridging the Gap between Bioinformatics and Medical Informatics	
Victoria López Alonso, Miguel Angel Mayer, Nour Shublaq, INBIOMEDvision Consortium	

14:45-16:15

EFMI for Clinical Genomics and Bioinformatics (I) meeting – ROOM A	
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16:15 – 16:45 COFFEE BREAK

16:45-18:15

T03.02 - Empowering Patient-Provider Interaction – ROOM Auditorium	
chaired by Surjan Gyorgy, Paolo Scala	
16:45	Empower the Patients with a Dialogue-Based Web App Charlotte D. Bjørnes, Elizabeth Cummings, Christian Nøhr
17:00	Using a Patient-Centered Approach for Health and Social Care Integration Mikaela Poulymenopoulou, Despina Papakonstatinou, Flora Malamateniou, George Vassilacopoulos
17:15	A Semiotic View on Paper and Mobile Care Data Quality Retha de la Harpe
17:30	From Clinical Requirement to Personalized Wellness Decision Support: A Data-Driven Framework for Computer-Supported Guideline Refinement Pei-Yun Sabrina Hsueh, Xinxin zhu, Ci-Wei Lan, Vincent Deng
17:45	Interoperability Design of Personal Health Information Import Service Mika Tuomainen, Juha Mykkänen
18:00	Challenges and Issues of Geolocation in Clinical Environment David-Zacharie Issom, Claire Hagry, Laetitia Wodia-Mendo, Henry Seng, Christian Lovis, Frederic Ehrler

16:45-18:15

T01.03 - Knowledge Representation 1 – ROOM B	
chaired by Etienne De Clercq	
16:45	MRI Image Artifact Ontology: A Proposed Method for Improved Recognition and Rectification jeremy Lasbleiz, john Morelli, Nicolas Schnel, Hervé Saint-Jalmes
17:00	The Reproducibility of CLIF, a Method for Clinical Quality Indicator Formalisation Kathrin Dentler, Ronald Cornet, Annette ten Teije, Kristien Tytgat, Jean Klinkenbijn, Nicolette de Keizer
17:15	Knowledge Representation for Fuzzy Inference Aided Medical Image Interpretation Norbert Gal, Vasile Stoicu-Tivadar
17:30	Virtual Medical Record Implementation for Enhancing Clinical Decision Support Valentin-Sergiu Gomi, Vasile Stoicu-Tivadar, Daniel Dragu
17:45	Design of an Original Interface to Facilitate the Use of infectious Clinical Guidelines by Physicians in Primary Care Rosy Tsopra, Catherine Duclos

18:00	Ontology-Driven Decision Support Systems for Medical Diagnosis (An Interactive Form for Consultation in Patients with Plasma Cell Disease) Sidoine Pierre Valéry Donfack Guefack
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16:45-18:15

T11-Village of the Future - Pillar 3 Persons systems interaction – ROOM Galilei chaired by Lisette van Gemert – Pijnen	
Demonstration of an Intelligent Platform for Personalized Remote Monitoring of the Cardiac Patients with Electronic Implant Devices Asuman Dogac, Gökçe Banu Laleci Erturkmen, Yildiray Kabakb, Elif Eryilmaz	
Impact of the Social Networking Applications for Health Information Management for Patients and Physicians Jian Liang, Tony Sahama, Renato Iannella	
Effective communication of the clinical data concerning the family members Presenter: Sara Marceglio	
Pervasive healthcare technologies: toward a personalized and remote care Presenter: Giovanni Pioggia	
Mobiguide project: Guiding the patient everytime everywhere Presenter: Silvana Quaglini	

16:45-18:15

T08-WS: Hints for Thinking – ROOM Fermi	
Should Health Information Technology be Regulated? Jos Aarts, Farah Magrabi, Andre Kushniruk, Eric Eisenstein	

16:45-18:15

T05-Panel: Decision Support Systems – ROOM Pacinotti	
Clinical Bioinformatics: New Challenges for Human-Centered Decision-Support Systems Riccardo Bellazzi, Vimla Patel, Amnon Shabo, Patrice Degoulet, Edward H Shortliffe	

18:30 MIE2012 Tuscany Dinner (transfer to Lucca)	
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DETAILED PROGRAM - TUESDAY, August 28

8:30-9:10

ROOM Auditorium

Keynote: Edward H. Shortliffe, Columbia University and New York Academy of Medicine, US
 The Future of Biomedical Informatics: A Perspective from Academia



EDWARD H. SHORTLIFFE is a Scholar in Residence at the New York Academy of Medicine in New York City. He also holds academic positions as an Adjunct Professor of Biomedical Informatics at both Columbia University's College of Physicians and Surgeons and Arizona State University. Previously he served from July 2009 through March 2012 as President and Chief Executive Officer of the American Medical Informatics Association (AMIA). From November 2009 until October 2011 he also held a position as Professor in the School of Biomedical Informatics at the University of Texas Health Science Center in Houston. Between 2007 and 2009 he was Professor of Biomedical Informatics at Arizona State University and Professor of Basic Medical Sciences and Professor of Medicine at the University of Arizona College of Medicine. He also served as the founding dean of the Phoenix campus of the University of Arizona's College of Medicine. From 2000-2007 he was the Rolf A. Scholdager Professor and Chair of the Department of Biomedical Informatics at Columbia University and Professor of Medicine and of Computer Science at Stanford University (1979-2000). Dr. Shortliffe has spearheaded the formation and evolution of graduate degree programs in biomedical informatics at Stanford, Columbia, and Arizona State Universities. His research interests include the broad range of issues related to integrated decision-support systems, their effective implementation, and the role of the Internet in health care. He is an elected member of the Institute of Medicine, the American Society for Clinical Investigation, and the Association of American Physicians. He has also been elected to fellowship in the American College of Medical Informatics and the American Association for Artificial Intelligence. A Master of the American College of Physicians, he received the Grace Murray Hopper Award of the Association for Computing Machinery in 1976. Currently Editor-in-Chief of the Journal of Biomedical Informatics and the well known textbook Biomedical Informatics: Computer Applications in Health Care and Biomedicine, Dr. Shortliffe has authored over 300 articles and books in the fields of biomedical computing and artificial intelligence.

09:15-10:45

T02.02 - Usability Studies 1 – ROOM Auditorium chaired by Marie-Catherine Beuscart-Zephir, Jos Aarts	
09:15	Using Video Observation to Gain Insight into Complex Clinical Work Practices Anna Marie Høstgaard, Pernille Bertelsen
09:30	The Role of Simulation in Clinical Information Systems Development Sanne Jensen, Christian Nøhr, Karen Marie Lyng
09:45	Low-Cost Rapid Usability Testing for Health Information Systems: Is it Worth the Effort? Tristin Baylis, Andre Kushniruk, Elizabeth Borycki
10:00	Analysis of Metrics for the Usability Evaluation of Electronic Health Record Management Systems Georgy Kopanitsa, Zhanna Tsvektova, Hasan Veseli

10:15	Patient Safety-Oriented Usability Testing: a Pilot Study Romaric Marcilly, Stéphanie Bernonville, Costanza Riccioli, Marie-Catherine Beuscart-Zephir
10:30	A Framework for User Involvement and Context in the Design and Development of Safe e-Health Systems Andre Kushniruk, Paul Turner

09:15-10:45

T04.03 - Enhancing Research and Trials 3 – ROOM Fermi chaired by Mira Hercigonja-Szekeres, Mauro Giacomini	
09:15	Designing and Implementing a Biobanking IT Framework for Multiple Research Scenarios Hans-Ulrich Prokosch, Sebastian Mate, Jan Christoph, Andreas Beck, Felix Köpcke, Stefanie Stephan, Matthias Beckmann, Tilman Rau, Arndt Hartmann, Bernd Wullich, Kai-Uwe Eckardt, Stephanie Titze, Jens Habermann, Josef Ingenerf, Michael Hackmann, Thomas Bürkle, Thomas Ganslandt, Bernhard Breil
09:30	Requirements for Semantic Biobanks André Andrade, Markus Kreuzthaler, Janna Hastings, Maria Krestyaninova, Stefan Schulz
09:45	Interoperability in Clinical Research: From Metadata Registries to Semantically Annotated CDISC ODM Philipp Bruland, Bernhard Breil, Fleur Fritz, Martin Dugas
10:00	A Web-based Tool for Patients Cohorts and Clinical Trials Management Mauro Giacomini, Paolo Fraccaro
10:15	SALUS: Scalable, Standard based Interoperability Framework for Sustainable Proactive Post Market Safety Studies Gökce Banu Laleci Erturkmen, Asuman Dogac, Mustafa Yuksel Short communication (Oral)
10:25	Using Federated Queries for On-the-Fly Retrospective Observational Studies Dennis Toddenroth, Sebastian Mate, Thomas Ganslandt Short communication (Oral)

09:15-10:45

T01.04 - Biosignals and Advanced Algorithms – ROOM Master chaired by Paola Di Giacomo	
09:15	Segmentation of Crohn, Lymphangiectasia, Xanthoma, Omid Haji Maghsoudi
09:30	Probabilistic Graphical Models for Effective Connectivity Extraction in the Brain Using fMRI Data Mohammad Ali Safari Sharif Abadi
09:45	Generation of a Probabilistic Arterial Cerebrovascular Atlas Derived from 700 Time-of-Flight MRA Datasets Nils Daniel Forkert, Santiago Suniaga, Jens Fiehler, Heike Wersching, Stefan Knecht, Andre Kemmling
10:00	Scale-Space Methods for Live Processing of Sensor Data Stein Olav Skrøvseth, Andre Dias, Lukas Gorzelniak, Fred Godtliebsen, Alexander Horsch
10:15	An Application of Symbolic Dynamics for FHRV Assessment Mario Cesarelli, Maria Romano, Paolo Bifulco, Giovanni Improta, Giovanni D'Addio

10:30	Automated Versus Interactive Spectral Analysis of Heart Rate Variability from 24-hour Holter Recordings in Heart Failure Patients Roberto Maestri, Maria Teresa La Rovere, Gian Domenico Pinna
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09:15-10:45

T05.02 - Health and Patient Record 2 – ROOM Pacinotti chaired by Stig Andersen, Federico Melgara	
09:15	The Distributed Use of Electronic Emergency-Department Whiteboards Morten Hertzum
09:30	Fragmentation of Diabetes Treatment in Austria - an Indicator for the Need for Shared Electronic Health Record Systems Georg Duftschmid, Wolfgang Dorda, Gottfried Endel, Karl Fröschl, Walter Gall, Wilfried Grossmann, Milan Hronsky
09:45	Automatic Detection of Inconsistencies between Free Text and Coded Data in Sarcoma Discharge Letters Ruty Rinott, Michele Torresani, Rossella Bertulli, Abigail Goldsteen, Paolo Casali, Boaz Carmeli, Noam Slonim
10:00	Health Data Collecting and Sharing: Case Studies of Czech eHealth Applications Jana Zvarova, Lenka Lhotska, Libor Seidl, Karel Zvara
10:15	An EMR Based Cancer Diary - Utilisation and Initial Usability Evaluation of a New Cancer Data Visualization Tool Markus Ries, Hans-Ulrich Prokosch
10:30	Ontology-Based Reusable Clinical Document Template Production System Sejin Nam, Sungin Lee, James G. Boram Kim, Hong-Gee Kim

9:15-10:45

T11-Village of the future - Pillar 4 People and Expectations – ROOM Galilei chaired by Michael Rigby	
MENRVA Project - Multigenerational Education of elderly by Virtual Arts Peter Kokol, Gregor Stiglic, Igor Pernek	
Bridging SMEs and Health Care Organisations to foster Development of Innovative Solutions in Health Care Provision Thomas Karopka, Wolfgang Blank	
Khresmoi: Multimodal Multilingual Medical Information Search Allan Hanbury, Henning Mueller	
Generic Open Source System Evolved from Conversion Project Based on Established Organ-Transplantation Logistics-System Presenter: Bo Pedersen	
Intelligent Textiles for Health: experience of SMARTEX Presenter: Rita Paradiso	

09:15-10:45

T01-WS: Process, information and data Models – ROOM B

Model-Driven Healthcare Standards Development: Lowering the Bar for Implementers
John Timm, Amnon Shabo, Ariel Farkash

09:15-10:45

Primary Care Informatics Working Group – ROOM A

Improving the Design of Research and Quality Improvement Using Routine Data in Chronic Disease:
Ontology-Driven Approach: Primary Care Informatics Working Group Workshop
Simon de Lusignan
Working Group Workshop

10:45 – 11:15 COFFEE BREAK

11:15-12:45

T02.03 - Usability Studies 2 – ROOM Auditorium

chaired by Andrej Orel, Retha De La Harpe

11:15	Usability Evaluation of a Guideline Implementation System for Cardiac Rehabilitation: Think Aloud Study Mariëtte van Engen-Verheul, Linda Peute, Ellen Kilsdonk, Niels Peek, Monique Jaspers
11:30	ICU Nurses' Evaluations of Integrated Information Displays on User Satisfaction and Perceived Mental Workload Sven Koch, Dwayne Westenskow, Charlene Weir, Jim Agutter, Maral Haar, Matthias Gorges, David Liu, Nancy Staggers
11:45	Small Cause - Big Effect: Improvement in Interface Design Results in Improved Data Quality - a Multicenter Crossover Study Janko Ahlbrandt, Michael Henrich, Bernd A. Hartmann, Bettina B. Bundschuh, Julia Schwarz, Joachim Klasen, Rainer Röhrig
12:00	The Use and Usability of EPR Systems in Oncology Thomas Poulter, Peter Bath
12:15	Proactive Authenticated Notifications for Health Practitioners: Two Way Human Computer Interaction through Phone Raphael W Majeed, Mark R Stöhr, Rainer Röhrig
12:25	Analysis of 3D Visualization Tools for Usage in Neuromedicine with High Performance Computing Resources Fred Viezens, Jana Klimova, Benjamin Löhnhardt, Frank Dickmann Short communication (Oral)

11:15-12:45

T08.02 - National Experiences – ROOM Fermi

chaired by Jose Luis Oliveira, Cristina Mazzoleni

11:15	On the Attitudes of GPs Toward Novel Features of their Next EPRs Federico Cabitza
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11:30	Envisioning Electronic Health Record Systems as Change Management: The Experience of an English Hospital Joining the National Programme for Information Technology Amirhossein Takian
11:45	Method for Modeling Social Care Processes for National Information Exchange Aki Miettinen, Juha Mykkänen, Maarit Laaksonen
12:00	Uniforming Information Management in Finnish Social Welfare Maarit Laaksonen, Jarmo Kärki, Erja Ailio
12:15	Proposal of an Architecture for the National Integration of Electronic Health Records: A Semi-Centralized Approach Samir El Masri, Asma Aljarullah
12:25	Biomedical Informatics: Experience in Brazil and Mozambique Heimar Marin, Lucila Ohno Machado Short communication (Oral)

11:15-12:45

T05.03 - Support for Decisions – ROOM Pacinotti chaired by Anne Moen, Sara Colantonio	
11:15	A Data-Driven Living Review for Pharmacogenomic Decision Support in Cancer Treatment Gökhan Karakulah, Aslı Suner, Klaus-Peter Adlassnig, Matthias Samwald
11:30	Knowledge-Analytics Synergy in Clinical Decision Support Noam Slonim
11:45	Electronic Medication Ordering with Integrated Drug Database and Clinical Decision Support System Andrej Orel, Andreja Čufar, Anže Droljc
12:00	Isolation of Patients with Vancomycin Resistant Enterococci (VRE): Efficacy of an Electronic Alert System Damian Borbolla
12:15	Clinical Validation of the Added Value of a Clinical Decision Support System for Brain Tumour Diagnosis-Based on SV 1H MRS: Randomized Controlled Trial of Effectiveness and Qualitative Evaluation Carlos Sáez, Juan Miguel García-Gómez, Ángel Alberich-Bayarri, Miguel Ángel Edo, María Vanyó, Ana I Català-Gregori, Carmen Barber, Cecilio Poyatos, Enrique Mollà, Luis Martí-Bonmatí, Montserrat Robles Short communication (Oral)

11:15-12:45

T01.05 - Terminology and Ontology 2 – ROOM B chaired by Reinhold Haux	
11:15	Method for Mapping the French CCAM Terminology to the UMLS Metathesaurus Cédric Bousquet, Julien Souvignet, Tayeb Merabti, Eric Sadou, Beatrice Trombert, Jean Marie Rodrigues
11:30	Semantic Relations of Binary Compounds Annotated with SNOMED CT Dimitrios Kokkinakis
11:45	Customization of Biomedical Terminologies Julien Homo, Laetitia Dupuch, Allel BenBrahim, Natalia Grabar, Marie Dupuch

12:00	Towards a Bilingual Alzheimer's Disease Terminology Acquisition Using a Parallel Corpus Khadim Drame
12:15	The Issue of Building Generative Terminologies for Automatic Medical Data Aggregation Belhadj Ihssen
12:30	IRMA Code II: Unique Annotation of Medical Images for Access and Retrieval Tim-Christian Piesch, Henning Mueller, Christiane Kuhl, Thomas Deserno (né Lehmann)

11:15-12:45

T11-Village of the Future - Pillar 5 Social and Policy Incentive Framework – ROOM Galilei chaired by Jacob Hofdijk	
mEducator Village: Medical Educational Resources in the Era of Semantic Web (Web 3.0) & Social Media (Web 2.0) Panagiotis Bamidis, Stathis Th. Konstantinidis, Dimitris Spachos, Eleni Dafli, Charalambos Bratsas, Panagiotis Antoniou	
From health house to accountable care organisations: creating a village with a future Presenter: Marcel Smeets	
New platform for business intelligence based on social networks with application to Health Information Systems Presenter: Filippo Geraci	
I App, Trustworthy Medical Apps Presenter: Urs-Vito Albrecht	
Integrating social and healthcare requires teamwork and supporting funding systems along The Blue Line Presenter: Jacob Hofdijk	
DesignThinking network focusing on HealthCare Facilitator: Johannes van den Eerenbeemt	

11:15-12:45

T01-WS: Information Storage and Retrieval – ROOM Master	
Characterising an Effective Computer-Based Disease Registry Silvana Quaglini, Giordano Lanzola, Simon Lusignan, Giuseppe Micieli, Anna Cavallini, Fabrizio Pizzo, Nouf Alharbi, Edward Leatham, Nils Wahlgren	

11:15-12:45

EFMI for Clinical Genomics and Bioinformatics (II) meeting – ROOM A	
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12:45-14:00 LUNCH
13:00-14:00 POSTER SESSION B (see page 50)

14:00-14:40

ROOM Auditorium

Keynote: Sabine Koch - Karolinska Institute, Stockholm, Sweden
 Improving Quality of Life Through eHealth – The Patient Perspective



SABINE KOCH is the first professor of Health Informatics at Karolinska Institutet in Stockholm, Sweden and director of its Health Informatics Centre. Dr. Koch received both a M.Sc. and a Ph.D. degree in Medical Informatics from Ruprecht-Karls University Heidelberg, Germany. Her early research was in dental informatics, especially dental imaging and IT supported integrated care concepts for dental offices. Her fields of interest include models for cooperative care, especially homecare, human factors/ usability and evaluation of information systems. Current research concerns the integration of consumer informatics and clinical informatics, patient-centered information and communication services, evidence-based decision support and information visualization for enhanced decision making. Dr. Koch is the chair of the Swedish Federation for Medical Informatics (SFMI) and the incoming treasurer of the International Medical Informatics Association (IMIA). She is a frequent member of the Scientific Program Committees for different international conferences in the field and member of the Editorial Boards of several international medical informatics journals. She has about 60 peer-reviewed publications and more than 40 keynote presentations at international conferences.

14:45-16:15

T07.02 - Social Networking for Health 2 – ROOM Galilei

chaired by Catherine Chronaki, Federico Cabitza

14:45	A Real-Time Disease Surveillance Architecture Using Social Networks Mustafa Sofean, Matthew Smith
15:00	Online Health Information Search: what Struggles and Empowers the Users? Nataly Pletneva, Alejandro Vargas, Konstantina Kalogianni, Celia Boyer
15:15	Exploring the Community Structure of a Diabetes Forum Andre Dias, Taridzo Chomutare, Taxiarchis Botsis
15:30	Experiences in the Creation of an Electromyography Database to Help Hand Amputated Persons Manfredo Atzori, Arjan Gijssberts, Simone Heynen, Anne-Gabrielle Mittaz Hager, Claudio Castellini, Barbara Caputo, Henning Mueller
15:45	Leveraging Social Media for Preventive Care-A Gamification System and Insights Raymund Lin, Xinxin Zhu

14:45-16:15

T10.03 - Support: Focus on Chronic Patients – ROOM Master

chaired by Jacob Hofdijk

14:45	Personalized Adherence Activity Recognition via Model-Driven Sensor Data Assessment Mark Hsiao, Pei-Yun Sabrina Hsueh, Sreeram Ramakrishnan
15:00	Model Driven Mobile Care for Patients with Type 1 Diabetes Stein Olav Skrøvseth, Eirik Årsand, Fred Godtliebsen, Ragnar M. Joakimsen

15:15	A Smartphone Application for Preventing Exercise-Induced Glycemic Imbalances in Type 1 Diabetic Patients Omar Vuattolo, Maria Pia Francescato, Vincenzo Della Mea, Agostino Accardo
15:30	An Android-Enabled Mobile Framework for Ensuring Quality of Life through Patient-Centric Care Vassiliki Koufi, Flora Malamateniou, George Vassilacopoulos
15:45	Utilization of Health-Enabling Technologies for Early Detection of Symptom Parameters of Addiction and Depression - Short communication (Oral) Nico Jähne-Raden
15:55	Supporting Self-Care and Collaboration in Stroke Care through Information and Communication Technology Nadia Davoody, Sabine Koch, Ingvar Krakau, Maria Hagglund -Short communication (Oral)

14:45-16:15

T03.03 - Guidelines and Collaborative Work – ROOM Pacinotti chaired by Stefan Schulz, John Mason	
14:45	Modeling Clinical Workflows Using Business Process Modeling Notation Syed Sibte Raza Abidi
15:00	Towards Collaborative Chronic Care Using a Clinical Guideline-Based Decision Support System Haifeng Liu, Jing Mei, Guotong Xie
15:15	openEHR-Based Representation of Guideline Compliance Data through the Example of Stroke Clinical Practice Guidelines Nadim Anani, Rong Chen, Sabine Koch, Tiago Prazeres Moreira
15:30	Accuracy of Clinical Data Entry when Using a Computerized Decision Support System: a Case Study with OncoDoc2 Brigitte Seroussi, Brigitte Blaszk-Jaulerry, Laurent Zelek, Jean-Pierre Lefranc, Rosa Conforti, Jean-Philippe Spano, Alexandra Rousseau, Jacques Bouaud
15:45	Eliciting Patient Patterns of Physician Non-Compliance with Breast Cancer Guidelines Using Formal Concept Analysis Jacques Bouaud, Nizar Messai, Cédric Laouenan, France Mentré, Brigitte Seroussi
16:00	Evidence-Based Electronic System to Ensure Quality of Care in Trauma Patients Vasiliki Mpletsa

14:45-16:15

T01.06 - Knowledge Representation 2 – ROOM B chaired by Christian Iovis	
14:45	Standard Based Multiclient Medical Data Visualization Georgy Kopanitsa
15:00	Patient Support ICT Tool for Hypertension Monitoring Morten Algy Bonderup, Pernille Heyckendorff, Stine Hangaard, Mette Dencker Johansen, Ole Hejlesen
15:15	RAVEL: Retrieval And Visualization in EElectronic Health Records Frantz Thiessard, Fleur Mouglin, Gayo Diallo, Vianney Jouhet, Sébastien Cossin, Nicolas

	Garcelon, Boris Campillo, Wassim Jouini, Julien Grosjean, Philippe Massari, Nicolas Griffon, Marie Dupuch, Fayssal Tayalati, Edwige Dugas, Antonio Balvet, Natalia Grabar, Suzanne Pereira, Bruno Frandji, Stefan Darmoni, Marc Cuggia
15:30	An Ontological Approach to Manage and Harmonize Document Types Frank Oemig, Bernd Blobel
15:45	Sonic Representation of Information: Application for Heart Rate Analysis George Mihalas, Sorin Paralescu, Nicoleta Mirica, Danina Muntean, Mircea Hancu, Anca Tudor, Minodora Andor Short communication (Oral)
15:55	Visualising Patient Data in Temporal or Non-Temporal Form A. Rosemary Tate, Natalia Beloff, Balques Al-Radwan, Adrian Bleach, Joss Wickson Short communication (Oral)

14:45-16:15

T06-WS: Safety and Data Quality – ROOM Auditorium	
Measuring and Comparing Data Quality in Electronic Health Care Records A. Rosemary Tate, Robert Verheij, Natalia Beloff, Tim Williams, Dipak Kalra	

14:45-16:15

T04-WS: Enhancing Research and Trials – ROOM Fermi	
Frameworks for Data Extraction and Management from Electronic Healthcare Databases for Multi-center Epidemiologic Studies: a Comparison among EU-ADR, MATRICE, and OMOP Strategies Rosa Gini, Massimo Coppola, Patrick Ryan, Giacomo Righetti, Iacopo Peri, Roberto Berni, Paul Avillach, Preciosa Coloma, Gianluca Trifirò, Gayo Diallo, Johan van der Lei, Miriam Sturkenboom, Martijn Schuemie	

14:45-18:15

TUTORIAL – ROOM A	
Advanced Security, Privacy and Trust for Personalized PervasiveHealth - Requirements, Principles and Available Specifications	
<p>Bernd Blobel, Pekka Ruotsalainen, Peter Pharow</p> <p><i>The tutorial is a joint offer of EFMI WGs “Security, Safety and Ethics (SSE)”, “Personal Portable Devices (PPD)”, and “Electronic Health Records (EHR)”. It addresses requirements and solutions for security, privacy and trust in the context of the health systems’ paradigm shift from organization centered and closed through process controlled and integrated up to the individualized health services delivery independent of time and location of actors and resources. The latter, also named personalized pervasive health is a policy driven cooperative services management under the control of the patient or even better the citizen before becoming a patient. The tutorial covers the different business environments and processes, the architectural framework for enabling such approach and the technological prerequisites such as mobile, pervasive and autonomous technologies. In the tutorial, relevant international and European standards and projects but also related national and regional activities will be presented and discussed. It aims at</i></p>	

providing a platform for information/discussion on legal, social, behavioral, organizational, and technical aspects/implications for trustworthy Health Telematics and Telemedicine. Taking the recent developments in European countries and beyond into account, personalized portable devices including cards will play an increasing role in providing IT-based health services. Such devices can allow for a better privacy and safety strategies, enabling new trust models. Thus, patients' and professionals' empowerment, involvement, and integration into treatment and care processes are keys to be addressed in this tutorial.

16:15 – 16:45 COFFEE BREAK

16:45-18:15

T09.02 - Distance Learning – ROOM Auditorium chaired by Arie Hasman, Carla Rognoni	
16:45	New Approaches to Linking Clinical Guidelines with Virtual Patients Andrzej Kononowicz, Inga Hege, Pawel Krawczyk, Nabil Zary
17:00	Virtual Patient Simulation: a Comparison of Two Approaches for Capacity Building in Sub-Saharan Africa Georges Bediang, Marc-André Raetzo, Antoine Geissbuhler
17:15	SIScaR-GPU: Fast Simulation and Visualization of Intraoperative Scattered Radiation to Support Radiation Protection Training Markus Wagner, Klaus Dresing, Wolfram Ludwig, Christoph Alexander Ahrens, Oliver Johannes Bott
17:30	Recommendation of Standardized Health Learning Contents using Archetypes and Semantic Web Technologies Maria del Carmen Legaz Garcia, Catalina Martinez-Costa, Marcos Menéndez-Tortosa, Jesualdo Tomas Fernandez-Breis
17:45	Towards a mLearning Training Solution to the Adoption of a CPOE System Despina Papakonstantinou, Mikaela Poulymenopoulou, Flora Malamateniou, George Vassilacopoulos
18:00	Criteria to Assess the Quality of Virtual Patients Inga Hege, Andrzej Kononowicz, Nabil Zary

16:45-18:15

T04.05 - Data Mining and Analysis – ROOM Fermi chaired by Lacramioara Stoicu-Tvadar, Jana Zvarova	
16:45	Automatic Extracting of Patient-related Attributes: Disease, Age, Gender and Race Huijia Zhu, Yuan Ni, Peng Cai, Feng Cao
17:00	Fine-Grained Clinical Outcome Extraction and Polarity Classification Peng Cai, Yuan Ni, Huijia Zhu, Feng Cao
17:15	Assessing the Feasibility of Data Mining Techniques for Early Liver Cancer Detection Alex Mu-Hsing Kuo
17:30	Estimating Rheumatoid Arthritis Activity with Infrared Image Analysis Monique Frize, Abiola Ogungbemile

17:45	Assessing the Clinical Uses of Fuzzy Detection Results in the Automated Detection of CVC-Related Infections: A Preliminary Report Jeroen de Bruin
18:00	A Semantic Model for Multimodal Data Mining in Healthcare Information Systems Dimitris Iakovidis, Christos Smailis

16:45-18:15

T01.07 - Information Storage and Retrieval 1 – ROOM B chaired by Anne Moen	
16:45	Development and Representation of Health Indicators with Thematic Maps Simona Dalle Carbonare, Carlo Cerra, Riccardo Bellazzi
17:00	Efficient Medical Information Retrieval in Encrypted Electronic Health Records Cédric Pruski, François Wisniewski
17:15	CliniQA : Highly Reliable Clinical Question Answering System Yuan Ni, Hui Jia Zhu, Peng Cai, Zhaoming Qiu, Feng Cao, Lei Zhang
17:30	The Use of Linked Registries to Assess Long-Term Mortality of ICU Patients Sylvia Brinkman, Evert de Jonge, Ameen Abu-Hanna, Dylan de Lange, Nicolette de Keizer
17:45	An Advanced Search Engine for Patent Analytics in Medicinal Chemistry Emilie Pasche, Julien Gobeill, Douglas Teodoro, Arnaud Gaudinat, Dina Vishnyakova, Christian Lovis, Patrick Ruch
18:00	Classification and Prioritization of Biomedical Literature for the Comparative Toxicogenomics Database Dina Vishnyakova, Emilie Pasche, Julien Gobeill, Arnaud Gaudinat, Christian Lovis, Patrick Ruch

16:45-18:15

Evaluation Working Group – ROOM Galilei	
Developing Quality Indicators for IT Interventions in Health Care Nicolette de Keizer, Elske Ammenwerth Working Group Workshop	

16:45-18:15

EFMI Invited Session: Quality in Selection of Papers – ROOM Master	
EFMI Invited Session: Quality in Selection of Papers Stig Kjær Andersen and others	

16:45-18:15

T03-WS: Empowering Patient-Provider Interaction – ROOM Pacinotti	
iCARDEA: An Intelligent Platform for Personalized Remote Monitoring of the Cardiac Patients with Electronic Implant Devices Asuman Dogac, Gökçe Banu Laleci Erturkmen, Yildiray Kabakb, Elif Eryilmaz, Catherine Chronaki, Stelios Sfakianakis, Yannis Petrakis, Robert Mulrenin, Mihai Radulescu, Andreas Thiel, Christian Lüpkes, Elena Arbelo, Albert Alonso, María Emilce Trucco, Lynne Hinterbuchner	

18:30 San Matteo National Museum and MIE2012 conference dinner at Villa Corliano

DETAILED PROGRAM - WEDNESDAY, August 29

08:30-9:10

Village of the Future: Round table – ROOM Auditorium

Discussing the results of the Village tracks:

Michael Rigby, School of Public Policy and Professional Practice, Keele University, United Kingdom

Christian Lovis, University Hospitals of Geneva, Switzerland

Lisette van Gemert – Pijnen, eHealth Research Center University of Twente, the Netherlands

Dipak Kalra, Centre for Health Informatics and Multi-professional Education UCL, London, UK

Jacob Hofdijk, Partner in Casemix, Utrecht, the Netherlands

09:15-10:45

T04.06 - Reuse of Data and Information – ROOM Fermi

chaired by George Mihalas, Roberto Berni

09:15	Reusable Data in Public Health Databases - Problems Encountered in Danish Children's Database Anna Marie Høstgaard, Louise Pape-Haugaard
09:30	Why is Clinical Information not Reused? Gert Galster
09:45	Secondary Use of Clinical Data in Healthcare Providers - an Overview on Research, Regulatory and Ethical Requirements Matthias Wiesenauer, Rainer Röhrig, Christian Johner
10:00	Evicase: An Evidence-Based Case Structuring Approach for Personalized Healthcare Boaz Carmeli, Ruty Rinott, Carmel Kent, Abigail Goldstein, Anna Goldbraich, Zeev Waks, Paolo Casali, Michele Torresani, Elena Sini, Nicola Restifo, Paolo Locatelli, Lisa Licitra
10:15	Standardizing Intensive Care Device Data to Enable Secondary Usages Josef Ingenerf, Ann-Kristin Kock, Marcel Peolker, Konrad Seidl, Georg Zeplin, Stefan Mersmann, Heinz Handels

09:15-10:45

T01.08 - Natural Language Processing – ROOM Galilei

chaired by Patrick Ruch, Mauro Giacomini

09:15	Linguistic Analysis of Large-Scale Medical Incident Reports for Patient Safety Katsuhide Fujita, Masanori Akiyama, Park Keunsik, Etsuko (Nakagami) Yamaguchi, Hiroyuki Furukawa
09:30	Grouping the Pharmacovigilance Terms with a Hybrid Approach Marie Dupuch, Laetitia Dupuch, Amandine Périnet, Hamon Thierry, Natalia Grabar
09:45	Information Extraction from SMS Text Related to a Reminder Service for Outpatients Stefania Rubrichi, Stéphanie Eku Ndam, Andrea Battistotti, Silvana Quaglini
10:00	Measuring Semantic Similarity Methods for Textual Mapping in Nursing Diagnoses in Spanish and SNOMED-CT Jorge Cruanes, María Teresa Romá-Ferri, Elena Lloret
10:15	Inventory of Tools for Dutch Clinical Language Processing Ronald Cornet, Nicolette de Keizer, Armand Van Eldik
10:30	Towards Using Literature-Based Discovery to Explain Drug Adverse Effects Dimitar Hristovski, Thomas Rindflesch, Anita Burgun, Paul Avillach - Short communication (Oral)

09:15-10:45

T06.02 - Security, Privacy, Ethics – ROOM Master chaired by Andrej Orel	
09:15	Recognition and Privacy Preservation of Paper-based Health Records Thomas Neubauer, Stefan Fenz, Johannes Heurix
09:30	EHR and Data Protection Issues in Italy Maria Vabriella Virone
09:45	Towards Human-Centric Visual Access Control for Clinical Data Management Sascha Fahl, Marian Harbach, Matthew Smith
10:00	Ontology-Based Log Content Extraction Engine for a Posteriori Security Control Hanieh Azkia, Nora Cuppens-Bouahia, Frédéric Cuppens, Gouenou Coatrieux
10:15	Watermarking as a Traceability Standard Catherine Quantin
10:30	Performance of XML Canonicalization of CDA Signed Documents in Large Archives Andrea Vanzin, Federica Sandri, Vincenzo Della Mea, Francesca Vanzo, Claudio Saccavini Short communication (Oral)

09:15-10:45

T03.04 – Telemedicine – ROOM Pacinotti chaired by Assa Reichert, Francesco Sicurello	
09:15	A Standardized Middleware as the Core of a Telemonitoring European Project Fabio Vergari, Roberta Gazzarata, Viola Parodi, Francesco Morandi, Simone Naso, Alessandra Arezza, Tullio Salmon Cinotti, Mauro Giacomini
09:30	Does Telecare Reduce the Number of Treatment Days? Masatsugu Tsuji, Yuji Akematsu
09:45	Establishing End-to-End-Security in a Nationwide Network for Telecooperation Martin Staemmler, Michael Walz, Gerald Weissner, Uwe Engelmann, Robert Weininger, Antonio Ernstberger, Johannes Sturm
10:00	Dicoogle Mobile: a Medical imaging Platform for Android Carlos Viana-Ferreira, Daniel Ferreira, Frederico Valente, Eriksson Monteiro, Carlos Costa, Jose Luis Oliveira
10:15	Mobile Access to Healthcare Monitoring Data for Patients and Medical Personnel Melanie Strasser, Emmanuel Helm, Andreas Schuler, Michael Fuschberger, Bernhard Altendorfer Short communication (Oral)
10:25	ICT-Tools to Facilitate Physician-to-physician-communication Philipp Neuhaus, Michael Storck, Maximilian Ataian, Timo Frett, Thomas Weber, Martin Dugas, Christian Juhra - Short communication (Oral)

09:15-10:45

T08-WS: Hints for Thinking – ROOM Auditorium	
International Perspectives on Health Information Systems and Technology Safety: Issues, Controversies and Challenges Elizabeth Borycki, Mowafa Househ, Andre Kushniruk, Christian Nøhr, Paul Turner	

09:15-10:45

T01-WS: Process, Information and data Models – ROOM B

Joint Workshop HL7-GS1: Information Exchange Standards Meet Supply Chain Standard
 Christian Hay, Anne Moen, Catherine Chronaki, Bernd Blobel, Charles Jaffe, Ulrike Kreysa

09:15-10:45

Computational Methods for Pharmacovigilance (I) meeting – ROOM A

10:45 – 11:15 COFFEE BREAK

11:15-12:45

T07.03 - Health and the Web – ROOM Auditorium

chaired by Celia Boyer, Fabrizio Pecoraro

11:15	Tracking Changes in Search Behaviour at a Health Web Site Ann-Marie Eklund
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11:30	Trustworthiness and Relevance in Web-Based Clinical Question Answering Sarah Cruchet, Lonneke van der Plas, Celia Boyer
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11:45	Finding Online Health-Related Information: Usability Issues of Health Portals Nergis A. Gurel Koybasi, Kursat Cagiltay
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12:00	How Medical Doctors and Students Should Use Social Miguel Angel Mayer, Angela Leis, Alex Mayer, Alejandro Rodriguez-González
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12:15	Ask the Doctor Service:A Qualitative Methodological Study Batami Sadan - Short communication (Oral)
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12:25	Privacy Pictograms for Health-Related Websites Samantha Adams, Marcello Aspria - Short communication (Oral)
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11:15-12:45

T01.10 - Reasoning and Decision Theory – ROOM Galilei

chaired by Riccardo Bellazzi, Bernd Blobel

11:15	Knowledge-Based Tacrolimus Therapy for Kidney Transplant Patients Walter Seeling
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11:30	Proposal of Diagnostic Process Model for Computer-Based Diagnosis Yasushi Matsumura, Toshihiro Takeda, Shiro Manabe, Hirokazu Saito, Kei Teramoto, Shigeki Kuwata, Naoki Mihara
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11:45	Characteristics of Patients at Risk for Adverse Drug Events: Designing for Patient Safety and Decision Support Elizabeth Borycki
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12:00	Clinical Diagnosis Support System Based on Case Based Fuzzy Cognitive Maps and Semantic Web Nassim Douali
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12:15	Decision Support in Trauma Management: Predicting Potential Cases of Ventilator Associated Pneumonia Adrian Pearl, David Bar-Or
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12:30	Comparing Drools and Ontology Reasoning Approaches for Telecardiology Decision Support Pascal van Hille
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11:15-12:45

T10.04 - Support: Focus on Nurses' Work – ROOM Master chaired by Parick Weber	
11:15	Development of Pain Flowsheet Based on Electronic Nursing Record System Jung Min Lee, Young Ah Kim , Hyunsoon Jung, Malsoon Song
11:30	Consistency of Nurses' Daily Predictions of Survival in the Intensive Care Lilian Minne, Dave Dongelmans, Evert de Jonge, Ameen Abu-Hanna
11:45	Achieving IT-Supported Standardized Nursing Documentation through Participatory Design Stine Loft Rasmussen
12:00	INCA - Individual Nomad Clinical Assistant - Supporting Nurses with Mobile Devices Frederic Ehrler, Christian Lovis, Evelyne Sarrey, Rolf Wipfli, Magali Walesa
12:15	Electronic Nursing Documentation in Paediatrics Hospital: Experiences with Modern Approaches Majda Oštir, Marinka Purkart, Anita Štih, Biljana Prinčič, Andrej Orel
12:30	ICNP Catalogues for Supporting Nursing Content in Electronic Health Records Amy Coenen, Tae Youn Kim, Claudia Bartz, Kay Jansen, Nicholas Hardiker

11:15-12:45

T06.03 - Patients' Safety – ROOM Pacinotti chaired by Gunnar Klein, Lucilla Frattura	
11:15	Implementation of Computerized Physician Order Entry (CPOE) with Clinical Decision Support (CDS) Features in Riyadh Hospitals to Improve Quality of Information Mariam Al-Mutairi, Rana Alseghayir, Anwar Al-Alshikh, Hayat Arafah, Mowafa Househ
11:30	Identifying Types and Causes of Errors in Mortality Data in a Clinical Registry using Multiple Information Systems Antonie Koetsier, Niels Peek, Nicolette de Keizer
11:45	A Statistics-Based Approach of Contextualization for Adverse Drug Events Detection and Prevention Emmanuel Chazard, Stéphanie Bernonville, Grégoire Ficheur, Regis Beuscart
12:00	Information-Based Sequential Selection of Clinical Tests in Risk Assessment Naama Parush, Tal El-Hay, Michal Ozery-Flato, Ligita Ryliskyte, Zydruone Visockiene, Aleksandras Laucevicius
12:15	Using EHR Data for Monitoring and Promoting Patient Safety: Reviewing the Evidence on Trigger Tools Persephone Doupi
12:30	Detecting and Classifying Technology-Induced Error in the Transmission of Healthcare Data Andre Kushniruk, Elizabeth Borycki, Joe Surich Short communication (Oral)

11:15-12:45

T01.09 - Information Storage and Retrieval 2 – ROOM B chaired by Ronald Cornet	
11:15	Flexible Solution for Interoperable Cloud Healthcare Systems Mihaela Vida, Lacramioara Stoicu-Tivadar, Oana Lupse
11:30	Coupling K-Nearest Neighbors with Logistic Regression in Case-Based Reasoning Boris Campillo-Gimenez, Marc Cuggia, Sahar Bayat
11:45	A "meta"-Perspective on "bit rot" of Biomedical Research Data Frank Dickmann
12:00	A Semantic Approach for Digital Long-Term Preservation of Electronic Health Documents Stephan Kiefer, Michael Schaefer, Jochen Rauch
12:15	Automated Realtime Data Import for the i2b2 Clinical Data Warehouse: Introducing the HL7 ETL Cell Raphael W Majeed, Rainer Röhrig
12:30	TEDIS, Pervasive Developmental Disorder' Patients Information System, Preliminary Results Mohamed Ben Said, Laurence Robel, Marie Pellegrin-Touati, Bernard Golse, Jean Philippe Jais, Paul Landais

11:15-12:45

T04-WS: Education – ROOM Fermi	
Free/Libre Open Source Software in Medical Informatics Research and Education Thomas Karopka, John Mantas, Arie Hasman, Ricardo Cruz-Correia, Christian Lovis, Holger Schmuhl, Björn Bergh	

11:15-12:45

Computational Methods for Pharmacovigilance (II) meeting – ROOM A	
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12:45-13:15 LUNCH

13:15-13:45

ROOM Auditorium Closing Ceremony	
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POSTER SESSIONS

POSTER SESSION A - GALLERY

MONDAY 13:00-14:00

Poster tour 01 - Focus on Methodologies 1 chaired by Bernd Blobel
Describing the Sublanguage of Wound Care in an Adult ICU Riitta Danielsson-Ojala, Heljä Lundgren-Laine, Sanna Salanterä
A System-Theoretical, Architecture-Based Approach to Ontology Management Bernd Blobel, Mathias Brochhausen, Carolina Gonzalez Serrano, Diego Lopez, Frank Oemig
Semantic Enrichment of Medical Forms' Semi-Automated Coding of ODM-Elements via Web Services Bernhard Breil, Andreas Watermann, Peter Haas, Philipp Bruland, Martin Dugas
Characteristics of Health Interventions: A Systematic Analysis of the Austrian Procedure Catalogue Sabrina Barbara Neururer, Karl-Peter Pfeiffer
Developing a Patient Education Method - The e-Knowledge Test with Feedback Mervi Siekkinen, Helena Leino-Kilpi
Representing Clinical Communication Knowledge through Database Management System Integration Saif Khairat

Poster tour 02 - Focus on Methodologies 2 chaired by Andrej Orel
A Method for Conducting Requirements Analyses for Research and Quality Improvement Studies Using Routinely Collected Health Data: a Model Driven Approach Simon de Lusignan
Ultradian Rhythms During Day and Night in Normal and COPD Subjects Agostino Accardo, Monica Cusenza, Alberto De Felice, Giovanni D'Addio
Statistical Disclosure Limitation of Health Data Based on Pk-Anonymity Eizen Kimura
Collaborative Development of Knowledge-Based Support Systems: A Case Study Helena Lindgren, Patrik J Winnberg, Chunli Yan
Classification of Ischaemic Episodes with ST/HR Diagrams Matjaz Kukar, Jana Faganeli Pucer
Integration of Data Analysis Methods in Syndromic Surveillance Systems Dimitris Zikos, John Mantas

Poster tour 03 - Focus on Applications 1 chaired by Christian Lovis
A Literature Overview and Comparison of Driving Impairing Condition Assessment Approaches by Health Enabling Technologies Nina Reichwaldt, Susanne Maslak, Klaus-Hendrik Wolf, Reinhold Haux
Psychological Evaluation of 24-hour Home Nursing Care: the Application of an Analytic Hierarchy Process to Improve the Quality of Life Takeo Shibata
CARDIO-i2b2: Integrating Arrhythmogenic Disease Data in i2b2 Daniele Segagni, Riccardo Bellazzi

IT as an Enabler of Sustainable Use of Data from Innovative Technical Components for Assisted Living Petra Knaup
IT Behind a Platform for Translational Cancer Research - Concept and Objectives Michael Steffens, Gabriele Husmann, Mithat Koca, Martin Lablans, Martina Komor, Sylke Zeissig, Katharina Emrich, Christian Brandts, Hubert Serve, Maria Blettner, Frank Ückert
Impact of Computerized Order Sets on Practitioner Performance Leila Ahmadian, Reza Khajouei

Poster tour 04 - Focus on Applications 2 chaired by Etienne De Clercq
Pluripotent Stem Cells in Mice Rainer Schmidt
A Clinical Research Analytics Toolkit for Cohort Study Yiqin Yu, Yu Zhu, Xingzhi Sun, Ying Tao, Shuo Zhang, Linhao Xu, Yue Pan
First Experiences in Implementing a Software-Based Support for Patient Recruitment at Heidelberg University Hospital Björn Schreibeis, Günter Grüber, Björn Bergh
An Encapsulated R Application for the Guided Analysis of Genomic Data Matthias Ganzinger, Miriam Kesselmeier, Jasmin Fabian, Petra Knaup
Translational Meta-Analysis Tool for Temporal Gene Expression Profiles Guenter Tusch, Olvi Tole
Medical Students and eHealth Mira Hercigonja-Szekeres, Vesna Ilakovac, Krešimir Šolić
Multiple Disciplines Synergy Tools for Ph.D. Students of Biomedical Informatics at Charles University in Prague Jana Zvarova, Stepan Svacina, Tatjana Dostalova, Michaela Seydlova, Karel Zvara

Poster tour 05 - Focus on Methodologies 1 (short communications) chaired by Anna Alloni
Barriers to the Adoption of Health Information Technology in Arab Countries' Hospitals: Practitioners' Perspective Yaseen Hayajneh, Ashraf Zaghloul
Developing an Ontology for Data Duality in Chronic Disease Management Ali Rahimi, Siaw-Teng Liaw, Prdeep Kumar Ray, Jane Taggart, Hairong Yu
IT Technologies to Reduce the Rate of Missed Appointments in the Outpatients. Humberto Mandirola, Sebastian Guillen, Pablo Laguzzi
The Role of Unstructured Data in Gait Analysis Vladimir Ergovic
The Role of Mathematical Modeling in Adopting the LuMiR System in Basilicata Region Oscar Tamburis, Fabrizio Ricci
Breast Centres Network Paolo Ferroni, Francesca Marangoni, Emanuela Garlaschelli, Carlos A. Garcia-Etienne
Informatics Support for Healthy Eating - Implications for Quality of Life Anne Moen, Kirsten Djøseland Røland, Gro Hilde Wensaas
User-Centered Design for Patients with Low Digital Literacy Emilija Stojmenova, Dejan Dinevski

A Curated Index of High-Quality Web Resources for Medical Practitioners Matthias Samwald, Marlene Kritz, Manfred Gschwandtner, Allan Hanbury
Preprocessing Mining In Congenital Malformation Database Rosa Cedeno

POSTER SESSION B - GALLERY

TUESDAY 13:00-14:00

Poster tour 06 - Focus on Applications 3 chaired by John Mantas
CAMIQ: A Composite Index of Information Quality in Complementary and Alternative Medicine Web Sites Federico Cabitza
Patient Satisfaction in a Context-Aware Hospital Guidance System Eunhye Kim
Concise Healthcare-Associated Infection Reporting and Benchmarking with Minimal Staff Resources Walter Koller, Jeroen de Bruin, Alexander Blacky, Harald Mandl, Klaus-Peter Adlassnig
Developing an eLearning Tool Formalizing in YAWL the Guidelines Used in a Transfusion Medicine Service Paola Russo, Miriam Piazza, Giorgio Leonardi, Layla Roncoroni, Carlo Russo, Salvatore Spadaro, Silvana Quaglini
E-learning for Neurological Bladder Management Gabiella Fizzotti, Carla Rognoni, Caterina Pistarini, M.Cristina Mazzoleni
Patient Empowerment in the Process of Sickness Certificates Gunnar O Klein, Kjell Andersson

Poster tour 07 - Focus on Applications 4 chaired by Brigitte Seroussi
Design of a Computerized Provider Order Entry System for Ordering of Chemotherapy SunHee Lee, Sooyoung Yoo, Seok Kim
ICF Machine: a Web-Based System for Collection of ICF Data Vincenzo Della Mea, Valerio Fioresi
A Special Query Tool in the Hospital Information System to Recognize Patients and to Increase Patient Numbers for Clinical Trials Mithat Koca, Gabriele Husmann, Juergen Jesgarz
Onco Alerts' to Support Acute Oncology Services Thomas Poulter, Peter Bath
Promoting Generic Medication Prescribing by Order Interface Redesign: Small Change, Large Impact Sameer Malhotra
Development and Evaluation of an Expert System for the Diagnosis of Child Autism Pashalina Lialiou

Poster tour 08 - Focus on Applications 5 chaired by Cristina Mazzoleni
Study of Iranian Breast Cancer Registration via Established Online System during 2011 Mohammad Zare, Sholeh Zakiani, Amir Zare

MInD: Moving in the Dark Alessandro Pepino, Marcella Rovani, Gerry Sicignano, Giovanni D'Addio
Development of an Information Model and Clinical Practice Guideline-Based Electronic Nursing Record System Hyeoun-Ae Park, Yul Ha Min
Clinical Decision Support for Monitoring Drug-Drug-Interactions and Potassium-Increasing Drug Combinations: Need for Specific Alerts Emmanuel Eschmann, Patrick Emanuel Beeler, Vladimir Kaplan, Markus Schneemann, Gregor Zünd, Jürg Blaser
Formative Usability Evaluation of a Web-Based Insulin Self-Titration System: Preliminary Results Wouter Gude, Airin Simon, Linda Peute, Niels Peek, Monique Jaspers
Decision Support System Based Semantic Web for Personalized Patient Care Nassim Douali

Poster tour 09 - Focus on Applications 6 chaired by Stefan Darmoni
Clinicians' Experiences with Videoconferencing in Psychiatry Rolf Wynn, Svein Bergvik, Gunn Pettersen, Sturla Fossum
A Way to Motivate Danish GPs to Implement a New National Service Alice Kristensen, Bente Wengler
Development and Management of National Health Education System for Emerging Infectious Diseases Myungja Koh, Parvati Dev, Eun Jung Lee, Byung-Ki Koo, Kyung-Oak Lee, Kukhwa Ha, Heesun Yang, Gilwon Kang, Youngsung Lee
An Example of a Multi-Professional Process-Oriented Structured Documentation Bound to SNOMED CT Carina Zetterberg, Bengt Kron
Pharmaceutical Validation of Medication Orders Using an OWL Ontology and Business Rules Amina Chniti, Abdelali Boussadi
Trend Analysis and Future Development of Taiwan Electronic Medical Record Wan-Chi Ke, Hung-Wen Chiu

Poster tour 10 - Focus on Applications 1 (short communications) chaired by George Mihalas
Mature Personal Health Record for the Empowered Consumer Wesley Rohrer, Mowafa Househ
The Use of Virtual Desktop Infrastructure for Patient Care and its Effects on Patient Satisfaction Sooyoung Yoo, Seok Kim
Electronic Health Record and Continuum of Care: the Case of Schizophrenia Christo El Morr, Tania Bostock
Implementing Business Intelligence to Assist Decision Making in Healthcare: A Case of a Regional Taiwanese Hospital Hao-Yun Kao, Wen-Hsiung Wu, King-Teh Lee
SAĞLIK-NET-NET Project in Turkey and HL7 v3 Implementation Paola Di Giacomo
Open Medical Data Models: A Prototype of an Exchange Platform for Medical Forms Martin Dugas, Bernhard Breil

A Query Tool for an Electronic Data Capture Patient Registry Software System Doris Lindörfer, Thomas Müller
Visual Analytics to Support Medical Decision-Making Process Samar Al-Hajj, Dr. Ian Pike, Dr. Brian Fisher
Poster tour 11 - Focus on Applications 2 (short communications) chaired by Jacob Hofdijk
Islamic E-Health: Definition, Applications, and Challenges Mowafa Househ
Preventing Boredom, Fatigue and Stress during Computer-Based Cognitive Rehabilitation Anna Alloni, Silvia Panzarasa, Giorgio Sandrini, Elena Sinforiani, Chiara Zucchella, Silvana Quaglino
Monitoring Patients' Enrolment and Performance Indicators in a Web Stroke Register Silvana Quaglino, Giordano Lanzola, Enea Parimbelli, Anna Cavallini, Elena Tartara, Giuseppe Micieli
Towards a Systematic Structuring of MEDLINE Abstracts Mikaela Keller, Natalia Grabar
Designing Templates of Clinical Documents to be Suitable for Care, Reimbursement and Research Vytenis Punys
Standardized Electronic Emergency Report for iOS Devices Markus Birkle, Benjamin Schneider, Peter Moll, Björn Bergh
e-ESO Francesca Marangoni, Walter Moscatelli, Fortunato Ramundo, Corinne Hall

DIST (University of Genoa)



Department of Communication, Computer and System Sciences (DIST)

The Bioengineering and Medical Informatics Laboratory (MEDINFO) at the Department of Communication Computer and System Sciences (DIST), University of Genova has been active for many years in several bioengineering fields, such as: medical and biological informatics; molecular and cellular engineering, protein structure determination, biomedical modelling. With special reference to biomedical informatics its work relates to medical knowledge based systems, multimedia data-bases and decision support systems, knowledge modelling for automatic reasoning and information retrieval.

The research team consists of 2 senior researchers (Prof. C. Ruggiero and Prof. M. Giacomini), 3 PhD students and some graduate students. The laboratory has participated to some EU funded projects. Specifically it has participated to the EPIC project, within the AIM programme of the Third Framework; to the following projects of the IV Framework: Bioartificial Organ and Tissues (Biomed 2); CONQUEST and ECOLE/GRIP (ACTION cluster, Telematics Applications); Advanced technology in image analysis for telemedicine (LEONARDO); BREAK-IT (Info 2000); and to the following projects of the V Framework: BITES and NEURAL TISSUE (Life), PLANT (Culture 2000), ADHESTOP (Competitive and Sustainable Growth Program), ASIARESIST (INCO DEV 1999). In the VI Framework we are participating to TASNANO (Nanotechnology and nanosciences), to CARDIOWORKBENCH (Life Sciences, Genomics And Biotechnology For Health) and to TRANSFOG (Life Sciences, Genomics And Biotechnology For Health). In the VII Framework we are participating to: EATRIS (European Advanced Translational Research Infrastructure in Medicine) as Italian Experts on Standards in translational data management, TRAIN (Training through Research Application Italian Initiative), CHIRON (Cyclic and person-centric Health management)

UNIVERSITY OF PAVIA

Laboratory for Biomedical Informatics “Mario Stefanelli” - BMI



Mobiguide: Guiding Patients Anytime Everywhere
Silvana Quaglini – silvana.quaglini@unipv.it



The Biomedical Informatics Laboratory “Mario Stefanelli” (BMI) belongs to the Department of Industrial and Communication Engineering (Faculty of Engineering) of the University of Pavia, one of the oldest universities in Europe and the oldest one in Lombardy. Created by Prof. Mario Stefanelli in 1982 and today directed by Prof. Riccardo Bellazzi, BMI is presently an important center both for training and for research and development of innovative ICT (Information & Communication Technologies) applications in the health care domain.

Nowadays about thirty people are working at BMI, focusing their activity on two different research areas: Bioinformatics/Data Mining and Medical Informatics.

POLITECNICO DI MILANO e-Health Lab



**POLITECNICO
DI MILANO**
**DIPARTIMENTO DI
BIOINGEGNERIA**



In the scenario of the Department of Bioengineering at the Politecnico di Milano technical University, the eHealth Lab activities focus on the analysis and development of several ICT-based solutions to support patients, caregivers, healthcare professionals, and all the other stakeholders of the healthcare setting. The current research areas include:

- The design and the development of mobile technologies for personalized health informatics;
- The investigation of health lexicons and ontologies for the family environment;
- The application of avatars for health and medicine;
- The process modeling for medicine and healthcare; and
- The implementation of data mining algorithms for clinical applications.

The skills and the knowledge available in the Lab allow to follow an approach based on environment analysis, process definition, process modelling, product design, and prototype development. The e-Health Lab serves also as scientific advisor to the public providers of ICT-based solutions on e-Health standard implementation. Among recent achievements:

- Historia Medica Familiae Digitalis personal mobile suite: a mobile system for the management of health-related documents, images, and drug therapies in the multigenerational family environment;
- The Lexicon camera: a basic tool for the definition of the family medical lexicon;
- Ages of life: a series of ontologies for geriatrics, pediatrics, newborns, and first aid emergency.

The activities of the eHealth Lab are supported by the patronage of several Italian Institutions, including The Italian Ministry of Health, some Italian regional governments, and many clinical and technological scientific societies in the field of medicine and e-Health.



National Council of Research (CNR)

- CNR IFC



The Institute of Clinical Physiology (IFC) is the largest biomedical institute of the CNR's Department of Biomedical Science. The multidisciplinary approach of IFC is centered on the patient and based on truly integrated milieu of medical, epidemiology, bioengineering, physics, informatics, chemistry and genetic researchers. The cultural infrastructure of the IFC is organized into four main areas of knowledge: clinical physiopathology, biomedicine, technoscience and epidemiology. At IFC today these topics can be studied in an integrated course of action that covers mechanisms of disease at the cellular and molecular levels,

bioengineering and mathematical modelling, as well as experimental, clinical and epidemiological aspects, with constant attention to patient welfare and supported by state-of-art technology. Its mission has remained unswerving over the years and can be summarized in the formula "Innovation For better patient Care". In e-health research field, IFC investigates the physiological processes through the provision of continuous and personalised healthcare designing new biomedical research methodologies focusing on multi-parametric real-time body monitoring systems, intelligent processing and physiological modeling. IFC combines the monitoring of health parameters, as physiological, behavioural and cardiovascular clues, vital body signs and biomarkers, and the patients' social and environmental context with expert biomedical knowledge assisting in prevention, diagnosis, treatment and rehabilitation.

- CNR IIT



The Institute for Informatics and Telematics (IIT) of CNR carries out research, development, technology transfer and training in the field of Information and Communication Technologies and of Computational Sciences. In line with the strategy of the EU Framework Programmes, IIT very naturally and clearly has its sights set on the Internet of the Future.

In IIT, research and applications are integrated synergically, promoting the development of added value services for the Internet of the Future. This approach contributes substantially to the self-funding of the research activities carried out by the institute.

The number and quality of IIT scientific publications, along with its participation in relevant research projects at European and international levels, testify to the pre-eminent role assumed by IIT in research and development areas such as the "Internet of things" and "Internet of services". These range from high speed, mobile and pervasive telematic networks, to issues of security and privacy, to innovative Web technologies, and also include new ICT issues relating to Internet governance.

IIT, through the Registry .it, is responsible for managing dot .it Internet domains, a crucial activity for spreading Internet culture in Italy.

Institute for Informatics and Telematics (IIT)

CNR - Italian National Research Council

Director: Dr. Domenico Laforenza

Director Secretariat: segreteria@iit.cnr.it

Scientific secretariat: segreteria-scientifica@iit.cnr.it

<http://www.iit.cnr.it>

- CNR ICAR



The Institute for High Performance Computing and Networking (ICAR) is an ICT institute part of the National Research Council of Italy (CNR). Its mission is to carry out, promote, spread, transfer and improve research activities in all sectors of knowledge growth and to develop pre-competitive applications. CNR-ICAR conducts basic and applies research to advancing knowledge, to defining novel methodologies and tools and to developing innovative applications in the areas of High Performance Computing and Networking and of Intelligent and Pervasive Systems with Complex Functionalities. In addition to its research activities, the CNR-ICAR institute carries out educational and training activities, through scholarships and research fellowships, advanced post-graduate specialization courses.

- CNR ISTI



The Institute of Information Science and Technologies “A. Faedo” (ISTI) is an institute of the National Research Council of Italy (CNR). The Institute is committed to producing scientific excellence and to playing an active role in technology transfer. The domain of competence covers Information Science, related technologies and a wide range of applications. The activity of the Institute aims at increasing knowledge, developing and testing new ideas and widening the application areas. ISTI is actively involved in collaborations with the academic world and in cooperative research and development programs, both national and international. The organization of the research work is aimed at stimulating flexibility and reactivity. The backbone of this organization is constituted by Research Laboratories and Technology Centers.

- CNR SI-LAB



The “Signals & Images” Lab is working in the fields of signal acquisition and processing, image understanding and artificial vision, high performance and distributed computing, real-time data collection

and transmission. The general goal of the Lab is to increase the knowledge in the above mentioned fields, in both theoretical and applicative contexts. This is achieved by studying and developing models, computer-based methods and machines for the formation, elaboration, analysis and recognition of images and signals, and by applying these methods and techniques to several sectors of the public and private society having strategic, scientific and technological interests. Around thirty people are working at the SI Lab, both researchers and technologists and engineers, covering expertise in computers science, engineering, physics and mathematics. The lab aims at developing its activities dynamically, fully becoming a part of the national and international, academic and industrial network in the field of automated vision and information technologies.

- CNR Laboratorio virtuale di sanità elettronica (LAVSE) Virtual Lab for e-health

Research topics

Governance of the healthcare network; information aspects in the healthcare planning and in the relationship with the environment; organizational process engineering and pervasive healthcare; information system conceptual modelling to support new healthcare delivery methods; study of semantic aspects of clinical documentation; modelling of processes, information flows and documents, considering in particular the clinical trial context; methods and tools to manage and disseminate the scientific knowledge and the clinical results; analysis of phenomena related to social and demographic behaviour in relation to demand/supply of health services; development of clinical data standards and methods to exchange these information; translational research; research integrity and accountability in healthcare; individual rights; medical ethics, deontology and biolaw; bioethical profiles.

Venue: IASI – CNR

viale Manzoni 30, 00185 Roma, Italy

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epSOS



epSOS is the European electronic Health ("eHealth") interoperability project co-funded by the European Commission and the project partners. It focuses on improving medical treatment of citizens while abroad by providing health professionals with the necessary patient data in a secure electronic format. In particular, epSOS aims to offer seamless healthcare to European citizens by building and evaluating a service infrastructure

<http://www.epsos.eu/news-press/press-section.html>

Khresmoi



Khresmoi is an FP7 Integrated Project that is developing a multilingual multimodal search and access system for medical and health information and documents. This is being done by: effective automated information extraction from documents; automated analysis and indexing for medical images in 2D (X-Rays), 3D (MRI, CT), and 4D (MRI with a time component); linking information extracted from unstructured or semi-structured biomedical texts and images to structured information in knowledge bases; supporting of cross-language search; and through the use of adaptive user interfaces. The research is flowing into several open source components, which are being integrated into an innovative open architecture for robust and scalable medical and health information search. Khresmoi is focussing on use cases for three groups of end users: members of the general public; clinicians and physicians; and radiologists, with the latter being a subset of physicians with particularly demanding image search requirements. More information can be found on <http://khresmoi.eu>

Hospital Italiano de Buenos Aires, Argentina



Address: Juan D. Perón 4190 (C1181ACH) Buenos Aires, Argentina

The Hospital Italiano de Buenos Aires (HIBA) is a health center that offers care over 40 medical specialties, The Hospital's health insurance system has over 150,000 members, who receive medical care at all stages of life.

Its two-hospital network has an inpatient capacity of 750 beds, as well as outpatient Medical Centers located in the City of Buenos Aires and its surrounding suburbs. In 1998, HIBA began to implement a Healthcare Information System (HIS) that was completely developed in-house and currently collects and leverages clinical and administration information. The multimedia electronic health record (EHR) is permanently available to the Hospital's professional staff, ensuring immediate access to records and offering patients the highest security regarding their healthcare. A Personal Health Record (PHR) acts as a communication channel between patients and the Hospital.

In the Medical Informatics educational domain HIBA started a medical residency program in 2000 and was awarded national educational accreditation. More than 20 residents have been fully trained since then. The e-learning courses related to medical informatics started in 2006 and were followed by more than 1000 students from all over the world.

Danish Centre for Health Informatics



Danish Centre for Health Informatics at Aalborg University contributes to research and understanding of interrelationship between health problems, the organisation of the health system and information technology. The centre provides an interdisciplinary understanding of health informatics and networks researchers from four Departments: Health Science and Technology, Development and Planning, Communication and Psychology, and Business and Management.

The main research fields are: user interface and usability; technology assessment and implementation; organisation and management; decision support systems; clinical information systems, and EHR; user driven innovation; clinical work practice; patient safety

The centre is engaged in networking knowledge and research flow between university, industry and clinic.

Danish Centre for Health Informatics

Aalborg University, Vestre Havnepromenade 5, 1. Sal, DK-9000 Aalborg

E-mail: info@dachi.dk

www.dachi.dk

iCARDEA



iCARDEA- An Intelligent Platform for Personalized Remote Monitoring of the Cardiac Patients with Electronic Implant Devices

The EU co-funded iCARDEA Project exposes CIED data through standard interfaces for developing an intelligent platform to semi-automate the follow-up of CIED patients with context-aware, adaptable computer interpretable clinical guideline models. The CIED is exposed through standard interfaces based on the HL7, ISO/IEEE 11073 standards and the IHE IDCO Profile. Interoperability with EHR Systems is

achieved by exposing legacy EHR systems through standard HL7 CDA interfaces in conformance to IHE Care Management Profile so that information about patients' medical history can be obtained from the patient EHR data and used in the clinical follow-up workflow. The patients are empowered with Personal Health Records (PHR) to enable informed and responsible participation in the care process.

Software Research and Development and Consultancy Ltd. (SRDC), Turkey

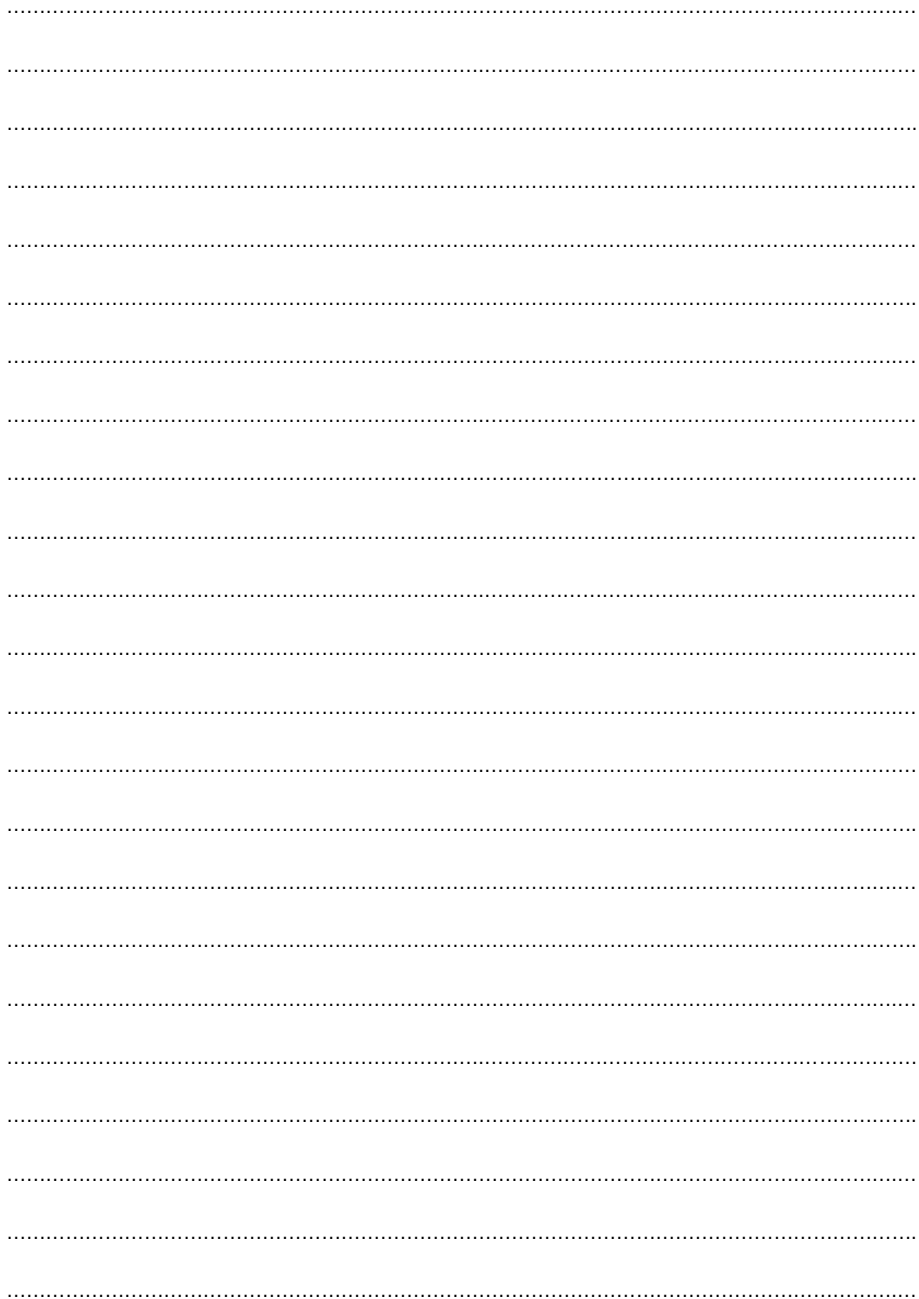
SRDC Ltd. (www.srdc.com.tr) is a spin-off company of the Middle East Technical University, Software Research and Development Center, located in the METU's techno park. SRDC enjoys strong backing from METU for transferring the RTD efforts of the university to the industry and the government. The company has extensive expertise in large scale software development, eHealth, eBusiness, Interoperability Standards and Internet technologies.

SMARTEX



Smartex was founded in 1999 to exploit new findings in the field of "smart materials" with the aim to develop innovative solutions and products answering the need of innovation and hi-tech transfer processes towards the textile world. The main field of activity became the so-called "E-textile". Leveraging the disparate materials, technologies and techniques available within the established electronics and textile industries is leading to a totally new class of large-area, flexible, conformable informative/interactive systems; essential instrumental functions (power supply, sensor, actuator, processor) can be implemented onto fabric substrates, where the sensitive function is due to woven smart materials. Electronic textile can be defined as fabrics where sensor function, electronics and interconnections are woven into them. Multifunctional electronic textiles give to the traditional textile industry a new added value represented by the possibility to make daily life more healthy, safe and comfortable, bringing technological achievements closer to the public, through the realisation of easy-to-use interfaces between humans and devices. The fabrication of such multifunctional interactive fabrics, flexible and conformable to the human body, represents a potential important tool to promote progress, sustainable development and competitiveness in several disciplines, such as: health monitoring, health promotion and disease detection and prevention, rehabilitation, health assistance like disability compensation for higher quality of life, sport medicine.

Several research activities are carried out in collaboration with the "Centro Interdipartimentale "Enrico Piaggio" of the University of Pisa, in the same shared laboratory hosted in the "Polo Scientifico e Tecnologico" of Navacchio.



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