WELCOME to medinfo2013 in wonderful COPENHAGEN, DENMARK, august 20 – 23 2013 at Bella Center

PROGRAM

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IMIA
International Medical Informatics Association

Dansk Selskab for Medicinsk Informatik

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Welcome message from IMIA President

It is with great pleasure and pride that I welcome you to Medinfo 2013, the 14th World Congress on Medical and Health Informatics.

Organised by the Danish Society of Medical Informatics, the conference will gather researchers and practitioners from all around the world in Copenhagen, the capital of Denmark and an important harbour for thousand years: without doubt a great place to trade knowledge and experiences in the field of health informatics, with a global perspective reaching beyond the horizon.

As the theme of the conference teasingly puts it, this edition of Medinfo is about Conducting medical informatics by Converging technologies, Conveying sciences and Connecting people. It is about leaders of the community charting the way forwards in the current challenging seas, about understanding how to blend diverse and advanced tools and techniques to provide better science and better services, about acquiring, sharing and disseminating state of the art knowledge, and about fostering useful synergies between people through smart information systems.

Medinfo is one of the flagship activities of the International Medical Informatics Association, and serves as an excellent vehicle to implement its core mission: bringing together, from a global perspective, scientists, researchers, vendors, consultants and suppliers in an environment of cooperation and sharing.

It represents a huge effort and dedication by numerous members of our community. I want to particularly acknowledge the Local Organizing Committee and its chair, Lene Vistisen, and co-chair, Knut Bernstein; the Scientific Program Committee and its co-chairs, Tze-Yun Leong and Dominik Aronsky; the Editorial Committee and its chair, Chris Lehmann, as well as the IMIA Vice-President for Medinfo, Riccardo Bellazzi, and IMIA’s CEO, Peter Murray.

The strength, success and standing of Medinfo is the result of the participation and commitment of our global medical informatics community, through quality scientific contributions, panels, workshops and tutorials, through business meetings of working groups, as well as unplanned gatherings and leasurly get-togethers, all fostering our shared values of excellence, conviviality, broadmindedness, inclusiveness, and diversity.

Be a part of the stimulation, excitement and fun of Medinfo 2013 in beautiful Copenhagen!

Prof. Antoine Geissbuhler, MD
Geneva University and Hospitals
President (2010-2013) of the International Medical Informatics Association

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Welcome message from DSMI President

Danish Society of Medical Informatics welcomes you to medinfo 2013. It is a dream come true. DSMI sent its first bid to host medinfo in 2006. Our vision was and is to strengthen cooperation nationally and internationally. Now it is a reality - Copenhagen hosts more than 1100 participants this August.

We have looked forward to this opportunity to share the latest knowledge in the field of e-Health. The topic of medinfo2013 will address the challenges we foresee to continue in:

Conducting medical informatics by Converging technologies, Conveying sciences and Connecting people

The Danish Society of Medical Informatics believes there is something of interest to all participants in the extensive and broad program and in the exhibition area. We think that medinfo 2013 has reached a good balance between research and more application-oriented activities; and we hope you will find this set-up interesting and inspiring.

The Danish Society of Medical Informatics has co-operated closely with the Local Organising Committee, LOC, to provide optimal conditions for all participants from user to supplier to share knowledge and information about informatics in health care. We hope that you being participant, contributor, exhibitor or sponsor will expand and enrich your professional network and contribute to make this event memorable and enjoyable as it is you who create the content of the conference.

Danish Society of Medical Informatics look forward to host the conference and look forward to be seeing all our ideas and thoughts become reality and our hope is that we have managed to create a framework in order to give everyone the opportunity to experience an exciting and rewarding conference.

We wish you all a warm welcome to medinfo 2013.

President of Danish Society of Medical Informatics
Christina Silseth Bartholdy
About the Danish Society of Medical Informatics

The Danish Society of Medical Informatics (DSMI) was established in 1966 and the society joined IMIA in 1980. DSMI is an independent society with an associated status to the Danish Medical Societies. The aim of the society is to compile and disseminate theoretical and practical knowledge in medical informatics, and to stimulate research and the use of IT-based information systems in health care.

Currently the number of members is 220 personal members and 26 enterprise members counting for additionally approx. 1500 interested persons as the members include all five regions in Denmark and the national authorities responsible for national registries and classifications, and institutions working to improve the digital infrastructure within healthcare. Furthermore 6 large hospitals and 11 IT- and consultancy-vendors are enterprise members, including all the major health IT-vendors operating in Denmark. The composition of the personal members is 30% clinicians (doctors, nurses and physical therapists), 10% academics and 60% others (administrators, consultants, project leaders, IT-vendors).

DSMI organizes meetings and seminars for members to share knowledge and establish networks. The society hosts a website (www.dsmi.dk) to support dissemination of information and co-operates nationally and internationally to strengthen the field of medical informatics.

Until now the largest medical informatics meeting arranged by DSMI was Medical Informatics Europe 96 in Copenhagen with more than 1000 attendees from all over the world. We are proud to say that medinfo 2013 is the largest event arranged by DSMI, and we are looking forward to host this high quality world congress in Copenhagen.

DSMI Board Members

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Welcome message from the Scientific Program Committee Co-Chairs

Recent natural disasters, emerging epidemics, changing demographics, volatile economics, and dwindling resources have called for collective and collaborative efforts to address the new and evolving challenges in health care and biomedicine. The conference theme of Medinfo 2013 – “Conducting medical informatics by Converging technologies, Conveying sciences and Connecting people” – highlights that integrative innovations that converge multidisciplinary technologies, rigorous scientific investigations that explicate the nature of complex phenomena, and human-centered designs that connect people are crucial for realizing the immense potential of information and communication technologies to improve health care processes and patient outcomes.

On behalf of the Scientific Program Committee, we welcome you to the beautiful city of Copenhagen for an exciting congress where informatics leaders, researchers, practitioners, and students exchange ideas and share the latest developments, innovations, and global trends in this rapidly advancing field. Medinfo 2013 features a pre-congress offering of an extensive tutorial program by leading experts and a student paper competition that draws the best young talent from all over the world. The main program includes keynote talks, papers, posters, panels, workshops, scientific demonstrations, and mini-symposia that span a broad range of topics from emerging methodologies that contribute to the conceptual and scientific foundations of biomedical and health informatics, to successful implementations of innovative application, integration, and evaluation of eHealth systems and solutions. The United Nations/World Health Organization strategies and efforts, as well as other initiatives to improve health outcomes in populations with varying resources in the world are featured in the program.

The contributions and presentations included in the program are carefully selected through a rigorous review process from a large number of submissions from all over the world. The Scientific Program Committee is grateful to all the reviewers who have contributed to the process, and thanks all the people involved in putting the program together.

We hope that you will enjoy the program!

Sincerely,

Dominik Aronsky, MD, PhD, FACMI and Tze-Yun Leong, PhD, FACMI
Co-Chairs, Medinfo 2013 Scientific Program Committee
Scientific Program Committee

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LOC Chair welcome and introduction to the congress program

The Local Organising Committee would like to welcome all our esteemed guests – whether you are here as a speaker, delegate or vendor – to this fantastic event.

We hope you will benefit greatly from the sharing of knowledge during the conference (and will do this) with colleagues and friends from all over the world. One of the 4 Cs in the theme of this conference is Connecting people and we hope that the program, along with the other conference arrangements for these four days, will facilitate exactly that.

This Medinfo congress is a unique opportunity to learn more about health informatics worldwide. We expect you will meet many people who are deeply interested and effective in finding ever-better ways of making information technology work to the benefit of ... citizens, patients, healthcare and care providers, researchers and administrators. The newest knowledge and thinking in our field of work will be accessible to you during the week – an unparalleled opportunity to discover, explore and elaborate on the extensive range of topics on offer!

Setting up a conference like Medinfo is a daunting task, and it has only been possible due to the deep commitment from all those individuals and organizations involved. The LOC and DSMI have consistently acted to create a congress that, we hope you will agree, is interesting and inviting for all participants. Colleagues from Denmark and other countries have played a major role by contributing ideas, supporting planning, advertising, and resolving the day-to-day practical issues. For this we are very grateful.

We have especially appreciated the close collaboration with IMIA, the SPC and with the EC, together we have focused on our common goal: to create the best scientific program where the greatest number of participants and exhibitors are accommodated.

We would also like to thank all exhibitors and sponsors for supporting this event and investing their time and resources to make it interesting for everybody. As the Local Organising Committee we encourage all delegates to take time to visit the exhibition, and to learn more about how the various parts of our industry are making eHealth ever more relevant, ever better.

Again: A warm welcome to all of you. We hope you will truly enjoy and benefit from the congress, the venue, the local area, and Copenhagen itself. We think all these have a lot to offer during your visit. And to finish with a local greeting: Velkommen til Medinfo!

Lene Vistisen
Chair, Local Organising Committee, for DSMI
Welcome and opening address from the Danish Minister of Health

Minister of Health Astrid Krag

Perspectives on eHealth and Telemedicine in Denmark

Welfare technology and e-Health hold the potential to benefit citizens, patients and health care professionals by improving quality and safety in treatment and care, creating more effective ways of organizing health care delivery and by empowering patients to be involved in their own treatment.

In June 2013, the Minister, in cooperation with the Chairman of Local Government Denmark and the president of Danish Regions, announced a new national digitalization strategy for the Danish Health Care Sector emphasizing on the continued uptake of e-health in health care delivery and increased use of telemedicine. The strategy also upholds and strengthens the cross-sectorial governance model within the field of e-health, where the Ministry of Health is responsible for determining the legal basis and standards for use of the ICT. Within this framework, the regions and municipalities are responsible for acquiring and implementing specific eHealth solutions.

Astrid Krag is the Danish Minister of Health which is a position she has held since October 2011. Krag is also a member of Folketinget, the Danish Parliament, for the Socialist People’s Party (Socialistisk Folkeparti or SF).

Her rise in Danish politics has been described in domestic media as “meteoric”. She first ran for a seat in the Folketing in 2001, and she was elected as a Member of Parliament for the greater Zealand constituency in November 2007. During her time as a Member of Parliament, Krag has served as party spokesperson on issues such as immigration, citizenship, and care for the elderly. She also served as vice-chairwoman for SF from 2010 to 2011 and as chairwoman of the Young Socialist People’s Party from 2005 to 2007.

Local Organising Committee

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How National Initiatives have improved eHealth Deployment in the US.

An inspiration for other countries?

The HITECH Act, a part of the American Reinvestment and Recovery Act, was enacted into law in early 2009. It contained a broad array of provisions intended to promote and support the adoption of clinical information technology at many levels of the US health care delivery system. A combination of new US national health information technology (HIT) policy, regulations, and large monetary incentives emerged as a result of the law. What has been the result in the US, four years later? Where is HIT likely headed in the US as a result of this law? What are the lessons for health care policy makers and governments throughout the world? This talk will summarize the impacts of HITECH, make some educated guesses about the ultimate consequences of the law in the US, and draw some conclusions for other nations.

Andrew M. Wiesenthal, MD, SM has been with Deloitte since May 2010. From April 2000 until joining Deloitte, he was Associate Executive Director of the Permanente Federation. There, his work was in the arenas of development and deployment of automated medical records, decision support, and other clinical systems for all of Kaiser Permanente. Most notably, he was the national physician leader for the Kaiser Permanente HealthConnect (electronic health record) project from its inception through its successful conclusion in 2010. From 1983 until April 2000, Dr. Wiesenthal served as a pediatrician and pediatric infectious diseases consultant with the Colorado Permanente Medical Group (CPMG). He also led CPMG’s quality management program and served as Associate Medical Director for Medical Management, with responsibility for quality management, utilization management, regulatory compliance, risk management, credentialing and physician performance, and informatics. Since joining Deloitte, he has been a leader on numerous clinical information system projects, as well as health care delivery system strategy and improvement projects. He is a widely recognized health information technology leader.

Dr. Wiesenthal graduated from Yale University with a BA degree with honors in Latin American Studies in 1971 and received his MD in 1975 from the State University of New York, Downstate Medical Center in Brooklyn. He completed his pediatric residency at the University of Colorado in 1978, and then he served as an Epidemic Intelligence Service Officer with the Centers for Disease Control from 1978-80 before returning to the University of Colorado for a pediatric infectious disease fellowship, which was completed in 1983. He is board certified in both general pediatrics and pediatric infectious diseases. In 2004, Dr. Wiesenthal earned an SM (Masters of Science) in Health Care Management from the Harvard School of Public Health.
U.S. Navy Capt. Michael Weiner
Director of the Military Health System Electronic Health Record Way Ahead Planning Office

Efficient Care:
Improving Quality Health Care in the Post Electronic Health Record World

U.S. Navy Capt. Michael Weiner will present the deployment of the next generation of the Department of Defense’s (DoD) Electronic Health Record (EHR) system. The DoD/VA Interagency Program Office was established to transform the current Military and Veteran’s Health System into a more interoperable and agile clinical infrastructure that will continue to provide world class care to the US military’s and Veteran’s 18.6 million valued beneficiaries while creating a more intuitive and efficient process for healthcare providers. The Interagency Program Office will support over 150,000 active clinical users, cover every time zone, and will be used by medical clinicians in all fixed and deployed Military Treatment Facilities (MTFs) globally.

Dr. Michael S. Weiner is a graduate of the U.S. Naval Academy and attended medical school at the Philadelphia College of Osteopathic Medicine. He is a board certified Internal Medicine physician, an adjunct Professor at George Washington University in Health IT, holds a masters degree in Management and a masters degree in Information Systems Technology from George Washington University and is a Certified Professional in Healthcare Information and Management (CPHIMS), Dr Weiner has been certified as a Chief Information Officer (CIO) by the General Services Administration.

Dr. Weiner is currently serving as the Director of Clinical Informatics and Chief Medical Information Officer for US Department of Defense and Veterans Administration Interagency Program Office.

Prior to assuming his current position, Capt. Weiner’s experience includes serving as the Deputy Program Manager (DPM) and Chief Medical Officer (CMO) for the Defense Health Information Management System (DHIMS), the Director of Information Technology Plans and Policy, the Director of IT Governance and Enterprise Architecture for the Chief Information Officer of Navy Medicine at the Bureau of Medicine and Surgery (BUMED). As a plank owner of the Navy Expeditionary Combat Command (NECC), Capt. Weiner served as the Senior Medical Officer to more than 200 medical departments supporting 40,000 sailors worldwide in support of ongoing military operations. In addition to leveraging IT capabilities within the healthcare arena to include voice recognition with the Navy Theater Electronic Medical Record and digitalizing healthcare records for contingency operations worldwide, his team also created and globally deployed “blow out injury” kits that provide Service Members immediate care during deployment at the point of injury.

He is an active member of the American College of Physicians, the American Osteopathic Association and the American Telemedicine Association, and is the military representative to the Philadelphia College of Osteopathic Medicine Alumni Board, as well as the DoD representative for Health and Human Services’ Office of the National Coordinator, Health Information IT Policy Committee. He has received numerous awards from the Navy, including two Meritorious Service Medals, an Air Medal, an Air Medal Single Strike Award, Navy Commendation Medals and a Navy Achievement Medal.
Keynote WHO Panel

A global perspective to strengthening health systems and accelerating universal health coverage through eHealth

The World Health Organization works with partners at the global, regional and country level to promote and strengthen the use of information and communication technologies (ICTs) in improving quality health services, achieving universal health coverage, and monitoring results, from eHealth applications to eHealth governance. The WHO eHealth team at headquarters and its regional counterparts actively work with national authorities, including relevant ministries, to provide technical assistance in eHealth strategy development, implementation and evaluation, and capacity development.

In this panel, specialists from WHO will provide an overview of the current innovative efforts in scalable and sustainable eHealth, including eHealth global monitoring and evaluation, multi-sector governance and policies, health data standards and interoperability, peer-to-peer networking and eLearning efforts that are underway both globally and regionally. Participants will gain a better understanding how to utilize eHealth effectively using standardized and cutting edge techniques to improve health for all.

Dr. Najeeb Al-Shorbaji
Director, Department of Knowledge Management and Sharing, WHO

Dr. Najeeb Al-Shorbaji has been working as Director, Department of Knowledge Management and Sharing at the World Health Organization Headquarters (WHO/HQ) in Geneva since September 2008. Prior to that, he held the posts of Information Scientist, Regional Advisor for Health Information Management and Telecommunication, and Coordinator for Knowledge Management and Sharing for WHO Eastern Mediterranean Region until August 2008. During his 14 years of work for the WHO Eastern Mediterranean Regional Office, he organized over 15 regional conferences on eHealth and health informatics, he initiated a number of eHealth projects, he lead the development of the regional health knowledge network and assisted countries in development of national eHealth plans and activities. He is from Jordan, married and holds a PhD in Information Sciences since 1986.

Dr Al-Shorbaji’s current portfolio covers WHO publishing activities and programmes, library and knowledge networks, eHealth, knowledge translation and WHO Collaborating Centres.

Through his career in WHO, he initiated and lead a number of information and telecommunication technology projects and knowledge networks. He is a member of a number of national and international professional societies and associations specialised in information management and health informatics. He has authored over 80 research papers and articles presented in various conferences and published in professional journals.
Ms. Jyotsna Chikersal
Regional Adviser, Health Situation and Trend Assessment, Regional Office for the South Eastern Region, WHO

Ms. Jyotsna Chikersal is the Regional Advisor for Health Situation and Trend Assessment (HST) for the WHO's South East Asia Region based in New Delhi, India. She leads WHO's technical advice to member countries in the region on strengthening Health Information Systems, Civil registration and Vital Statistics, Health Statistics and eHealth as key pillars to strengthen Health Systems. She has over 15 years of experience in building strategic collaborations with development partners and academic institutions to promote technical cooperation as well as capacity building in the area of HST. In recent years, her unit’s work has also focused on the use of information and communication technologies (ICTs) in improving quality health services, accelerating universal health coverage, monitoring results, and improving information and accountability for better health outcomes. She has also been spearheading work in the region towards the direction of implementing Open Source Tools, District Health Information System, Electronic Medical Records and Health Data Standards. Ms. Chikersal has also been taking forward the coordination of the activities under the Commission on Information and Accountability for Women's and Children's (COIA) health in SEAR countries, and monitoring of international health goals such as MDGs.

Mr. Clayton Hamilton
eHealth Regional Focal Point, Division of Information, Evidence, Research and Innovation, European Regional Office, WHO

Mr. Clayton Hamilton leads the eHealth and Innovation portfolio of the WHO European Region, providing support and strategic guidance to eHealth development and capacity building initiatives as a component of Health Information management in the region’s 53 Member States. With a background in ICT development and business management within WHO that spans a 15 year period, Mr. Hamilton works on broadening the awareness and benefit of strategic implementation of eHealth in Europe, linking with major international partners to build capacity in low-middle income countries and as a contributor to major national eHealth strategy development initiatives.
Keynote WHO Panel continued

Dr. Ramesh Krishnamurthy
Focal Point, eHealth Standardization and Interoperability,
Department of Knowledge Management and Sharing, WHO

Dr. Krishnamurthy serves as a senior technical officer and the focal point for eHealth standardization and interoperability efforts at the World Health Organization in Geneva, Switzerland. He has extensive experience in designing, implementing, coordinating, and managing national and sub-national eHealth systems and services, including health information systems, emergency operations centers, and public health surveillance information systems. Dr. Krishnamurthy has also assisted numerous countries in their development and implementation of national and sub-national eHealth strategies, standardization and interoperability of eHealth systems and services, and utilization of strategic information for evidence-based public health decision-making.

Mr. Mark Landry
Team Leader, Health Information, Evidence & Research
Western Pacific Regional Office, WHO

Mr. Mark Landry leads the eHealth and health information systems (HIS) initiatives of the WHO Western Pacific Region by coordinating and providing technical assistance to countries in Asia and the Pacific with development and implementation of standards-based, scalable, and reusable eHealth solutions. Mr. Landry collaborates with development partners and supports networks of professionals to improve regional and national eHealth policies, strategies, plans, governance, and sustainable investments. Mr. Landry has 17 years of experience in eHealth and HIS working with country governments and organizations in Asia, Africa, the Middle East, and the Americas. He is specifically assisting low and middle-income countries with building institutional and individual capacity for better data collection, quality, management, and use of health information and statistics to inform health sector planning, systems strengthening, and clinical care.
Prof. Søren Brunak
Technical University of Denmark & University of Copenhagen

Extracting fine-grained disease phenotypes and adverse drug reactions from electronic patient records

It is a fundamental issue to resolve whether specific adverse drug reactions (ADRs) stem from variation in the individual genome of a patient, from drug/environment cocktail effects, or both. We have developed a text mining pipeline for temporal analysis of electronic patient records for identification of ADRs directly from the free text narratives describing patient disease trajectories over time. Electronic patient records remain a rather unexplored, but potentially rich data source for discovering correlations between diseases, drugs and genetic information. Linking these data is a huge undertaking which soon will represent a major challenge given that it now has become feasible to sequence the DNA of entire populations at low cost. By extracting phenotype information and information of adverse drug reactions from the free-text in such records we demonstrate that we can extend the information contained in the structured record data, and use it for producing fine-grained patient stratification and disease co-occurrence statistics. We characterize the similarity of ADR profiles of approved drugs using drug-ADR networks and report on the relationship between the chemical similarity of drugs and their ADRs.

Søren Brunak, Ph.D., is professor of Bioinformatics at the Technical University of Denmark and professor of Disease Systems Biology at the University of Copenhagen. Prof. Brunak is the founding Director of the Center for Biological Sequence Analysis, which was formed in 1993 as a multi-disciplinary research group of molecular biologists, biochemists, medical doctors, physicists, and computer scientists. Søren Brunak has been highly active within biological data integration, where machine learning techniques often have been used to integrate predicted or experimentally established functional genome, metagenome and proteome annotation. His current research does combine molecular level systems biology and healthcare sector data such as electronic patient records and biobank questionnaires. The aim is to group and stratify patients not only from their genotype, but also phenotypically based on the clinical descriptions in the medical records. An additional focus area is now adverse drug reactions.
Dr. Patricia (Patty) Mechael
Executive Director, mHealth Alliance hosted by the UN Foundation and Adjunct Faculty at Earth Institute and School of International and Public Affairs at Columbia University

mHealth: From Hope to Hype and Back
For over 10 years, mobile technology has emerged as a transformative and truly disruptive innovation throughout the world. mHealth, the use of mobile technologies for health, has emerged as a critical strategy for public health and health service delivery especially in low and middle income countries. Having spent much of the past ten years studying informal and formal uses of mobile phones and other mobile devices for health, I have observed the advances and the trends in both technology and health that catalyzed them. The aim of this keynote is to take a systematic look at the evolution of mHealth over the course of the past ten years; from anthropological studies of health-related uses of mobile phones to privately sponsored NGO supported mHealth to increasing engagement and leadership of governments and industry in large scale deployments. The field has advanced, technology has advanced, but what is vision for the future? What needs to happen if the field is to advance towards scale and sustainability? What will this mean for the mobile community?

While there is significant hype and many new entrants in the field – there is a need for pragmatic reflection so that we do not carry the mistakes of the past into the future at much larger more damaging scale. Acknowledging that there has been a historical progression and evolution to mHealth and a mainstreaming process by the health sector that may make the need for a field and definitions obsolete is the first step in this process.

Dr. Patricia Mechael is the Executive Director of the mHealth Alliance, which is hosted by the United Nations Foundation, and faculty at the School of International and Public Affairs and Earth Institute, Columbia University. She has been actively involved in the field of International Health for over 15 years with field experience in 30+ countries primarily in Africa, the Middle East, and Asia. She has a Masters in International Health from the Johns Hopkins School of Public Health and Hygiene (1998) and a PhD in Public Health and Policy from the London School of Hygiene and Tropical Medicine (2006), where she specifically examined the role of mobile phones in relation to health in Egypt.

For over 10 years, Dr. Mechael has published and spoken extensively on the strategic role of mobile telephony and relevant software applications within an ecosystem of eHealth, public health, and telecommunications actors in low and middle income countries as well as the increasing need to engage women and girls more effectively in designing and implementing the solutions aimed at improving their health and quality of life. She recently published the co-edited volume, mHealth in Practice: Mobile technology for health promotion in the developing world with Jonathan Donner from Microsoft Research.
On determining factors for good research in biomedical and health informatics.

Some lessons learned

Medical Informatics or, from a more broader perspective, biomedical and health informatics is an interdisciplinary discipline “avent la lettre”.

Compared to monodisciplinary research, interdisciplinary research does not only impose significant opportunities for solving certain major problems in the sciences and in society. It also faces considerable additional challenges.

What constitutes good research in biomedical and health informatics? And what are determining factors for being able to do such research? Based on many lessons learned during my professional career, I want to try to identify such factors and present them for discussion.

As medical informatics as field has to be considered today as a major driving force for research progress, mainly in biomedicine and health care, but also in fields like computer science, it might be important to be aware of such factors with respect to research and education in our discipline.

Reinhold Haux is Professor for Medical Informatics and Director at the Peter L. Reichertz Institute for Medical Informatics of the University of Braunschweig - Institute of Technology and of Hannover Medical School, Germany.

The current research fields of Prof. Haux are health information systems and management, and health-enabling technologies. Reinhold Haux is, among others, co-chairing the Lower Saxony Research Network Design of Environments for Ageing, a research project, now in its 5th year, where more than 60 researchers are involved in inter- and multidisciplinary research on information and communication technologies for promoting and sustaining quality of life, health and self-sufficiency.

Prof. Haux is author and editor of more than 300 publications. He has supervised about 50 doctoral theses. His current lectures are in medical informatics and various subfields, such as health information systems and health-enabling technologies. Since its start in 2001 the international Frank-van-Swieten-Lectures on Strategic Information Management in Health Information Systems are part of his teaching activities.

For the term 2007-2010 Reinhold Haux was President of the International Medical Informatics Association (IMIA). Since 2001 he is editor of the journal Methods of Information in Medicine. He has, from 2001 to 2007, co-edited the IMIA Yearbook of Medical Informatics. Reinhold Haux has advisory functions in science, economy, and government. Details at “www.plri.de”.

Keynote Speaker

Prof. Dr. Reinhold Haux
Director, Peter L. Reichertz Institute for Medical Informatics, University of Braunschweig and Hannover Medial School, Germany
The Danish Centre for Health Informatics

The Danish Centre for Health Informatics at Aalborg University contributes to research and understanding of interrelationship between information technology, health issues and the organization of the Danish health system.

The Danish Centre for Health Informatics organizes the annual Danish eHealth Observatory’s conference attracting 650+ eHealth professionals and 25+ national and international exhibitors. The Danish eHealth Observatory provides an annual monitoring of dissemination and use of eHealth in the Danish health care sector.

Please come and visit us at the Aalborg University stand.

An apple a day is not enough to keep your business safe and sound

Healthcare needs a healthy IT system

MedCom is a co-operative venture between authorities, organizations and private firms linked to the Danish healthcare sector. MedCom is financed and owned by: The Ministry of Health, Danish Regions and Local Government Denmark.

"MedCom is continued based on the politically established goals and milestones concerning cross-sectorial communication and with a precise role as operating organization. MedCom solves problems with a focus to support efficient performance and a gradual expansion of the national eHealth infrastructure, which is necessary for a safe and coherent access to relevant data and communication across regions, municipalities, and general practitioners”.

MedCom has both a national and an international section. MedCom collaborates closely with many Danish and several foreign organizations and institutions, including Danish local municipalities and hospitals. MedCom develops and implements communication standards and telemedicine.

Telemedicine includes health services which can be delivered across long or short distances through the use of ICT, including the support of diagnosis, treatment, prevention, research, and education. Home monitoring covers the solutions in which the telemedical service is delivered to the patient’s home. Hence, telemedicine is relevant for both local authorities and the private health sector, as well as for the patient/citizen at home.
Hospitals and health systems seeking to have an effective health record system will find IMO’s terminology solution essential to achieving this goal. IMO’s terminology service provides nomenclature cross-mapping of code sets and medical vocabularies to allow for the capture of structured clinical information for the clinician.

 IMO’s most widely-used product is IMO Problem Terminology, a database of over 260,000 clinician-friendly medical terms and concepts that are seamlessly mapped to all major reference coding systems, including SNOMED CT® and ICD-10-WHO. The automated mapping to standard code sets is at the center of any EMR system.

CDC Article Shows IMO’s Interface Terminology Beats Algorithms for Identifying Coronary Heart Disease with ‘Nearly Perfect’ Accuracy—read more at www.e-imo.com/news.aspx


IMO® Clinical Interface Terminology
The fundamental element for effective medical records systems

Learn more at our Satellite Symposium
IMO® Clinical Interface Terminology:
The Foundation for Electronic Medical Records Efficacy
Thursday, 22 August 2013
13.45–15.15
Conference Room 19, Bella Center

Visit IMO at Stand 9

Capturing CLINICAL INTENT in your Electronic Health Records
Your INTERFACE TERMINOLOGY for effective MAPPING to ICD-9, ICD-10, SNOMED CT® and other clinical coding systems

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SNOMED is a registered trademark of the International Health Terminology Standards Development Organisation.
<table>
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<td>First Morning Sessions</td>
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<td><strong>FRIDAY</strong></td>
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</tr>
<tr>
<td>13:00-14:30</td>
<td>Closing Session Afternoon</td>
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**Keynote and Poster Sessions**

- **Posters Session A (Lunch - Exhibition - Networking)**
  - Panel on Privacy - I
  - Panel on Education - II
  - Demonstration on Analytic Tools

- **Posters Session B (Lunch - Exhibition - Networking)**
  - Panel on Usability
  - Panel on Patient-Centred Care - I
  - Minisymposium on Public Health in Vietnam

- **Posters Session C (Lunch - Exhibition - Networking)**
  - Panel on Decision Support - I
  - Panel on Patient-Centred Care - II
  - Minisymposium on Digital Ecosystems

- **Posters Session D (Lunch - Exhibition - Networking)**
  - Panel on Trends
  - Panel on Decision Support - II
  - Minisymposium on Village of the Future

**Closing Keynote**

Closing Keynote on factors for good research in biomedical and health informatics
Prof. Dr. Reinhold Haux
Award and Closing Ceremony
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<tr>
<td>Paper Session: Data Models and Representations - II</td>
<td>Paper Session: Personalized and Preventive Care - Elder Care and Social Media</td>
<td>Workshop on Evaluation - I</td>
<td>Workshop on History</td>
<td>Panel on Safety - I</td>
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<td>Paper Session: Intelligent Data Analysis - II</td>
<td>Workshop on Patient-Centred Care</td>
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<td>Workshop on Policies</td>
<td>Workshop on Safety - II</td>
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<tr>
<td>Paper Session: Health Information Systems - II</td>
<td>Paper Session: Patient Safety and Medical Errors - II</td>
<td>Workshop on eHealth - I</td>
<td>Workshop on eHealth - II</td>
<td>Paper Session: Ontologies and Representations</td>
<td>Paper Session: Information and Knowledge Visualization</td>
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<td>Paper Session: HIS/CIS Design and Architecture</td>
<td>Paper Session: Human Factors and Usability - I</td>
<td>Workshop on Education - II</td>
<td>Workshop on Standards - I</td>
<td>Paper Session: Controlled Vocabularies and Terminologies - I</td>
<td>Panel on Social Media - II</td>
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<td>Paper Session: HIS - Monitoring and Secure Information Infrastructures</td>
<td>Paper Session: Human Factors and Usability - II</td>
<td>Workshop on Education - III</td>
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<td>Paper Session: Controlled Vocabularies and Terminologies - II</td>
<td>Panel on Social Media - III</td>
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<td>Paper Session: National and International Health IT Efforts and Implementations</td>
<td>Panel on Nursing - I</td>
<td>Panel on Nursing - II</td>
<td>Panel on Nursing - III</td>
<td>Panel on Nursing - IV</td>
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**Wireless network: MEDINFO**

Program updates are available at the medinfo2013 App and at www.medinfo2013.dk

In the detailed program this symbolises “Nomination for Distinguished Paper”, “Nomination for Distinguished Poster” and “Student Paper Finalist”.
## Tuesday 20 August

### OPENING SESSION

**16:00 - 18:30**

**Plenum**

**Opening Session**
- Welcome address from LOC
  - Lene Vistisen
- Welcome address from IMIA/SPC
  - Antoine Geissbühler
- Welcome address
  - Telemedicine and the DK governance model
    - The Danish Minister of Health Astrid Krag
- **Keynote: How National Initiatives have improved eHealth Deployment in the US. An Inspiration for Other Countries?**
  - Dir. Andrew M. Wiesenthal
- **IMIA Best Student Paper Award**
  - Marion Ball, IBM Research

## Wednesday 21 August

### FIRST MORNING SESSIONS

**08:30 - 10:00**

**Plenum**

**Keynote on EHR implementation in the US Military**
- Chair: Christina S. Bartholdy

**Efficient Care: Improving Quality Health Care in the Post Electronic Health Record World**
- Michael Weiner

**Auditorium**

**Keynote panel on eHealth Activities at World Health Organization: By WHO**
- Najeeb Al-Shorbaji
- Jyotsna Chikersal
- Clayton Hamilton
- Ramesh Krishnamurthy
- Mark Landry

**Room 1**

**Scientific demonstration: Demonstration on Electronic Health Record and CPOE Systems**
- Chair: Lucy Westbrooke

- Creating Electronic Health Records within 15 minutes with Ruby on Rails and ISO 13606 / Open EHR
- Standardized Clinical Models
  - Shinji Kobayashi
  - Eizen Kimura
  - Ishihara Ken

- **Regenstrief Institute's New Gopher: A Next-Generation Open-Source Computerized Order Entry System**
  - Jon Duke
  - Burke Mamlin
  - Doug Martin

**Room 2**

**Paper Session: Data Models and Representations - 1**
- Chair: Katsuhiko Takabayashi

- Determining Scanned Body Part from DICOM Study Description for Relevant Prior Study Matching
  - Thusitha Mabotuwana
  - Yuechen Qian

- **Deterministic Record Linkage versus Similarity Functions: a Study in Health Databases from Brazil**
  - Kālia Mitiko Firmino Suzuki
  - Carlos Humberto Porto Filho
  - Luis Fernando Cozin
  - Lucas Calabrez Pereyra
  - Paulo Azevedo Marques

- **Using Linked Data for Mining Drug - Drug Interactions in Electronic Health Records**
  - Jyotishman Pathak
  - Richard Kiefer
  - Christopher Chute

- **Enabling Complex Queries to Drug Information Sources through Functional Composition**
  - Lee Peters
  - Jonathan Mortensen
  - Thang Nguyen
  - Olivier Bodenreider
FIRST MORNING SESSIONS
08:30 - 10:00

Room 3

**Paper Session: Personalized and Preventive Care**
Chair: Finn Kensing

**Continual Development of a Personalized Decision Support System**  
Dina Demner-Fushman, Charlotte Seckman, Cheryl Fisher, George Thoma

**Feasibility Analysis of the Privacy Attributes of the Personal Wellness Information Model**  
Pirkko Nykänen, Antto Seppälä, Pekka Ruotsalaainen, Bernd Blobel

**Supervised Analysis of Drug Prescription Sequences**  
Grégoire Ficheur, Emmanuel Chazard, Beatrice Merlin, Laurie Ferret, Michel Lucxek, Régis Beuscart

**Personalized Health Care and Health Information Technology Policy: An Exploratory Analysis**  
Jonathan Wald, Michael Shapiro

Room 4

**Paper Session: Modelling and Simulation - Physiological and Care Processes**
Chair: Henning Müller

**Detecting Periodic Limb Movements with Off-the-Shelf Accelerometers: A Feasibility Study**  
Andre Dias, Lukas Gorzelniak, Julianne Rudnik, Dragan Stojanovic, Alexander Horsch

**e-Labs and the Stock of Health Method for Simulating Health Policies**  
Philip Couch, Martin O’Flaherty, Matthew Sperrin, Benjamin Green, Panos Balatsoukas, Stephen Lloyd, James McGrath, Claudia Solland-Reyes, John Ainsworth, Simon Caperwell, Iain Buchan

**Clinical Simulation and Workflow by use of two Clinical Information Systems, the Electronic Health Record and Digital Dictation**  
Sven Koldby, Iben Schou Jensen

**Automatic Platelets Counter for Supporting Dengue Case Detection in Primary Health Care in Indonesia**  
Lutfan Lazuardi, Guardian Yoki Sanjaya, Ika Candradewi, Åsa Holmner

**Electrophysiological Signal Analysis and Visualization using Cloudwave for Epilepsy Clinical Research**  
Catherine Jayapandian, Chien-Hung Chen, Alireza Bozorgi, Samden Lhatoo, Guo-Qiang Zhang, Satya Sahoo

Room 5

**Vision Paper Session: Future of Informatics - Visions - I**
Chair: William Hersh

**Nursing Informatics and Nursing Ethics: Addressing their Disconnect through an Enhanced TIGER-vision**  
Mette Kjer Kaltoft

**A Continuum of Sociotechnical Requirements for Patient-Centered Problem Lists**  
Sarah Collins, Kira Tsivkin, Tonya Hongsermeier, David Dubois, Hari Nandigam, Roberto Rocha

**Building a Time-Saving and Adaptable Tool to Report Adverse Drug Events**  
Yves Parès, Gunnar Declerck, Sajjad Hussain, Romain Ng, Marie-Christine Jaulent

**Modeling Decision Support Rule Interactions in a Clinical Setting**  
Margarita Sordo, Beatriz Rocha, Alfredo Morales, Saverio Maviglia, Elisa Dell’Oglio, Amanda Fairbanks, Teal Aroy, David Dubois, Sharon Bouyer-Ferullo, Roberto Rocha

Room 7

**Paper Session: Decision Support Systems and Technologies - I**
Chair: Milos Hauskrecht

**Identification of Strategies to reduce Computerized Alerts in an Electronic Prescribing System using a Delphi Approach**  
Melissa Baysari, Johanna Westbrook, Brian Egan, Richard Day

**PPADS: Physician-Parent Decision-Support for Neonatal Intensive Care**  
Monique Frize, Erika Bariciak, Jeffrey Gichrist

**Structured Representation for Core Elements of Common Clinical Decision Support Interventions to Facilitate Knowledge Sharing**  
Li Zhou, Tonya Hongsermeier, Aziz Boxwala, Janet Lewis, Kensaku Kawamoto, Saverio Maviglia, Douglas Gentile, Jonathan Teich, Roberto Rocha, Douglas Bell, Blackford Middleton

**Early Detection of Hospitalized Patients with Previously Diagnosed Obstructive Sleep Apnea Using Computer Decision Support Alerts**  
R. Scott Evans, Vrena Flint, Tom Cloward, Bill Beninati, Jim Lloyd, Kimberly Megwatu, Kathy Simpson, Ahmed Alsharit, Shayna Balls, Bob Farney

**Automatic Identification of Comparative Effectiveness Research from Medline Citations to Support Clinicians’ Treatment Information Needs**  
Mingyuan Zhang, Guilherme Del Fiol, Randall Grout, Siddhartha Jonnalagadda, Richard Medlin Jr, Rashmi Mishra, Charlene Weir, Hongfang Liu, Javed Mostafa, Marcelo Fiszman

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<td>Networking and Light Refreshment</td>
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<tr>
<td><strong>10:30-12:00</strong></td>
<td><strong>Panel on Standards - I</strong>&lt;br&gt;Current State of Clinical Information Exchange in Six Countries&lt;br&gt;Thomas H. Payne, Charles Gutteridge, Christian Lovis, Claudia Pagliari, Luo-Ping Zhao, Shivam Natarajan</td>
<td>Plenum</td>
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<td><strong>Panel on Education - I</strong>&lt;br&gt;The New Clinical Informatics Medical Subspecialty in the United States&lt;br&gt;Jeffrey Williamson, William Hersh, Edward Shortliffe, Kevin Fickenscher, Charles Safran</td>
<td>Auditorium</td>
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<td><strong>Scientific demonstration: Demonstration on Information integration and Visualization Tools</strong>&lt;br&gt;Chair: TBA&lt;br&gt;TimeCaT: A Comprehensive Tool for Time Motion Studies&lt;br&gt;Marcelo Lopetegui, Po-Yin Yen, Albert Lai, Peter Embi, Philip Payne&lt;br&gt;Khresmoi – Multilingual Semantic Search of Medical Text and Images&lt;br&gt;Allan Hanbury, Henning Müller</td>
<td>Room 1</td>
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<td><strong>Paper Session: Data Models and Representations - II</strong>&lt;br&gt;Chair: Rae Wong Park&lt;br&gt;Taming EHR Data: Using Semantic Similarity to reduce Dimensionality&lt;br&gt;Leila Kalankesh, James Weatherall, Thamer Ba-Dhfrari, Iain Buchanan, Andy Brass&lt;br&gt;Building a Knowledge Base of Severe Adverse Drug Events Based on AERS Reporting Data using Semantic Web Technologies&lt;br&gt;Guoqian Jiang, Liwei Wang, Hongfang Liu, Harold Solbrig, Christopher Chute&lt;br&gt;An RDF/OWL Knowledge Base for Query Answering and Decision Support in Clinical Pharmacogenetics&lt;br&gt;Matthias Samwald, Robert Freimuth, Joanne Luciano, Simon Lin, Robert L. Powers, M. Scott Marshall, Klaus-Peter Adlassnig, Michel Dumontier, Richard D. Boyce&lt;br&gt;(Student paper) Exploring Pharmacoepidemiologic Groupings of Drugs from a Clinical Perspective&lt;br&gt;Rainer Winnenburg, William Hsu, Ricky Taira&lt;br&gt;(Student paper) A Formal Representation for Numerical Data Presented in Published Clinical Trial Reports&lt;br&gt;Maurine Tong, William Hsu, Ricky Taira</td>
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<td><strong>Paper Session: Personalized and Preventive Care - Elder Care and Social Media</strong>&lt;br&gt;Chair: Patricia Brennan&lt;br&gt;The Consequences of Seniors Seeking Health Information using the Internet and Other Sources&lt;br&gt;Stephanie Medlock, Saeid Eslami, Manjan Askari, Danielle Sent, Sophia E. de Rooij, Ameen Abu-Hanna&lt;br&gt;Feasibility of Interactive Biking Exercise System for Telemangement in Elderly&lt;br&gt;Joseph Finkelstein, In Cheol Jeong&lt;br&gt;(Student paper) The Usefulness of Activity Trackers in Elderly with Reduced Mobility: A Case Study&lt;br&gt;Jonas Lauritzen, Adolfo Muñoz, José Luis Sevillano, Anton Civit&lt;br&gt;(Student paper) Finding Meaning in Social Media: Content-based Social Network Analysis of QuitNet to Identify New Opportunities for Health Promotion&lt;br&gt;Sahiti Myneni, Nathan Cobb, Trevor Cohen&lt;br&gt;Consumers’ Online Social Network Topologies and Health Behaviours&lt;br&gt;Annie Lau, Adam Dunn, Nathan Mortimer, Judith Proudfoot, Annie Andrews, Siaw-Teng Liaw, Jacinta Crimmins, Amael Arguel, Enrico Coiera</td>
<td>Room 3</td>
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<td><strong>Workshop on Evaluation - I</strong>&lt;br&gt;Evaluation and Evidence: Applying Guidelines for Health IT Evaluation in Developed and Developing Countries&lt;br&gt;Nicolette de Keizer, Michael Rigby, Elske Ammenwerth, Jan Talmon, Pirkko Nykänen, Siobhan Melia, Hamish Fraser, Tom Oluoch</td>
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**Wednesday 21 August**
## Wednesday 21 August

### Second Morning Sessions 10:30 - 12:00

| Room 5 | Workshop on History  
Workshop on the 50th Anniversary IMIA History of Medical Informatics Project  
Casimir Kulikowski, Diarmuid UaConaill, George Mihalas, Hyeoun-Ae Park, Lyn Hanmer, Alvaro Margolis, Peter Murray |
| --- | --- |
| Room 6 | Panel on Safety - I  
*International Perspectives: From Technology-induced Errors to Health Information Technology Safety*  
Elizabeth Borycki, David Bates, Kaija Saranto, Hiroshi Takeda |
| Room 7 | Paper Session: Decision Support Systems and Technologies - II  
Chair: Klaus-Peter Adlassnig  
*Segmentation of Mammography by Applying GrowCut for Mass Detection*  
Filipe Cordeiro, Wellington Santos, Abel Silva-Filho  
*Validation of Fuzzy Sets in an Automated Detection System for Intensive-Care-Unit-Acquired Central-Venous-Catheter-Related Infections*  
Jeroen Sebastiaan de Bruin, Alexander Blacky, Walter Koller, Klaus-Peter Adlassnig  
*Development of a Semantic-based Search System for Immunization Knowledge*  
Li-Hui Lee, Hsingy-Yi Chu, Der-Ming Liou  
*Non-contact Screening System with Two Microwave Radars in the Diagnosis of Sleep Apnea-Hypopnea Syndrome*  
Masayuki Kagawa, Katsuhiro Ueki, Akira Kurita, Hirokazu Tojima, Takemi Matsui  
*Hidden Markov Model for Analyzing Time-Series Health Checkup Data*  
Ryouhei Kawamoto, Alwis Nazir, Atsuyuki Kameyama, Takashi Ichinomiya, Keiko Yamamoto, Satoshi Tamura, Mayumi Yamamoto, Satoru Hayamizu, Yasutomi Kinosada |
| Room 8 | Panel on Standards - II  
*Do we need a Common Ontology between ICD 11 and SNOMED CT to Ensure Seamless Re-use and Semantic Interoperability?*  
Jean Marie Rodrigues, Stefan Schulz, Kent Spackman, Bediran Ustun, Christopher Chute, Vincenzo Della Mea, Jane Millar, Kristina Brand Persson, Kalra Dipak, Alan Rector |

### 12.00 - 13.30 Noon Session: Lunch - Exhibition - Networking

### Poster Session A: Poster Area

- See separate program

### First Afternoon Sessions 13:45 - 15:15

| Plenum | Panel on Privacy - I  
The IMIA Initiatives on Trustworthy Reuse of Health Data: A Report  
Riccardo Bellazzi, Iain Buchan, Steven Labkoff, Antoine Geissbuhler, Charles Safran |
| --- | --- |
| Auditorium | Panel on Education - II  
The AMIA 10x10 (“Ten by Ten”) Program: An International Approach to Building Informatics Capacity  
William Hersh, Jeffrey Williamson, Paula Otero, Alvaro Margolis |
## FIRST AFTERNOON SESSIONS
### Room 1
**Scientific demonstration: Demonstration on Analytic Tools**  
Chair: Jim Weatherall  
*An Integrated Approach to Chart Review and Annotation*  
Tyler Forbush, Shuying Shen, Scott DuVall  
*Analytic Approaches to Phenotypic Complexity*  
Jeremy Warner, Josh Denny, David Kreda, Gil Alterovitz

### Room 2
**Paper Session: Intelligent Data Analysis - I**  
Chair: Niels Peek  
*Detecting Effective Classes of Medical Incident Reports based on Linguistic Analysis for Common Reporting System in Japan*  
Katsuhide Fujita, Masanori Akiyama, Nobuyuki Toyama, Yasuko Kamemori  
*Evaluating Predictive Modeling’s Potential to Improve Teleretinal Screening Participation in Urban Safety Net Clinics*  
Omolola Ogungbemi, Senait Teklehaimanot, Lauren Patty, Erin Moran, Sheba George  
*Mining Information Dependency in Outpatient Encounters for Chronic Disease Care*  
Wen Sun, Weijia Shen, Xiang Li, Feng Cao, Yuan Ni, Haifeng Liu, Guotong Xie  
*Missed Opportunities Mapping: Computable Healthcare Quality Improvement*  
Benjamin Brown, Richard Williams, John Ainsworth, Iain Buchan  
*A System for Automated General Medical Diagnosis using Bayesian Networks*  
Adam Zagorecki, Piotr Orzechowski, Katarzyna Holownia

### Room 3
**Paper Session: Personal Health Systems**  
Chair: TBA  
*Preference-maximized Nutrition Planning by Relative Learning and Ranking*  
Jen-Hao Hsiao  
*Citizens and Personal Health Records – the Case of Nelson Mandela Bay*  
Dalenc Rattas, Nicky Mostert-Phipps  
*(Student paper) Improving Patients' Electronic Health Record Comprehension with NoteAid*  
Arije Polepalli Ramesh, Thomas Houston, Cynthia Brandt, Julia Fang, Hong Yu  
*(Student paper) Clinical Documentation as a Source of Information for Patients – Possibilities and Limitations*  
Torunn Wibe, Mirjam Ekstedt, Ragnhild Hellesø, Karl Øyri, Laura Slaughter  
*Usage and Perceptions of a Mobile Self-Management Application for People with Type 2 Diabetes: Qualitative Study of a Five-Month Trial*  
Naoe Tatara, Eirik Årsand, Tone Bratteteig, Gunnar Hartvigsen

### Room 4
**Workshop on Evaluation - II**  
Quantifying Health Professionals’ Patterns of Work and Communication and the Impact of Health Information Technology: A Workshop on How to Design and Use the Work Observation Method By Activity Timing (WOMBAT) Tool  
Elin Lehnbom, Melissa Baysari, Johanna Westbrook

### Room 5
**Workshop on Publication**  
Writing for Publication in Biomedical Informatics Journals  
Jan Talmon, Dominik Aronsky, Reinhold Haux, Nicolette de Keizer, Tze-Yun Leong, Charles Safran, Christoph Lehmann

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**Wednesday 21 August**
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| **FIRST AFTERNOON SESSIONS**<br>13:45 - 15:15 | Workshop on Safety - I  
Clinical Simulations in Health Professional Education: International Perspectives and Lessons Learned about Integration and Patient Safety  
Elizabeth Borycki, Carola Hullin, Jorge Gonzalez, Kendall Ho, Andre Kushniruk | Room 6   |
|              | Paper Session: Decision Support Systems and Technologies - III  
Chair: Hans-Ulrich Prokosch  
An Information and Communication Technology System to Detect Hypoglycemia in People with Type 1 Diabetes  
Morten Hasselstrøm Jensen, Toke Folke Christensen, Lise Tarnow, Mette Dencker Johansen, Ole Kristian Hejlesen  
Delivering Antibiotic Resistance Information Specifically Tailored to Location and Time  
Philipp Meng, Karsten Fehre, Alexander Blacky, Andrea Rappelsberger, Jeroen Sebastiaan de Bruin, Klaus-Peter Adlassnig  
A Diet Management Information and Communication System to Help Chronic Kidney Patients Cope with Diet Restrictions  
Sisse Heiden, Amanda Buus, Morten Hasselstrøm Jensen, Ole Kristian Hejlesen  
(Student paper) Exploring the Use of Clinical Data to Inform Patients  
Brent Hill, Joshua Proulx, Qing Zeng-Treitler  
(Student paper) AccessMRS: Integrating OpenMRS with Smart Forms on Android  
Louis Fazen, Benjamin Chemwolo, Julia Songok, Laura Ruhl, Carolyne Kipkoech, James Green, Justus Ikemeri, Astrid Christoffersen-Deb | Room 7   |
|              | Panel on Standards - III  
Current Issues and Future Directions for Standards Developing Organizations  
Ed Hammond | Room 8   |
| 15:15-15:45  | NETWORKING AND LIGHT REFRESHMENT | Plenum   |
| **SECOND AFTERNOON SESSIONS**<br>15:45 - 17:15 | Panel on Safety - II  
Patient Safety Governance for National and Cross-border Health Information Technology  
Farah Magrabi, Dean Sittig, Maureen Baker, Jan Talmon, Enrico Coiera | Plenum   |
|              | Panel on Education - III  
Health informatics Education for the Clinical Workforce  
Kathleen Gray, Edward Shortliffe, Kendall Ho, Paul Taylor, Maurice Mars, Anthony Maeder, Ambica Dattakumar, Kerryn Butler-Henderson, Helen Chenery | Auditorium |
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<th>Room 1</th>
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<th>15:45 - 17:15</th>
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| **Scientific demonstration: Demonstration on Decision Support Systems**  
Chair: Petra Knaup  
**Demonstrating Cloud-based Clinical Decision Support at Scale: The Clinical Decision Support Consortium**  
Brian E. Dixon, Marilyn D. Paterno, Linas Simonaitis, Howard Goldberg, Aziz Boxwala, Tonya Hongsermeier, Ruslana Tsunkova, Blackford Middleton  
**Portable Health Clinic Packages for BoP**  
Yasunobu Nohara, Naoki Nakashima, Ahamed Ashir, Masahiro Kuroda, Sozo Inoue, Partha Ghosh, Rafiqul Islam, Tatsuo Hiramatsu |
| **Paper Session: Intelligent Data Analysis - II**  
Chair: Silvana Quaglini  
**Real-time Multidimensional Temporal Analysis of Complex High Volume Physiological Data Streams in the Neonatal Intensive Care Unit**  
Carolyn McGregor, Andrew James, Mikael Eklund, Daby Sow, Maria Ebling, Marion Blount  
**A Unified Medical Language System (UMLS) Based System for Literature-based Discovery in Medicine**  
Matteo Gabetta, Cristiana Larizza, Riccardo Bellazzi  
**Full-text Automated Detection of Surgical Site Infections Secondary to Neurosurgery in Rennes, France**  
Boris Campillo-Gimenez, Nicolas Garcelon, Pascal Jarno, Jean-Marc Chapplaine, Marc Cuggia  
**Identifying Unproven Cancer Treatments on the Health Web: Addressing Accuracy, Generalizability and Scalability**  
Yindalon Aphinyanaphongs, Lawrence Fu, Constantin Aliferis  
(Student paper) **Unsupervised Medical Image Classification by Combining Case-based Classifiers**  
Thien Anh Dinh, Tomi Silander, Bolan Su, Tianxia Gong, Boon Chuan Pang, C. C. Tchoyoson Lim, Cheng Kiang Lee, Chew Lim Tan, Tze-Yun Leong |
| Room 2 | Workshop on Patient-Centred Care  
Moving Beyond eHealth Systems for ‘People Like Us’  
Paul Turner, Andre Kushniruk, Pernille Bertelsen, Luis Falcon, Chris Showell |
| Room 3 | Workshop on Evaluation - III  
Proposal for an EFMI WG Eval Supported Workshop “Aligning National eHealth Policy Goals with Indicators of eHealth Policy Effects. Challenges and Opportunities”  
Arild Faxvaag, Christian Nahr, Kristian Skauli, Sabine Koch, Hannele Hyppönen |
| Room 4 | Workshop on Policies  
Bridging Patient Summaries Across the Atlantic  
Catherine Chronaki, Robert Dolin, Marcello Melgara, Harold Solbrig, Jamie Ferguson, Kalra Dipak |
| Room 5 | Workshop on Safety - II  
Is the International Information Model for Patient Safety (2IMPS) a Suitable Tool to Compare Patient Safety Reporting Systems?  
Jean Marie-Rodrigues, Masanori Akiyama, Julien Souvignet, Katsuhide Fujita, Cedric Bousquet, Yingzi Jin, Pierre Lewalle, Luc van Looy, Anne Marie Taylor, Stefan Schulz, Itziar Larizgoitia |
### SECOND AFTERNOON SESSIONS 15:45 - 17:15

**Room 7**

#### Paper Session: Decision Support Systems and Technologies - IV
Chair: R Scott Evans

- **User Tests for Assessing a Medical Image Retrieval System: A Pilot Study**
  Dimitrios Markonis, Frédéric Baroz, Rafael Ruiz de Castaneda, Celia Boyer, Henning Müller

- **The Effect of an Electronic “Hard-stop” Alert on HIV Testing Rates in the Emergency Department**
  Rebecca Schnall, Jeremy Sperling, Nan Liu, Robert Green, Sunday Clark, David Vawdrey

- **A Method for Probing Disease Relatedness Using Common Clinical Eligibility Criteria**
  Mary Regina Boland, Riccardo Miotto, Chunhua Weng

  *(Student paper)* **On Behavioral Decision Making and Mobile Health: A Case Study**
  Divya Krishnan, Rema Padman

  *(Student paper)* **Completeness, Accuracy, and Presentation of Information on Interactions Between Prescription Drugs and Alternative Medicines: An Internet Review**
  Lou Ann Scarton, Guilherme Del Fiol, Qing Tretler-Zeng

### Room 8

#### Panel on Standards - IV

The Development and Adoption of an HIV Data Exchange Protocol by Large Global HIV Networks – Lessons Learned and Future Direction

Firas Wehbe, Dominic Duggan, Monique Termote, Jesper Kjær

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### THIRD AFTERNOON SESSION 17:15 – 18:30

**POSTER SESSION B: Poster Area** - See separate program

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**Wednesday 21 August**
### Thursday 22 August

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| **Keynote on Text Mining of Electronic Patient Records**  
  Chair: Knut Bernstein  
  Extracting Fine-grained Disease Phenotypes and Adverse Drug Reactions from Electronic Patient Records  
  Prof. Søren Brunak |
| **Auditorium**                        |
| **Keynote on Mobile Technologies to Improve Health**  
  Chair: TBA  
  mHealth: From Hope to Hype and Back  
  Dir. Patty Mecheal |
| **Room 1**                            |
| **‘Care for the World’ Mini-Symposium: Minisymposium on Care for the World**  
  Care for the World: Collaboration, Openness, Transparency and Trust as Prerequisite for High Quality, Effective and Efficient Health Care  
  Thomas Karopka, Syed Aljunid, Nurhizam Safie, Luis Falcon, Holger Schmuhl, Kjeld Lisby |
| **Room 2**                            |
| **Paper Session: Health Information Systems - I**  
  Chair: Tao Dai  
  Agile Exploration of Electronic Health Records with Application to Comparing the Quality of Blood Pressure Control in Pay-for-Performance Targets in a Cross-Sectional Study  
  Norman Poh, Simon de Lusignan, Harshana Liyanage, Jeremy van Vlymen, Paul Krause, Simon Jones  
  User-centered Design in Clinical Handover: Exploring Post-Implementation Outcomes for Clinicians  
  Ming Chao Wong, Elizabeth Cummings, Paul Turner  
  Functional Requirements for a Central Research Imaging Data Repository  
  Thomas Franke, Romanus Gruetz, Frank Dickmann  
  Exploring End Users’ System Requirements for a Handheld Computer Supporting Both Sepsis Test Workflow and Current IT Solutions  
  Lasse Lefevre Samson, Louise Pape-Hauggaard, Mette Søgaard, Henrik Carl Schenheyder, Ole Kristian Hejlesen  
  (Student paper) Development of a Public Health Reporting Data Warehouse: Lessons Learned  
  Seyed Ali Mussavi Rizi, Abul Roudsari |
| **Room 3**                            |
| **Paper Session: Patient Safety and Medical Errors - I**  
  Chair: Basema Saddik  
  It is Time for Self-Incident-Reporting for Patients and Their Families in Every Health Care Organization  
  Ulla-Mari Kinnunen, Kajsa Saranto  
  Telephone Follow-up in Primary Care: Can Interactive Voice Response Calls Work?  
  Shannon Houser, Midge Ray, Richard Maisiak, Anantachai Panjamapirom, James Willig, Gordon Schiff, Thomas English, Christa Nevin, Eta Berner  
  An Electronic Dashboard to Improve Nursing Care  
  Yung Ming Tan, Joshua Hii, Katherine Chan, Robert Sardual, Benjamin Mah  
  (Student paper) The Design of a User-Centered Voluntary Patient Safety Reporting System: Understanding the Time and Response Variances by Retrospective Think-aloud Protocols  
  Lei Hua, Yang Gong  
  (Student paper) Reducing Provider Cognitive Workload in CPOE Use: Optimizing Order Sets  
  Yiyue Zhang, Rema Padman, James E. Levin |
### Thursday 22 August

#### Paper Session: Education and Training
Chair: Fernando Martin-Sanchez

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<td>Developing Clinical Skills using a Virtual Patient Simulator in a Resource-limited Setting</td>
<td>Georges Bediang, Caroline Franck, Marc-André Raetzo, Jascha Doell, Marieme Ba, Yannick Kamga, Frédéric Baroz, Antoine Geissbühler</td>
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<td>Developing a Survey to Assess Factors that Contribute to Physician Involvement in Clinical Research</td>
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<td>Developing a Common Reference Model for the Health Informatics Discipline</td>
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<td>Urs-Vito Albrecht, Christoph Noll, Ute von Jan</td>
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<td>Santa Fé: Building a Virtual City to Develop a Family Health Game</td>
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#### Paper Session: Future of Informatics - Visions - II
Chair: Enrico Coiera

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<td>John Mantas, Arie Hasman, Edward Shortliffe</td>
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<td>A Vision for the Systematic Monitoring and Improvement of the Quality of Electronic Health Data</td>
<td>Brian E. Dixon, Marc Rosenman, Yuni Xia, Shaun Grannis</td>
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<td>mHealth to Revolutionize Information Retrieval in Low and Middle Income Countries: Introduction and Proposed Solutions Using Botswana as Reference Point</td>
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<td>Why We Need a Large-scale Open Metadata Initiative in Health Informatics – A Vision Paper on Open Data Models for Clinical Phenotypes</td>
<td>Martin Dugas</td>
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<td>The WHO-ITU National eHealth Strategy Toolkit as an Effective Approach to National Strategy Development and Implementation</td>
<td>Clayton Hamilton</td>
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#### Paper Session: Information Integration
Chair: Adam Wright

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<td>Hannu Virkanen, Juha Mykkänen, Mika Tuomainen</td>
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<td>Epistemonikos: A Free, Relational, Collaborative, Multilingual Database of Health Evidence</td>
<td>Gabriel Rada, Daniel Perez, Daniel Capurro</td>
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<td>Designing a Mobile Augmented Reality Tool for the Locative Visualisation of Biomedical Knowledge</td>
<td>Jess Kilby, Kathleen Gray, Kristine Elliott, Jenny Waycott, Fernando Martin Sanchez, Bharat Dave</td>
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<td>CiteGraph: A Citation Network System for MEDLINE Articles and Analysis</td>
<td>Qing Zhang, Hong Yu</td>
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<td>CONSORT-EHEALTH: Implementation of a Checklist for Authors and Editors to Improve Reporting of Web-Based and Mobile Randomized Controlled Trials</td>
<td>Gunther Eysenbach</td>
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10:00 - 10:30 Networking and Light Refreshment
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<td>eHealth Research and Educational Capacity in Sub-Saharan Africa&lt;br&gt;Pernille Bertelsen, Mona-Lisa Dahms</td>
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# Thursday 22 August

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<td>Experiences of Novel e-Health Services for Patients – Pros, Cons and Future Challenges</td>
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<td>Isabella Scandurra, Rose-Mharie Åhfeldt, Maria Hägglund</td>
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<td>12:00-13:30</td>
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<td>Paper Session: Ontologies and Representations</td>
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<td>Chair: Olivier Bodenreider</td>
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<td>Applying Ontological Realism to Medically Unexplained Syndromes</td>
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<td>Kristina Doig-Harris, Stéphane Meystre, Matthew Samore, Werner Ceusters</td>
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<td>An Ontological Approach for the Exploitation of Clinical Data</td>
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<td>Ariane Assélé Kama, Remy Choquet, Giovani Mels, Christel Daniel, Jean Charlet, Marie-Christine Jaulent</td>
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<td>Ontologies to Improve Chronic Disease Management Research and Quality Improvement Studies: A Conceptual Framework</td>
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<td>Harshana Liyanage, Siaw-Teng Liaw, Craig Kuziemsyky, Simon de Lusignan</td>
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<td>Design of Schistosomiasis Ontology (IDOSCHISTO) Extending the Infectious Disease Ontology</td>
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<td>Goussou Camara, Sylvie Despres, Rim Djedidi, Moussa Lo</td>
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<td>Development of Description Framework of Pharmacodynamics Ontology and its Application to Possible Drug-drug Interaction Reasoning</td>
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<td>Takeshi Imai, Masayo Hayakawa, Kazuiko Ohe</td>
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<td>Automated Synthesis and Visualization of a Chemotherapy Treatment Regimen Network</td>
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<td>Jeremy Warner, Peter Yang, Gil Alterovitz</td>
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<td>Whiteboard Icons to Support the Blood-Test Process in an Emergency Department: An Observational Study of Temporal Patterns</td>
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<td>Arnvør á Torkilsheyggi, Morten Hertzum, Gustav From</td>
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<td>Clustering and Summarising Association Rules Mined from Phenotype, Genotype and Environmental Data Concerning Age-Related Hearing Impairment</td>
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<td>Kati Iltanen, Sami Kviharju, Lida Ao, Martti Juhola, Ilmari Pyykkö</td>
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<td>Establishing Semantic Interoperability of Biomedical Metadata Registries using Extended Semantic Relationships</td>
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<td>Yu Rang Park, Young Jo Yoon, Hye Hyeon Kim, Ju Han Kim</td>
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<td>Visualization of Infectious Disease Outbreaks in Routine Practice</td>
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<td>David Karlsson, Joakim Eckberg, Armin Spreco, Henrik Eriksson, Toomas Timpka</td>
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<td>New Trends in Health Social Media: Hype or Evidence-based Medicine</td>
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<td>Luis Fernandez Luque, Annie Lau, Carol Bond, Kerstin Denecke, Fernando Martin-Sanchez</td>
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**12.00 – 13.30** NOON SESSION: LUNCH - EXHIBITION - NETWORKING

• • • POSTER SESSION C: Poster Area - See separate program • • •
**Thursday 22 August**

| Room 1 | Minisymposium on Digital Ecosystems  
Digital Ecosystems in Resource Constrained Areas: Implications for Chronic Disease Intervention  
Patricia Abbott; Andrew Kanter, Charles Friedman, & Daniel Capurro |
|--------|--------------------------------------------------|
| Room 2 | Paper Session: HIS/CIS Design and Architecture  
Chair: Daniel Luna  
**Barriers to the Reuse of Routinely Recorded Clinical Data: A Field Report**  
Kathrin Dentler, Annette ten Teije, Nicolette de Keizer, Ronald Cornet  
**Guidelines to Encourage the Adoption and Meaningful Use of Health Information Technologies in the South African Healthcare Landscape**  
Nicky Mostert-Phipps, Dalenca Pottas, Mikko Korpela |
| Room 3 | Paper Session: Human Factors and Usability - I  
Chair: Sabine Koch  
**Human Factors Considerations for Contraindication Alerts**  
Heleen van der Sijis, Imtiaaz Baboe, Shobha Phansalkar  
**Seeking Evidence to Support Usability Principles for Medication-Related Clinical Decision Support (CDS) Functions**  
Romaric Marcilly, Marie-Catherine Beuscart-Zéphir, Elske Ammenwerth, Sylvia Pelayo  
**Usability Evaluation of Family Physicians’ Interaction with COMET: Comorbidity Ontological Modeling and ExecuTion System**  
Samina R. Abidi, Samuel Stewart, Michael Shepherd, Syed Sibté Raza Abidi  
**An Example of an Application of the Semiotic Inspection Method in the Domain of Computerized Patient Record System**  
Weronika Tancredi, Olof Torgersson  
(Student paper) **Human Factors Affecting the Quality of Routinely Collected Data in South Africa**  
Edward Nicol, Debbie Bradshaw, Tamsin Phillips, Lilian Dudley |

**FIRST AFTERNOON SESSIONS**  
13:45 - 15:15  
**Panel on Decision Support - I**  
Reusable Knowledge for Best Clinical Practices: Why We Have Difficulty Sharing and What We Can Do  
Robert Greenes, Mor Peleg, Alan Rector, Jerome Osheroff  
**Panel on Patient-Centred Care - II**  
Patient-Centered Care Across Transitions: Challenges and Opportunities in Clinical Informatics  
Lipika Samal, Patti Dykes, Kaija Saranto, David Bates  
**Minisymposium on Digital Ecosystems**  
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## Thursday 22 August

### FIRST AFTERNOON SESSIONS  
**13:45** - **15:15**

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Anthony Luberti, Maurice Mars, John Holmes, Janise Richards, Paula Otero, Alvin Marcelo |
| 5    | Workshop on Standards - I | Workshop for IMIA Standardization WG  
Jun Nakaya, Beatriz de Faria Leao |
| 6    | Paper Session: Controlled Vocabularies and Terminologies - I | Chair: Michio Kimura  
**Genetic Testing Information Standardization in HL7 CDA and ISO13606**  
Diego Bosca, Luis Marco, Veronica Burriel, Teresa Jaijo, Jose Maria Millan, Ana Levin, Oscar Pastor, Monserrat Robles, Jose Alberto Maldonado  
**Sharing Ontology between ICD 11 and SNOMED CT will enable Seamless Re-use and Semantic Interoperability**  
Jean-Marie Rodrigues, Stefan Schulz, Alan Rector, Kent Spackman, Bedirhan Ustun, Christopher Chute, Vincenzo Della Mea, Jane Miller, Kristina Brand Persson  
**Leveraging Terminological Resources for Mapping between Rare Disease Information Sources**  
Bastien Rance, Michelle Snyder, Janine Lewis, Olivier Bodenreider  
**Semantic Interoperation and Electronic Health Records: Context Sensitive Mapping from SNOMED CT to ICD-10**  
James R. Campbell, Hazel Brear, Rita Scichilone, Susan White, Kathy Giannangelo, Brian Carlsen, Harold Solbrig, Xin Wah Fung |
| 7    | Paper Session: Natural Language Processing, Understanding and Generation - I | Chair: Pierre Zweigenbaum  
**Engineering Natural Language Processing Solutions for Structured Information from Clinical Text: Extracting Sentinel Events from Palliative Care Consult Letters**  
Neil Barrett, Jens H. Weber-Jahnke, Vincent Thai  
**Automatically Identifying Health- and Clinical-Related Content in Wikipedia**  
Feifan Liu, Soheil Moosavinasab, Shashank Agarwal, Andrew S. Bennett, Hong Yu  
**Applying Multiple Methods to Assess the Readability of a Large Corpus of Medical Documents**  
Danny T.Y. Wu, David Hanauer, Qiaozhu Mei, Patricia Clark, Lawrence C. An, Jianbo Lei, Joshua Proulx, Qing Zeng-Treitler, Kai Zheng  
**Analyzing Differences between Chinese and English Clinical Text: A Cross-Institution Comparison of Discharge Summaries in Two Languages**  
Yonghui Wu, Jianbo Lei, Weiqi Wei, Buzhou Tang, Josh Denny, Samuel Trent Rosenbloom, Randolph Miller, Dario Giuse, Kai Zheng, Hua Xu  
(Student paper) **An Efficient Pancreatic Cyst Identification Methodology using Natural Language Processing**  
Saeed Mehrabi, Max Schmidt, Joshua Waters, Chris Beesley, Anand Krishnan, Joe Kesterson, Paul Dexter, Mohammad Ali Al-Hadad, William Tierney, Mathew Palakal |

### Panel on Social Media - II  
**Social Media for More Patient-Centered, Cost-Effective Healthcare Delivery**  
Carolyn Petersen, Samantha Adams, Jonathan Armstrong, Paul DeMuro

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**15:15** - **15:45**  
**NETWORKING AND LIGHT REFRESHMENT**
## Thursday 22 August

| Room 1 | Panel on Trends  
Big Data Analytics in Biomedicine and Health: Trends and Challenges  
Niels Peek, John Holmes, Fernando Martin-Sanchez, Jimeng Sun |
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| Room 1 | Panel on Decision Support - II  
How to Detect and Exploit Non-adherence to Guidelines?  
Vimla Patel, Ameen Abu-Hanna, Mor Peleg, Silvana Quaglini |
| Room 2 | 'Care for the World' Mini-Symposium: Minisymposium on Village of the Future  
Village of the Future – Copenhagen Next Stop  
Jacob Hofdijk, Michael Rigby, Christian Lovis |
| Room 2 | Paper Session: HIS - Monitoring and Secure Information Infrastructures  
Chair: TBA  
Home Monitoring and Decision Support for International Liver Transplant Children  
Bianying Song, Mareike Schulze, Imeke Goldschmidt, Reinhold Haux, Ulrich Baumann, Michael Marschollek  
Integrated System to Automatize Information Collecting for the Primary Health Care at Home  
Edson Oliveira, Jean Cainelli, Maria Eugênia Bresolin Pinto, Silvio Cazella, Alessandra Dahmer  
Envisioning the Future of Home Care: Applications of Immersive Virtual Reality  
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**Assisting the Translation of SNOMED CT into French**  
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**User-Directed Coordination in SNOMED CT**  
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Stathis Konstantinidis, Margaret Hansen, Panagiotis D. Bamidis, Chris Paton |

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**POSTER SESSION D: Poster Area** - See separate program

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**Mini-Symposium on Village of the Future**  
**Discussion Session**  
Jacob Hofdijk, Michael Rigby, Christian Lovis
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Charles Friedman, Arie Hasman, John Holmes, John Mantas, Kaija Saranto |
| Room 1        | **Panel on Privacy - II**  
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Working Solutions for Telehealth in Low Resource Areas  
Shashi Bhushan Gogia, Anthony Maeder, Gunnar Hartvigsen, Maurice Mars, Susil Meher |
| Room 3        | **Panel on Info Management - I**  
Question Answering for Health Professionals and Laypersons  
Ulrich Andersen, Stefan Schulz |
| Room 4        | **Paper Session: National and International Health IT Efforts and Implementations**  
Chair: Lyn Hanmer  
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Elin Lehnbom, Andrew McLachlan, Jo-Anne Brien  
Ensuring Clinical Utility and Function in a Large Scale National Project in Australia by embedding Clinical Informatics into Design  
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A Proposed Model for Advancing the Science of Nursing Informatics and its Value Proposition for Clinical Practice, Nursing Education and Research  
Elizabeth Weiner, Charlotte Weaver, Rosemary Kennedy, Heimar Marin, Patricia Brennan |
| Room 5        | **Workshop on Standards - III**  
The Open EHR Developers’ Workshop  
Shinji Kobayashi, Alan March, Erik Sundvall, Daniel Karlsson, Mikael Nyström, Sergio Freire, Bert Verhees, Iago Corbal, Nadim Anani, Rong Chen |
Friday 23 August

**FIRST MORNING SESSIONS 08:30 - 10:00**

**Room 6**

**Paper Session: Informatics Policies and Ethical Issues**  
Chair: Lincoln A Moura

**Nordic eHealth Indicators: Organisation of Research, First Results and Plan for the Future**  
Hannele Hyppönen, Arild Faaavag, Heidi Gilstad, Gudrun Hardardottir, Lars Jerløvall, Maarit Kangas, Sabine Koch, Christian Nehr, Thomas Pehrsson, Jarmo Reponen, Åke Walldius, Vivian Vimarland

**International Priorities for Research in Nursing Informatics for Patient Care**  
Dawn Dowding, Leanne Currie, Elizabeth Borycki, Susan Clamp, Jesus Favela, Geraldine Fitzpatrick, Peter Gardner, Susan Hamer, Nicholas Hardiker, Owen Johnson, Rebecca Lawton, Ann O’Brien, Rebecca Randell, Johanna Westbrook, Zac Whitewood-Moore, Patti Dykes

**Application of the Medical Device Directive to Software: Methodological Challenges**  
Sylvia Pelayo, Sabrina Bras Da Costa, Nicolas Leroy, Séverine Loiseau, Damien MacKeon, Delphine Trancard, Marie-Catherine Beuscart-Zéphir

**Experts Speak: Advice from Key Informants to Small, Rural Hospitals on Implementing the Electronic Health Record System**  
Catherine Craven, Mary Ellen Sievert, Lanis Hicks, Greg Alexander, Leonard Hearne, John Holmes

**Personal Health Information, Privacy and Surveillance: Do We Need a Critical Voice?**  
Sue Whetton

**Room 7**

**Paper Session: Technology and System Evaluation- I**  
Chair: Wendy Chapman

**Steps to Consider for Effective Decision Making when Selecting and Prioritizing eHealth Services**  
Vivian Vimarland, Nadia Davoodly, Sabine Koch

**An Evaluation Framework and Pilot Study of a Mobile Platform for Diabetes Self-Management: Insights from Pediatric Users**  
Rema Padman, Sravani Jaladi, Sean Kim, Saumitra Kumar, Philip Orbeta, Kate Rudolph, Tony Tran

**Web-based Peer-Driven Chain Referrals for Smoking Cessation**  
Rajani Sadasivam, Sarah Cutrona, Erik Volz, Sowmya Rao, Thomas Houston

**Clinical Computer Systems Survey (CLICS): Learning about Health Information Technology (HIT) in its Context of Use**  
Valentina Lichtner, Tony Cornford, Ela Klecun

**Evaluation of a Computerized Tool allowing Retrospective Detection of Potential Vitamin K Antagonist Overdoses in Complex Contexts**  
Laurie Ferret, Michel Luyckx, Béatrice Merlin, Grégoire Ficheur, Emmanuel Chazard, Régis Beuscart

**Room 8**

**Paper Session: Computerized Guidelines and Protocols - I**  
Chair: Wojtek Michalowski

**Mining the Changes of Medical Behaviors for Clinical Pathways**  
Zhengxing Huang, Chenxi Gan, Xudong Lu, Huilong Duan

**A Model-Driven Approach to Clinical Practice Guidelines Representation and Evaluation Using Standards**  
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**A Web-based System to Facilitate Local, Systematic Quality Improvement by Multidisciplinary Care Teams: Development and First Experiences of CARDSS Online**  
Mariette van Engen-Verheul, Sabine van der Veer, Nicolette de Keizer, Winston Tjon Sjoe Sjoe, Eric van der Zwan, Niels Peek

**Clinical Practice Guidelines and Comorbid Diseases: A MiniZinc Representation of Guideline Models for Mitigating Adverse Interactions**  
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**Patient-tailored Workflow Patterns from Clinical Practice Guidelines Recommendations**  
Lucia Sacchi, Adi Fux, Carlo Napolitano, Silvia Panzarasa, Mor Peleg, Silvana Quaglini, Erez Shalom, Phina Soffer, Paolo Tormene

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**Workshop on Standards - IV**  
Open Metadata for Medical Data Models  
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Chair: Amado Espinosa

- **Insuring the Security and Availability of a Hospital Wireless LAN System**  
  Eisuke Hanada, Takato Kudou, Shusaku Tsumoto
- **A Comparison of Approaches to Providing Patients Access to Summary Care Records Across Old and New Europe: An Exploration of Facilitators and Barriers to Implementation**  
  Simon de Lusignan, Peter Ross, Michael Shifrin, Mira Hercigonja-Szekeres, Brigitte Seroussi
- **Concepts for a Standard-based Cross-organisational Information Security Management System in the Context of a Nationwide EHR**  
  Alexander Mense, Franz Hoheiser-Pförtner, Martin Schmid, Harald Wahl
- **(Student paper) An Examination of Electronic Health Information Privacy in Older Adults**  
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  Shada Alsalamah, W. Alex Gray, Jeremy Hilton, Hessah Alsalamah

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- **Comparing Approaches to Measuring the Adoption and Usability of Electronic Health Records: Lessons Learned from Canada, Denmark and Finland**  
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- **Sociotechnical Evaluation of the Safety and Effectiveness of Point-of-Care Mobile Computing Devices: A Case Study Conducted in India**  
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- **Evaluating the Impact of ICT-tools on Health Care Delivery in Sub-Saharan Hospitals**  
  Frank Verbeke, Gustave Karara, Marc Nyssen
- **(Student paper) User Experience of InterRAI Assessment Tools in New Zealand**  
  Joanne Smith, Dick Whiddett, Inga Hunter

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**Friday 23 August**
### SECOND MORNING SESSIONS

**10:30 - 12:00**

**Room 8**

**Paper Session: Computerized Guidelines and Protocols - II**

**Chair:** Mor Peleg

- **Early Experiences from a Guideline-based Computerized Clinical Decision Support for Stroke Prevention in Atrial Fibrillation**
  Rong Chen, Carlos Valladares, Iago Corbal, Nadim Anani, Sabine Koch

- **Assessing the Usage of a Guideline-Driven Interactive Case Simulation Tool for Insomnia Screening and Treatment in an HIV Clinical Education Program**
  Xuan Hung Le, Amneris Luque, Dongwen Wang

- **Which Patients may Benefit from the Use of a Decision Support System to Improve Compliance of Physician Decisions with Clinical Practice Guidelines: A Case Study with Breast Cancer involving Data Mining**

- **(Student paper) A Guideline-Derived Model to Facilitate the Implementation of Test Ordering Rules within a Hospital Information System**
  Mobin Yasini, Catherine Duclos, Alain Venot, Eric Lepage, Jean-Baptiste Lamy

- **(Student paper) Method to Clinical Guidelines Integration into EHR Applying Archetypes Approach**
  Diego Garcia, Claudia Moro, Paulo Cicogna, Deborah Carvalho

### CLOSING SESSION AFTERNOON

**13:00 - 14:30**

**Plenum**

- **Closing Keynote on factors for good research in biomedical and health informatics**
  On Determining Factors for Good Research in Biomedical and Health Informatics. Some Lessons Learned
  Prof. Reinhold Haux

- **Award and Closing Ceremony**
  Invitation to Brazil 2015
  IMIA Awards
  Closing by IMIA and LOC

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**Reviewers medinfo 2013**

medinfo 2013 would like to recognize and thank the 379 reviewers who contributed their expertise, time, and effort for reviewing the numerous submissions. The MEDINFO conference would not be possible without all the reviewers’ contribution. The names of the reviewers are available at [www.medinfo2013.dk](http://www.medinfo2013.dk)
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## Board 02. Ontologies, knowledge representations, data models

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**(The Posters will be mounted at 8:30 and dismounted when the Poster Session ends)**

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- Mukai Masami, Ando Yutaka, Okuda Yasuo, Takahashi Naoto, Yoda Yoshihisa, Tsuji Hiroshi, Kamada Tadashi

#### 53.3 Promoting Health Informatics for Multidisciplinary Education in Patient Safety: A Master Course Program in Japan
- Qiyan Zhang, Hiroshi Takeda

#### 53.4 A Pilot Study Measuring Changes in Student Impressions before and after Clinical Training Using a Questionnaire Based on the Semantic Differential Technique
- Naomi Tamura, Takayoshi Terashita, Katsuhiko Ogasawara

#### 53.5 Development of Electronic Progress Tables for Multidisciplinary Medical Education in a University
- Rie Inoue, Hinako Toyama, Toru Ishikawa, Tetsuya Eda, Fumihiro Kuroda

#### 53.6 Long-term Changes of Information Environments and Computer Anxiety of Nurse Administrators in Japan
- Yukie Majima, Takako Izumi

#### 53.7 Electronic Teaching Materials for Inter-Professional Education in a College of Medical Professionals
- Hinako Toyama, Rie Inoue, Yumi Ito, Chieko Sakamoto, Toru Ishikawa, Tetsuya Eda, Keichi Saito

#### 53.8 10xo Comes Full Circle: Spanish Version Back to United States in Puerto Rico
- Alvaro Margolis, Francisco Joglar, Fernán González Bernaldo de Quirós, Analia Baum, Antonio Fernández, Sofía García, Antonio López Arredondo, William R. Hersh

#### 53.9 The Development of a Multiplayer Game for Education of Hospital Management
- Tadamasa Takemura, Toshiyuki Tanaka, Kazuya Okamoto, Naoto Kume, Tomohiro Kuroda, Masahiro Hirose, Hiroyuki Yoshihara

### 54. Government, community, and organizational policies for health and informatics

#### 54.1 Impact of Thailand Universal Coverage Scheme on the Country's Health Information Systems and Health Information Technology
- Boonchai Kijsanayotin

### 55. Ethical and legal issues

#### 55.1 Legal Issues among doctors in the implementation of Teleconsultation: A study at AIIMS, New Delhi, INDIA
- Sushil Kumar Meher, Ashutosh Biswas, Birkam K. Ratha
Telemedical wound assessment - a national IT tool in everyday clinical practice cross-sectoral

In Denmark a national telemedical wound assessment is currently being implemented. Specialty departments in hospitals are already cooperating with local wound care nurses about the treatment of leg ulcers, but it is a challenge to exchange data in a quick and efficient manner. At the same time it can be a challenge to maintain the same principles of treatment and skills in wound management, and to ensure an early effort by specialists in wound management. The national project supports common learning and qualification principles.

By using a common IT platform that can function as a shared care platform and as a communication tool, gives the clinicians the opportunity to share data and apply the same principles of treatment. The national implementation project supports development of shared competence and optimization of the referral process. The treatment of wounds is performed within several hospital specialties and the practice of registration of diagnosis is varied, the national project promotes joint registration practices.

The national implementation project is a consequence of a national business case. The government, Local Government Denmark and Danish Regions has agreed to validate the national business case and if necessary, change the described gain potential in the national business case, thus a dynamic business case is used.

Learning Objectives:
At this symposium you will be introduced to:
• The National Action Plan for telemedicine in Denmark in 2012-2015
• A national program of telemedical wound assessment for 5 regions and 98 municipalities
• Telemedicine applied via an online shared care platform in a national program
• The use of telemedicine as a targeted communication tool for wound assessment
• Learning tools such as e-learning and traditional courses as part of the development of telemedical wound assessment
• Work with a dynamic national business case

Presenters:
Kristoffer Karlsen, CEO Danish Telemedicine
Rie Nygaard, Partner, Development and process management, KvaliCare
Susan Jorgensen, Partner, CEO, benchmarking and support, KvaliCare
Lars Hulbæk, Deputy Head, MedCom
Dorthe Skou Lassen, Senior Consultant, MedCom
IMO Clinical Interface Terminology: The Foundation for Electronic Medical Records Efficacy

Clinical Interface Terminology, as pioneered by IMO, is the most fundamental element for the efficacy and interoperability of medical records systems. Hospitals and health systems seeking to have an effective health record system will find IMO’s terminology solution essential to achieving this goal. In this symposium, you will learn how IMO’s terminology service provides nomenclature cross-mapping of code sets and medical vocabularies to allow for the capture of structured clinical information for the clinician. This way, ‘true clinical intent’ is captured and documented within the electronic medical record. The automated mapping to standard code sets is at the center of any EMR system.

IMO’s most widely-used product is IMO Problem (IT), a database of over 260,000 clinician-friendly medical terms and concepts that are seamlessly mapped to all major reference coding systems, including SNOMED CT® and ICD-10-WHO. Problem (IT) allows clinicians to build problem lists and capture diagnoses with a higher degree of granularity than SNOMED CT or ICD-10. This improves the quality of the diagnosis in a problem list while improving the clinical workflow, saving a great deal of time for the clinician. IMO also provides automatic nomenclature updates, simplifying the management of your vocabularies.

As a leading healthcare technology innovation center, IMO is also deeply involved in Speech Recognition Technologies and Natural Language Processing for longitudinal care records, Patient Histories, eHealth and OpenMRS, and will provide an overview to these technologies.

Learning Objectives:
After this symposium, you will have the ability to:
• Understand Clinical Interface Terminology and how it works
• Recognize how Interface Terminology is essential for the efficacy of health information systems
• Differentiate Intelligent Medical Objects from other terminology services
• Identify how IMO supports other eHealth initiatives

Presenters:
Frank Naeymi-Rad, PhD, MBA, Chairman and Chief Executive Officer
Fritz Hofheinz, MD, MBA, Chief Medical Information Officer
Intelligent Medical Objects
## Working Group Meetings

### Monday 19 August 2013

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<thead>
<tr>
<th>Room</th>
<th>Time</th>
<th>Meeting</th>
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<tbody>
<tr>
<td>Meeting room 17</td>
<td>8.00 - 17.00</td>
<td>IMIA Board Meeting</td>
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<tr>
<td>Meeting room 19</td>
<td>8.00 - 17.00</td>
<td>EFMI Council Meeting</td>
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### Tuesday 20 August 2013

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<tr>
<td>Meeting room 19</td>
<td>8.00 - 15.30</td>
<td>IMIA General Assembly</td>
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<tr>
<td>Meeting room 19</td>
<td>15.30 - 17.00</td>
<td>APAMI General Assembly</td>
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<tr>
<td>Meeting room 17</td>
<td>8.00 - 17.00</td>
<td>IMIA Francophone SIG</td>
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<td>Meeting room 16</td>
<td>8.00 - 17.00</td>
<td>IMIA NI SIG Board Meeting</td>
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### Wednesday 21 August 2013

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<tr>
<th>Room</th>
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<tbody>
<tr>
<td>Meeting room 17</td>
<td>8.00 - 9.30</td>
<td>Health Social Media IMIA WG</td>
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<td>9.30 - 11.00</td>
<td>The CDS Collaborative for Performance Improvement</td>
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<td>11.00 - 14.00</td>
<td>Security in Health Information Systems</td>
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<td>15.30 - 17.00</td>
<td>Asia eHealth Information Network</td>
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<tr>
<td>Meeting room 19</td>
<td>8.00 - 9.30</td>
<td>IMIA LAC</td>
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<td>9.30 - 11.00</td>
<td>IMIA Social and Organizational WG</td>
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<td></td>
<td>11.00 - 12.30</td>
<td>Wearable Sensors in Healthcare</td>
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<td>12.30 - 14.00</td>
<td>Technology Assessment and quality development in Health Informatics</td>
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<td>14.00 - 15.30</td>
<td>Open Source Health Informatics</td>
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<td>15.30 - 17.00</td>
<td>Health and Medical Informatics Education</td>
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### Thursday 22 August 2013

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<tr>
<td>Meeting room 17</td>
<td>8.30 - 10.00</td>
<td>Medical Concept Representation</td>
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<tr>
<td></td>
<td>12.00 - 13.30</td>
<td>Methods of information in Medicine</td>
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<td></td>
<td>12.00 - 13.30</td>
<td>Editorial Board meeting</td>
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<td></td>
<td>14.00 - 15.00</td>
<td>HIS WG</td>
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<td>15.30 - 17.00</td>
<td>Primary Health Care Informatics WG</td>
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<tr>
<td>Meeting room 19</td>
<td>8.00 - 9.30</td>
<td>Human Factors Engineering in Health Informatics</td>
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<td>10.30 - 12.00</td>
<td>Silversponsor Symposium MEDCOM</td>
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<td>13.45 - 15.15</td>
<td>Silversponsor Symposium IMO</td>
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<td>15.30 - 17.00</td>
<td>IMIA Social and Organizational WG</td>
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### Friday 23 August 2013

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<tr>
<th>Room</th>
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<tr>
<td>Meeting room 17</td>
<td>8.00 - 9.30</td>
<td>HI for Development</td>
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<td></td>
<td>10.30 - 12.00</td>
<td>Medical Concept Representation</td>
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<td>12.30 - 14.00</td>
<td>Dr S B Gogia</td>
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<td></td>
<td>14.00 - 15.30</td>
<td>Intelligent Data Analysis and Data Mining</td>
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<td>15.30 - 17.00</td>
<td>Medical Concept Representation</td>
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<tr>
<td>Meeting room 19</td>
<td>8.00 - 9.30</td>
<td>Workshop for IMIA standardization</td>
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<td>10.30 - 12.00</td>
<td>IMIA Social and Organizational WG</td>
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<td></td>
<td>12.30 - 14.00</td>
<td>Health Informatics in Africa (Helina)</td>
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<td></td>
<td>14.00 - 15.30</td>
<td>Smart homes and Ambient Assisted Living</td>
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### Speakers room

Speakers room is available for presenters in room 16 on 21, 22 and 23 August 2013 from 8:00 – 17:00.
medinfo2013 would like to thank the organisers of the well attended French Speaking scientific track held on 20 August.

All talks were given in French.

Please see full program on http://francophonesig.imia.info/ (follow link to Pré-symposium francophone à MEDINFO)

Program

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>08:30</td>
<td>Welcome and Introduction</td>
</tr>
<tr>
<td>09:00</td>
<td>Session 1: Patient Records and Telemedicine</td>
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<tr>
<td></td>
<td>(Québec, 4 talks)</td>
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<tr>
<td>10:20</td>
<td>Coffee break</td>
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<tr>
<td>10:50</td>
<td>Session 2: Surveillance, Telemedicine,</td>
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<td></td>
<td>Self Learning, Ethics, Interoperability,</td>
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<tr>
<td></td>
<td>Decision Support, Language Processing</td>
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<tr>
<td></td>
<td>(Canada, Colombia, France, Madagascar,</td>
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<td></td>
<td>Mali, Senegal, Spain, Switzerland, United</td>
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<td></td>
<td>States, 12 short talks)</td>
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<tr>
<td>12:30</td>
<td>On-site lunch break and SIG discussion</td>
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<tr>
<td>14:00</td>
<td>Session 3: Interoperability, Ontology, and</td>
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<td></td>
<td>Language Processing (Switzerland and France,</td>
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<td></td>
<td>4 talks)</td>
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<tr>
<td>15:30</td>
<td>Final discussion</td>
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<tr>
<td>15:45</td>
<td>End of meeting</td>
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</tbody>
</table>

Program Committee

Cheikh Oumar Bagayoko (Bamako, Mali)
Asma Ben Abacha (Luxembourg, Luxembourg)
Anita Burgun (Paris, France)
Stéfan Darmoni (Rouen, France)
Marius Fieschi (Marseille, France)
Marie-Pierre Gagnon (Québec, Canada)
Antoine Geissbuhler (Genève, Suisse), président
Natalia Grabar (Lille, France)
Marie-Christine Jaulent (Paris, France)
Ghislain Kouematchoua (Cameroon)
Christian Løvis (Genève, Suisse)
Stéphane Meystre (Salt Lake City, États-Unis)
Fleur Mougin (Bordeaux, France)
Aurélie Névèvel (Orsay, France)
Guy Paré (Montréal, Canada)
Sylvia Pelayo (Lille, France)
Rabenja Rapelanoro (Antananarivo, Madagascar)
Jean-Marie Rodrigues (Saint-Étienne, France)
Patrick Ruch (Genève, Suisse)
Brigitte Séroussi (Paris, France)
Pascal Staccini (Nice, France)
Lynda Tamine (Toulouse, France)
Patrick Weber (Lausanne, Suisse)
Pierre Zweigenbaum (Orsay, France), président

Student paper competition finalists

The Student Paper Competition is sponsored by IBM Research

Identifying Problematic Concepts in SNOMED CT using a Lexical Approach
Ankur Agrawal, Yehoshua Perl, Gai Elhanan

A Health Literacy and Usability Heuristic Evaluation of a Mobile Consumer Health Application
H Monkman, A Kushniruk

Finding Meaning in Social Media: Content-based Social Network Analysis of QuitNet to Identify New Opportunities for Health Promotion
Sahiti Myneni, Nathan Cobb, Trevor Cohen

Human factors affecting the quality of routinely collected data in South Africa
Edward Nicol, Debbie Bradshaw, Lilian Dudley, Tamsin Phillips

Improving Patients’ Electronic Health Record Comprehension with NoteAid
Balaji Polepalli Ramesh, Thomas Houston, Hong Yu

A Formal Representation for Numerical Data Presented in Published Clinical Trial Reports
Maurine Tong, William Hsu, Ricky Taira

Automatic identification of comparative effectiveness research from Medline citations to support clinicians’ treatment information needs
Mingyuan Zhang, Guilherme Del Fiol, Randall Grout, Siddhartha Jonnalagadda, Richard Medlin Jr, Rushmi Mishra, Charlene Weir, Hong-fang Liu, Javed Mostafa, Marcelo Fiszman

Navigating longitudinal clinical notes with an automated method for detecting new information
Rui Zhang, Serguei Pakhomov, Janet Lee, Genevieve Melton-Meaux
medinfo2013 would like to thank the organisers of the well-attended tutorial program

Monday, August 19

Clinical Decision Support: A Practical Guide to Developing Your Program to Improve Outcomes
Robert A. Jenders, Jerome A. Osheroff, Jonathan M. Teich, Dean F. Sittig

The Electronic Health Record – Realizing the Potential
W. Ed Hammond, Jeff Ferranti, and Eugenia Hinz

The international impact of openEHR clinical content models
Heather Leslie, Rong Chen, Anže Droljc, Shinji Kobayashi, Hugh Leslie, Ian McNicoll, Jussara Rötzsch

Using visual computing tools to improve clinical engagement and group communication
Joanne Curry, Ante Prodan

Practical Approaches to Knowledge Management and Clinical Decision Support
Roberto A. Rocha, Saverio M. Maviglia, Margarita Sordo, Beatriz H. Rocha

Practical Modeling Issues: Representing Coded and Structured Patient Data in EHR Systems
Stanley M. Huff

Expressing and Sharing Clinical Decision Support Rules Using openEHR Archetypes
Rong Chen, Lago Corbal

Evaluating Health Information and Communications Technologies: Why, How, Challenges
Caitlin M. Cusack, Brian E. Dixon, Adam Wright

Implementation of telemedicine services in rural areas – lessons learned and future perspectives
Gunnar Hartvigsen

Tuesday, August 20

Essentials of Data mining in Clinical Applications: Development, Evaluation, and Use
Niels Peek

An Introduction to Clinical Natural Language Processing
Wendy W. Chapman, Dina Demner-Fushman, Hua Xu, Stéphane M. Meystre

Effective eHealth and mHealth Evaluations in Low Resource Environments (Part 1 and Part 2)
Hamish Fraser, Shariq Khoja, Jan Talmon, Janise Richards

User Centered Design for Public Health and Consumer Health Informatics
Rupa Valdez, Barbara L. Massoudi

The Role of Chief Medical Information Officer: Importance, Areas of Responsibility and Expertise
Thomas Payne, Gil Kupperman, Kevin Fickenscher

Making Electronic Health Records Safer and More Effective in Improving Health Care
Dean F. Sittig, Farah Magrabi, Hardeep Singh

Large scale clinical text processing and process optimization
Olga V. Patterson, Scott L. DuVall

Personal Health Records, Portals, and Patient-facing Health Information Technologies
Patricia Flatley Brennan, Jonathan Wald

Ethics and Health Informatics
Kenneth W. Goodman
Exhibition and Conference Floor Plan
Intelligent Medical Objects (IMO®) develops, manages, and licenses medical vocabularies and software applications for health care organizations. IMO’s Clinical Interface Terminology products provide seamless mapping of diagnostic terminologies to standard codes and medical concepts. IMO provides the tools necessary for health care organizations to support uniform labeling of health profiles, services rendered, and outcomes across their enterprise.

IMO products provide a common linkage across all electronic patient records, regardless of the standard needed for that particular data set (ICD9-CM, SNOMED® CT, MeSH, HCPCS, LOINC, RxNorm, ICD-10-WHO). Since most code mappings are updated several times per year, including regulatory updates, IMO removes the burden of managing updates for you.

Our flagship product, IMO® Problem (IT)™, allows physicians to enter a diagnosis for a patient Problem List without altering the language they would normally use. This solves the problem of forcing clinicians to remember and use the often awkward and cumbersome ICD-9 coding language when documenting in the EHR.

Unlike other electronic medical records software vocabularies, IMO provides an interface to the standard ICD-9-CM-driven terminology in the EHR search with an improved 260,000+ term search that expresses clinical intent while at the same time providing the correct coding for that intent. For more information, visit www.e-imo.com.

MedCom is a co-operative venture between authorities, organisations and private firms linked to the Danish healthcare sector. In the 1999 financial agreement between the counties and central government, it was decided that MedCom would be made permanent, with the following objective:

“MedCom will contribute to the development, testing, dissemination and quality assurance of electronic communication and information in the healthcare sector with a view to supporting good patient progression”.

MedCom’s profile was intensified further in connection with the financial agreement between the regions and the government for 2011, with role of operating organization. “MedCom solves problems with a focus to support efficient performance and a gradual expansion of the national eHealth infrastructure, which is necessary for a safe and coherent access to relevant data and communication across regions, municipalities, and general practitioners”.

MedCom is financed and owned by: The Ministry of Health, Danish Regions, Local Government Denmark

MedCom has, since its establishment, worked in time-constricted project periods of 2 – 4 years. MedCom8 takes place in 2012 – 2013 and includes 7 project lines:

1. The Chronic Patient Project
2. E-record and P-record
3. Local authority projects
4. Common Medication Card in medical practice
5. Telemedicine
6. Practice and Laboratory projects
7. International projects

NSI - Danish National Board of e-Health
We establish the framework for digitization across Denmark’s health care system.
The vision for Denmark’s health care system is to provide coherent clinical pathways focusing on the needs of patients and high quality of treatment. A prerequisite for this is easy access to relevant information where and when it is needed by both patients and health care providers.

The National Board of e-Health is an agency under the Ministry of Health. As a national public authority, we collaborate with all relevant parties in Denmark’s health care sector and manage the processes that lead to the establishment of uniform rules and frameworks for e-Health in Denmark. This ensures that all parts of the health care system can share data securely and efficiently, with the aim of providing patients the best possible treatment.

The National Board of e-Health is responsible for the creating relevant common frameworks and standards within e-Health. We generate reference architectures and lay down standards for communication between sectors. Furthermore, we lay the foundation for nationwide infrastructure and operate and develop national health-related IT systems. Finally, we implement specific intersectoral initiatives and collaborate internationally.
NNIT, a leading IT service provider, offers world-class IT consulting and services for regulated industries including life sciences and public sector. We create value for our private and public sector customers by treating their IT as if it were our own. We use IT to support our customers’ daily operations and help them to achieve their business goals.

NNIT collaborates with healthcare organizations to put patients at the heart of their operations and helps them become high-performance businesses.

www.nnit.com

The Danish eHealth Observatory conference communicates important achievements in eHealth for patients, clinicians and management. Since 1999 issues of needs to support prevention, diagnostics, treatment and care by the user of ICT have been put into perspective during the eHealth Observatory annual conference. The conference attracts 600+ eHealth professionals and around 25 exhibitors annually.

Medinfo2013 Other sponsors
List of Exhibitors

We would particularly like to thank all exhibitors and sponsors for supporting this event and investing their time and resources to make it interesting for everybody. The Local Organising Committee encourage all delegates to take time to visit the exhibition, and to learn more about how the various parts of our industry are making eHealth ever more relevant, ever better.

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<thead>
<tr>
<th>Booth no</th>
<th>Exhibitor</th>
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<td>Cambio Healthcare System</td>
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<td>MIE - European Federation for Medical Informatics</td>
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<td>CGI Denmark A/S/Cerner</td>
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<td>Chip Soft</td>
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<td>Qualcomm Life</td>
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<td>IOS Press</td>
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<td>CSC Scandiphath</td>
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<td>Max Manus A/S</td>
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<td>Aalborg University</td>
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<td>NNIT</td>
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<td>SIG Nordic – The Software Improvement Group</td>
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<td>Cetrea A/S</td>
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<td>Socialstyrelsern, Sweden</td>
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<td>Uptodate - Wolters Kluwer Health</td>
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<td>5 B</td>
<td>EBSCO, Dynamed</td>
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<td>Systematic</td>
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<td>IMO - Intelligent Medical Objects Inc.</td>
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<td>Danske Telemedic</td>
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<td>GSs Denmark</td>
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<td>MEDCOM</td>
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<td>11</td>
<td>NSI – Danish National Board of e-Health</td>
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<td>SAS Institute</td>
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<td>IMATIS A/S</td>
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<td>Siemens</td>
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<td>IMIA - The International Medical Informatics Association</td>
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<td>22</td>
<td>MIRSK Digital ApS</td>
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<td>IHTSDO</td>
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Aalborg University

Aalborg University (AAU) offers education and research within the fields of natural sciences, social sciences, humanities and health sciences. The university is working to create better health and welfare in modern society. In doing so the university combines research in the fields of health science and engineering into a strong profile within medical technology. At AAU the health sciences encompasses a wide range of highly advanced and internationally acknowledged research areas ranging from cell to system.

In 2013 an institute for clinical science was established at the university. This institute is part of the new Aalborg University Hospital where clinical research is carried out in cooperation between students and scientists to the benefit of the patients, the hospital and development of clinical science in general.

AAU is dedicated to the practice of interdisciplinary research and knowledge sharing between subjects of knowledge. The objective is to utilize collaborations between the researchers from all four faculties at the university, the departments at Aalborg University Hospital and national and international companies. Combined with a very strong environment for medical technology collaborative research truly has potential to contribute to better health and welfare and sustainable growth in society.

Visit us on our website: www.en.aau.dk
Read more about our health research: www.hst.aau.dk , www.en.dachi.aau.dk and www.klinisk.aau.dk (in Danish only).

Cetrea

The Cetrea Clinical Logistics technology is designed with a clear vision: making sure that the right patient gets the right treatment at the right time in the right place with the right equipment and the right staff without wasting time. The Cetrea technology is now used by more than 12,000 clinicians in 70 departments in 20 hospitals in 4 Danish regions.

Cetrea Clinical Logistics brings state of the art technology into the healthcare environment, providing overview, communication, collaboration and coordination to the floor of the hospital. All to the benefit of reducing non-productive time to its minimum. Cetrea Clinical Logistics connects every clinical department or service department together, which increases productivity and effectiveness throughout the whole organization. For patients, this means better patient flow, safety, and quality. For the healthcare professionals, it means more efficient workflows, a better overview of patient flows, and a better work environment, with less stress, noise, and interruptions.

The Cetrea technology applies a wide range of standard integration interfaces, including HL7. This means that the Cetrea solutions are able to communicate and exchange information with existing IT-solutions at the hospital such as HIS, RIS, LIS, EMR, HSS etc. For more information – visit our website www.cetrea.com or call a Cetrea representative for a presentation +45 3840 0570
List of Exhibitors

CGI
Cerner and CGI are joining forces at this year’s Medinfo. Join us for an open conversation about interconnected healthcare.

With 69,000 professionals operating in 400 offices in 40 countries, CGI fosters local accountability for client success while bringing global delivery capabilities to clients’ front doors. Founded in 1976, CGI applies a disciplined delivery approach that has achieved an industry-leading track record of on-time, on-budget projects.

At CGI, we deliver a full spectrum of health IT solutions to help providers, plans and governments meet new mandates, advance the quality of care, promote health and increase efficiency. Download our health IT solutions and services brochure.

Cerner’s mission is to contribute to the systemic improvement of healthcare delivery and the health of communities. For more than 30 years, Cerner has been a visionary leader in making healthcare safer and more efficient. We started with the foundation of digitising paper processes and replacing memory based care by linking research and evidence-based decision support at the point of care. Our clinical and health information system applications and services enhance the productivity, efficiency and effectiveness of healthcare delivery worldwide.

Healthcare is too important to stay the same. Visit www.cerner.com for more information

Chip Soft
ChipSoft specialises in the provision of PAS, EMR and Clinical Care systems. Founded in 1986, we have installed our software successfully at over 85 health organisations in the Netherlands. With our healthcare IT solutions we are not only market leaders but also the fastest growing software company in the Netherlands. This continual growth is realized by offering stability as a trustworthy partner and by persistently providing functional and technological innovative solutions.

ChipSoft’s integrated clinical suite, which is a total package to support all clinical processes, provides the richest software available on the market in terms of functionality, with state-of-the-art technology. This clinical suite comprehensively supports the entire process, with all the expected advantages: the option to give people or groups authorisations that link to the workflow, the option to freely configure layouts, to make overviews and generate letters automatically, to launch our core system in all departments in the hospital, and the option to interface into your current core system.

Curious? Visit us at Medinfo2013 at stand 028 to experience our proven and innovative solutions.

CSC Scandihealth
CSC Scandihealth is the leading provider of healthcare IT products and services in Scandinavia. Through more than 40 years we have supported our customers in managing the business and technology changes within healthcare by delivering solutions, targeted on optimizing results in effectiveness and quality of care.

CSC Scandihealth is part of CSC’s global healthcare vertical with more than 4,000 healthcare specialists and with activities around the globe serving clients in all sectors of healthcare. CSC is a global leader in providing technology enabled business solutions and services. CSC has approximately 98,000 employees in 90 countries worldwide.

CSC is presenting the following innovative solutions:

- Tracking in Healthcare
- Mobile Clinical Suite
- Enterprise Scheduling
- Coordinated Care
- Big Data in Healthcare

For further information about CSC Scandihealth please see http://csc.com/sundhed

Visit CSC at exhibition number 004.

Daintel
Daintel is a leading provider of software solutions developed specifically to specialist hospital departments. Daintel’s main product is CIS by Daintel, a complete software suite developed specifically for Intensive Care Units.

CIS meets all needs for a performant, intelligent and fully integrated IT system for ICUs. It allows users access to all relevant patient and best clinical practice, thereby increasing treatment quality and patient safety while reducing cost significantly in the most expensive treatment environment in modern health care.

Critical Information System, CIS by Daintel, is a state of the art IT solution developed specifically for Intensive Care Units. CIS can be integrated with all existing hospital IT systems and meets the need for an intelligent and fully integrated IT system for ICUs. CIS allows users access to all relevant patient and best clinical practice, thereby increasing treatment quality and patient safety while reducing cost significantly in the most expensive treatment environment in modern health care.

Delta
"WE HELP IDEAS MEET THE REAL WORLD

DELTA is an independent technology company that offers accessible information for everyone. As our customers’ strategic partner we ensure optimal usage of advanced technology. We develop, test, certify, and advice our customers in all the phases of product development. Our core competences cover electronics, microelectronics, software technology, optics and light technology, acoustic and vibration technology, and sensor systems. We have been the technology pathfinders since 1941, and it is our vision that Denmark shall be the best place to carry out high-tech product development."
List of Exhibitors

**Epic**
Epic software is the information backbone for a relatively small number of large, highly respected health systems. Physicians using Epic software care for more than 140 million patients worldwide. Because a single system holds the entire hospital, clinic, and home record, organizations can improve quality and safety, while lowering costs.

**EBSCO**
EBSCO is the leading provider of clinical information and point of care solutions for the healthcare industry. DynaMed™, a clinical reference tool from EBSCO, is rated higher than other disease reference tools in a KLAS report on Clinical Decision Support. DynaMed was created by physicians for physicians and other healthcare professionals for use primarily at the point of care. DynaMed contains more than 3,200 evidence-based, clinically-organized summaries which are updated daily and are based on a rigorous editorial process to ensure clinicians are accessing the best available evidence. DynaMed integrates with electronic health records and is available via mobile devices. EBSCO’s suite of health care products include: DynaMed, PEMSoft, Nursing Reference Center™, Patient Education Reference Center™ and Rehabilitation Reference Center™.

**GS1**
GS1 is a global, NGO, neutral, not-for-profit standards organisation dedicated to the design and implementation of global standards and solutions to improve efficiency and visibility in supply and demand chains. There are 111 GS1 member organisations world-wide, each dedicated to assisting industry implement the GS1 System of standards. The GS1 System is the most widely used system of identification (numbering) and data carrier (bar code) standards throughout the world. It is recognised by organisations such as the International Standards Organisation (ISO), the American National Standards Institute (ANSI) and the European Committee for Standardisation (CEN).

The GS1 Healthcare user group was created to drive the development and adoption of GS1 standards and solutions to meet the needs of the Global Healthcare industry. There are currently over 300 participants in GS1 Healthcare, representing over 150 companies, including thirty of the forty largest global manufacturers. The work of GS1 Healthcare allows the sector to drive towards the effective utilisation and development of global standards with the primary focus on automatic identification to improve patient safety and supply chain efficiencies.

Do you want you and your business partners to benefit from using global standards? Visit us at MedInfo2013 at stand 010 to learn how.

**IHTSDO/SNOMED CT**
SNOMED Clinical Terms (SNOMED CT) is the most comprehensive, multilingual clinical terminology in the world. SNOMED CT contributes to the improvement of patient care by underpinning the development of Electronic Health Records. It enhances the value of recording clinical information by enabling meaning-based retrieval. Visit our booth to discuss SNOMED CT, its implementation and how it supports ‘Meaningful Use’.

**Imatis**
Imatis is the leading provider of clinical workflow, logistics and integration technology for the healthcare and welfare sector.

Our products focus on connecting people, information, processes and systems within a healthcare organization – to achieve a truly Integrated Healthcare Solution. Our integration engine, messaging service, mobility and applications will help you in achieving your goal of becoming an integrated digital hospital, with focus on self-service, mobility, effective patient flow and Lean logistic solutions.

Our vision is simple enough, yet it goes to the heart of the matter of healthcare everywhere: A better everyday life for patients, relatives and employees.

For more information – visit our website www.imatis.com

**IMIA**
The International Medical Informatics Association (IMIA) is the world body for health and biomedical informatics. As an ‘association of associations’, IMIA acts as a bridging organisation, bringing together a network of 60 Member Societies in all regions of the world, as well as Academic Institutions and other organisations. IMIA provides leadership and expertise to the multidisciplinary, health focused community and to policy makers, to enable the transformation of healthcare in accord with the world-wide vision of improving the health of the world population. IMIA also has close and collaborative ties with the World Health Organization (WHO) as a NGO (Non Government Organization), and is a Liaison A category organisation in cooperation with the International Organization for Standardization (ISO).

For further information, see www.imia.org or www.imia.info

**IMO**
Intelligent Medical Objects (IMO®) develops, manages, and licenses medical vocabularies and software applications for health care organizations. IMO’s Clinical Interface Terminology products provide seamless mapping of diagnostic terminologies to standard codes and medical concepts. IMO provides the tools necessary for health care organizations to support uniform labeling of health profiles, services rendered, and outcomes across their enterprise.

IMO products provide a common linkage across all electronic patient records, regardless of the standard needed for that particular data set (ICD-9-CM, SNOMED® CT, MeSH, HPCPS, LOINC, RxNorm, ICD-10-WHO). Since most code mappings are updated several times per year, including regulatory updates, IMO removes the burden of managing updates for you.

Our flagship product, IMO® Problem (IT)™, allows physicians to enter a diagnosis for a patient Problem List without altering the language they would normally use. This solves the problem of forcing clinicians to remember and use the often awkward and cumbersome ICD-9 coding language when documenting in the EHR.

Unlike other electronic medical records software vocabularies, IMO provides an interface to the standard ICD-9-CM-driven terminology in the EHR search with an improved 260,000+ term search that expresses clinical intent while at the same time providing the correct coding for that intent.

For more information, visit www.e-imo.com
List of Exhibitors

IOS Press

Commencing its publishing activities in 1987, IOS Press (www.iospress.com) serves the information needs of scientific and medical communities worldwide. IOS Press now (co-)publishes over 100 international journals and about 120 book titles each year on subjects ranging from computer sciences and mathematics to medicine and the natural sciences. All journals are available electronically and an ebook platform was launched in 2005. The book series Studies in Health Technology and Informatics was started in 1990 to promote research conducted under the auspices of the EC programmes’ Advanced Informatics in Medicine (AIM) and Biomedical and Health Research (BHR) bioengineering branch. A driving aspect of international health informatics is that telecommunication technology, rehabilitative technology, intelligent home technology and many other components are moving together and form one integrated world of information and communication media. Studies in Health Technology and Informatics closely cooperates with EFMI and IMIA and is the publisher of MEDINFO, MIE and other large medical informatics conference proceedings. The series has been accepted by MEDLINE/PubMed, Scopus, EMBase, Book Citation Index - Science and Thomson Reuters’ Conference Proceedings Citation Index. All the volumes are available in ebook format: www.ebooks.iospress.com.

Max Manus

Max Manus is the leading Scandinavian distributor of speech recognition solutions for healthcare professionals, providing customised speech recognition and digital dictation solutions to hospitals in Norway, Sweden and Denmark. The software portfolio includes both standalone products and systems that can be fully integrated into central healthcare IT platforms. Max Manus’s product suite provides speech services and client-side software to support speech-enabled clinical documentation and communication from any application, on any device, at any time. Max Manus speech recognition technology is currently used by more than 8,000 healthcare professionals and the digital dictation platform has over 20,000 users.

Max Manus – a Norwegian freedom-fighter from World War II – founded the company in 1946 as a supplier of office materials. During the 1960s, the company started focusing on healthcare and dictation systems. In 1993, Max Manus introduced its own dictation system to the market; and in 2001, the company started operating as a distributing partner for speech recognition technology. Today, Max Manus is a third-generation, family-owned company which has more than 65 employees.

Visit our website: www.maxmanus.dk.

MedCom

MedCom is a co-operative venture between authorities, organisations and private firms linked to the Danish healthcare sector. In the 1999 financial agreement between the counties and central government, it was decided that MedCom would be made permanent, with the following objective:

“MedCom will contribute to the development, testing, dissemination and quality assurance of electronic communication and information in the healthcare sector with a view to supporting good patient progression”.

MedCom’s profile was intensified further in connection with the financial agreement between the regions and the government for 2011, with role of operating organization. “MedCom solves problems with a focus to support efficient performance and a gradual expansion of the national eHealth infrastructure, which is necessary for a safe and coherent access to relevant data and communication across regions, municipalities, and general practitioners”.

MedCom is financed and owned by:
- The Ministry of Health
- Danish Regions
- Local Government Denmark

MedCom has, since its establishment, worked in time-constricted project periods of 2 – 4 years. MedCom8 takes place in 2012 – 2013 and includes 7 project lines:
1. The Chronic Patient Project
2. E-record and P-record
3. Local authority projects
4. Common Medication Card in medical practice
5. Telemedicine
6. Practice and Laboratory projects
7. International projects

MIE-EFMI

European Federation for Medical Informatics association invites you to travel to Istanbul for its annual conference MIE 2014. Health informatics is fast growing in Turkey this conference is the PLACE TO BE IN 2014 for scientific and cultural events. To be informed the Turkish medical association delegates are ready to welcome and inform YOU.

MIRSK

MIRSK is a Danish owned company based in Copenhagen with a number of subsidiaries worldwide. Our core business is to provide innovative speech technology solutions to improve efficiency in public and private hospitals. Everyday more than 30,000 people benefit from our technologies, such as digital dictation and speech recognition. The products are developed to streamline data sharing in the hospital sector – optimize the workload and most importantly; create more time for patient care. MIRSK is constantly searching for new ways to deliver improvements for efficiency, support of employees and reduction of costs.

With our headquarters in Copenhagen, we have grown from an entrepreneurial dream to a Danish market leader in the field of digital dictation and speech recognition, and we continue to explore and nurture new markets for even bigger opportunities.
List of Exhibitors

MIRSK aims to be one of Europe’s biggest suppliers of speech technologies, and currently we are in collaboration with some of the best companies and universities in the field of speech technologies. Our team today consists of over 30 language experts, development specialists and workflow management consultants, divided throughout our offices. For more information about our products and solutions visit www.mirsk.com

NNIT
NNIT is an international IT service provider offering IT consulting and the development, implementation and operation of IT solutions. We create value for our private and public sector customers by treating their IT as if it were our own. We use IT to support our customers’ daily operations and help them to achieve their business goals. Owned by Novo Nordisk, NNIT employs more than 1,800 people. In 2011, our turnover was €242 million.

NSI - Danish National Board of e-Health
We establish the framework for digitization across Denmark’s health care system. The National Board of e-Health is an agency under the Ministry of Health. As a national public authority, we collaborate with all relevant parties in Denmark’s health care sector and manage the processes that lead to the establishment of uniform rules and frameworks for e-Health in Denmark. This ensures that all parts of the health care system can share data securely and efficiently, with the aim of providing patients the best possible treatment.

The National Board of e-Health is responsible for the creating relevant common frameworks and standards within e-Health. We generate reference architectures and lay down standards for communication between sectors. Furthermore, we lay the foundation for nationwide infrastructure and operate and develop national health-related IT systems. Finally, we implement specific intersectoral initiatives and collaborate internationally.

PatientVille
PatientVille takes its name from the movie DogVille that uses an extremely minimal, stage-like set. Like DogVille, PatientVille used a minimal set-up with as few props as possible to tell its story. PatientVille will demonstrate and show how eHealth supports coherence in a Danish patient’s course of treatment in which the focus is on the patient centric solutions and patient empowerment. The journey will include a demonstration of care in the patient’s home, the pre-hospital sector (ambulance), acute care department, general practitioner, local authorities and also includes a demonstration of cross-border e-prescription at a Danish pharmacy.

PatientVille gathers several Danish organizations and companies which are part of the Danish health sector, such as Local Government Denmark, Welfare Tech, Healthcare Denmark, Falck, National Board of eHealth, Capital Region of Denmark, Region of Southern Denmark, the North Denmark Region, Central Denmark Region, the Danish eHealth portal (sundhed.dk), and MedCom.

Qualcomm
Qualcomm Incorporated has a 10-year heritage in telehealth and, through its wholly owned subsidiary, Qualcomm Life, Inc., has developed a business committed to bringing the benefits of telehealth to patients living with chronic disease. Using its leading position within device connectivity and data management, it has developed a secure, cloud based end-to-end wireless connectivity solution that can connect to any medical device. Qualcomm Life’s 2net™ Platform wireless solution allows patients, their physicians and caregivers to easily get accurate device readings, with complete data privacy. It can help reduce hospital readmissions through remote monitoring, and most importantly empower the patient through the management of their own care.

The 2net Ecosystem allows Qualcomm Life’s collaborators to achieve scalability and the freedom to choose any device/sensor to support any telemedicine service or application, removing connecting issues to reduce costs and increase access to information to improve patient care. The 2net Ecosystem can help overcome connectivity hurdles to create an interoperable environment whereby data becomes ubiquitous across the continuum of care.

PPN
PPN is an evidence-based digital decision support tool which meets the demands for a knowledge based practice, patient safety and quality assurance. PPN contributes to consistent and coordinated care across nurses and clinical settings. The database covers approximately 300 nursing procedures based on the most up to date knowledge in research and professional development. PPN consists of three main parts; the procedures, connecting knowledge base, and knowledge tests. PPN has many illustrations which visualizes and support the performance and devices of the procedures.

PPN is developed in collaboration with professional specialists and quality assured by consultants with medical and nursing backgrounds. Universally accepted methods and systematic process flow have been utilized.

PPN is continually updated both professionally and technically. Electronic integration solutions have been developed with EPR (electronic patient records) and quality systems which provide seamless solutions for the users. PPN can also be accessed on your computer at home or on mobile devices.
List of Exhibitors

PPN is is used in all of Norway’s colleges - bachelor degrees in nursing, hospitals, district- and community nursing. PPN is also used in community nursing and at VIA Aarhus University in Denmark. PPN will be available in Danish and English in 2013. Visit us at stand no 7 for further information and demonstration!

Siemens Healthcare

A happier world begins with a healthier world. Siemens answers are improving lives with advancements in diagnostics, therapy and healthcare IT so that more people can have a life that is longer, richer, and more filled with happiness.

As the worlds’ population grows and gets older, more and more people thrive to reach their full potential and to lead a healthy, high-quality life far into old age.

At Siemens, we play a unique role, supporting healthcare professionals to do their job by providing medical technologies that help deliver a better quality of healthcare and enable ever-improving degrees of individual care through advanced imaging, diagnostics, therapy, and healthcare IT solutions. We provide innovative technology to customize medicine, enabling better differentiated diagnostic results and more distinct therapy decisions.

Healthcare IT is at the core of Siemens’ vision for Integrated Healthcare. Healthcare IT solutions address patient safety initiatives, strengthen the revenue cycle and enable technology to improve patient care.

Siemens Healthcare helps ensure the next generation of breakthroughs become a reality. Our commitment to advancing human health, however, goes beyond delivering the latest diagnostic and treatment technology to our customers. We support their success through close collaboration and mutual partnerships.

Together, we innovate to advance human health.

SIG - The Software Improvement Group

SIG is a management consultancy that focuses on software-related challenges. We provide management with fact-based insight into their current IT situation, along with razor-sharp, pragmatic and highly actionable recommendations on how to improve on that situation. We know how to govern software projects effectively, when to invest in quality improvement, how to rationalise, and how to control cost. By consolidating low-level technical analysis and high-level financial analysis we make sure our recommendations are the best fit for your specific business needs.

Systematic

Healthcare challenges of the current society require modern and smart solutions that can address an increasing number of demands to keep the costs down and provide better healthcare. Systematic has been successfully following its goal to help to deliver better healthcare since 1999 and today is the biggest healthcare IT provider in Denmark. Our eHealth platform Columna is designed in a way so that the highest quality care is received by every patient in today's modern hospital. Our system is fully customisable and gathers information from all the angles in a hospital to create a complete clinical overview and continuously improve the quality of care.

Columna is the new generation eHealth platform that helps each stakeholder in a healthcare system to stay efficient and most importantly to simplify the most critical aspects of every day care:

- healthcare delivery
- patient-centric care
- critical decision making

A forward-thinking approach and simplicity are core elements that make Columna unique. The products in the Columna eHealth platform are based on international standards and open architecture, making them ideal for integration into – and interaction with – other systems in the healthcare sector.

Find out more at: www.systematic.com

Socialstyrelsen

In connection with the Swedish strategy for eHealth, the National Board of Health and Welfare is responsible for the development and management of the national information structure and the interdisciplinary terminology for health and social care, including SNOMED CT. The aim of the Swedish national strategy for eHealth is to ensure efficient information supply in health and social care. The National Board of Health and Welfare will, within the strategy, assume overall national and strategic responsibility for making individually-based patient and user information clearer and more easily measurable and accessible. The work involves defining and describing the content of appropriate health and social care documentation.

For more information please visit our website: www.socialstyrelsen.se

UpToDate

UpToDate®, part of Wolters Kluwer Health, is an evidence-based, physician-authored clinical decision support resource which more than 700,000 clinicians in 158 countries trust to make the right point-of-care decisions. The more than 5,100 world-renowned physician authors, editors and peer reviewers utilize a rigorous editorial process to synthesize the most recent medical information into trusted, evidence-based UpToDate recommendations, proven to improve patient care and quality. More than 30 research studies confirm the widespread usage and association of UpToDate with improved patient care and hospital performance – including reduced length of stay, fewer adverse complications and lower mortality. For more information, visit www.uptodate.com.
Social Events

Welcome reception at Bella Center Tuesday 20 August at 18:30-20:00
A light refreshment and a drink will be available in the exhibition area when the opening ceremony ends.
We encourage all participants to visit the exhibition.

Welcome reception at Town Hall of Copenhagen
Wednesday 21 August at 19.00 - 20.30
The Town Hall with its hard, national romantic-style is a monumental building in the centre of Copenhagen. It’s the seat of Copenhagen’s political leadership and is the central of administration. It was designed by the architect Martin Nyrop that was inspired by the Town Hall of Siena in Italy. At the slim clock tower you’ll find the unique clock designed by the Danish astromechnic, Jens Olsen. This clock displays not only the time locally but also the solar time, sunrise and sunset, and even the Gregorian calendar. The tower is the tallest buildings in the low city of Copenhagen with its 105,6 metres. You can climb the clock tower for a great view of the city.

Directions to Town Hall from Bella Center: At Bella Center take the metro, M1 towards Vanløse (10 min, 6 stop) then walk to Nørreport and take bus 14 from there towards Jydeholmen/Åklekistev (4 min, 2 stop) and then walk to Rådhuspladsen (300 m, 4 min).

Directions to Town Hall from Copenhagen H (Central station): Walking distance is 1.2 km (15 min). If you prefer to take the bus, take the nr 10 from Hovedbanegård/Reventlowsg towards Rådhuspladsen (4 min, 1 stop) and then walk from the stop to Rådhuspladsen (550 m, 7 min)

Welcome to the Gala Dinner at Langelinie Pavillionen
Thursday 22 August at 19.00
To explore the Danish culture the Langelinie pavilion is the obvious choice. The bright and welcoming rooms of the pavilion are fitted and furnished with the very finest Danish design. You’ll find magnificent artichoke and plate lamps designed by Poul Henningsen especially designed for Langelinie Pavillionen. You can also enjoy other interior design like the Arne Jacobsen chairs, Børge Mølgaard sofas and Else Alfelts imposing glass mosaics. Enjoy a glass of wine sitting in the Arne Jacobsen chair, viewing the panoramic of the harbor and feeling the Danish culture in this lovely surroundings while tasting the exceptional culinary food.

You can book the bus at the register page that takes you from and to Langelinie Pavillionen from Bella Center and Copenhagen H (Central Station). The bus time table can be found at the Congrex registration desk.

Welcome to enjoy a three course Gala dinner in the beautiful surroundings of Langelinie Pavillionen

Welcome to the Town Hall where you will be served the famous pancakes with a glass of wine.
medinfo 2013 Practical Information

Conference Opening hours
20 August: 16.00 – 20.00
21 August: 8.30 – 18.30
22 August: 8.30 – 18.30
23 August: 8.30 – 14.30

Exhibition Opening Hours
20 August: 16.00 – 20.00
21 August: 8.00 – 18.30
22 August: 8.00 – 18.30
23 August: 8.00 – 14.30

Congrex Registration Opening Hours
19 August: To be announced at www.medinfo2013.dk
20 August: 14.00 – 20.00
21 August: 7.30 – 18.30
22 August: 8.00 – 18.30
23 August: 8.00 – 12.00

Social Events
20 August: 18.30 – 20.00  Welcome Reception at Bella Center
21 August: 19.00 – 20.30  Welcome reception at Town Hall of Copenhagen
22 August: 19.00  Gala Dinner at Langelinie Pavillionen

Organisers Office
Situated in Bel Club at your left entering the conference area you will find representatives from IMIA, SPC and LOC.

Speakers Room
21, 22 and 23 August in Meeting Room 16.

Program on App
The congress App will contain the latest version of the program - see front page.

Last minute changes in Program
Last minute changes will be announced as News at www.medinfo2013.dk during the congress.
General Information

Proceedings
The IOS medinfo2013 proceeding is available on line as an Open Access publication on IOS e-book platform:
www.booksonline.iospress.nl

Badges
For organisational and security reasons, your personal name badge must be worn at all times in the congress venue. Your badge is your entrance ticket to all sessions and to the exhibition. If you have booked tickets to social events, you will receive these upon registration and they may be kept in your badge. If you do not plan to attend a booked social event, please return your ticket at the Registration desk in the registration area.

Should you lose your name badge – a new badge may be purchased from the registration desk at a cost of Euro (€) 100. Please note, proof of your original registration must be shown for validation.

Banks
There are many cash machines throughout the city and the many Bureaux de change are open during weekends. Banks are usually open Monday to Friday from 10.00-16.00 on weekdays with late hours until 17.00 on Thursdays (closed Saturdays and Sundays).

Business Centre and Information
Bella Center’s Copying Service is located in the main lobby, on the Ground Floor of the Bella Center and can handle both large and small copy jobs in black/white and colour. You may also buy office supplies and send faxes here.

Cancellation or Modification of the Congress due to Force Majeure
In case of force majeure, the medinfo2013 Congress has the right to alter or cancel the Congress without prior notice, however a notice of the occurrence shall be given by medinfo2013 Congress as soon as reasonably possible. Force majeure shall mean any circumstance beyond the reasonable control of the medinfo2013 Congress which prevents or impedes the holding of the Congress, including, but not limited to, government action, war or hostilities, or civil commotion, plague or other epidemic such as SARS, bird flu etc, earthquake, flood, hurricane, cyclone, fire or other natural physical disaster, explosion, accident or breakdown, strike, lack of the usual means of transportation or terrorism. The medinfo2013 Congress shall not be liable for any direct or indirect, incidental or consequential damages, losses, expenditures or any other inconveniences or costs caused by such modification or cancellation of the Congress. Furthermore, registration fees will not be reimbursed by the medinfo2013 Congress.

Certificate of Attendance
Upon request participants will receive a Certificate of Attendance at the registration desk.

Climate
The climate in Copenhagen is temperate and in August it is usually mild and sunny but you should prepare for rain and chilly evenings. Daytime temperature ranges from 15° C to 20° C (59°–68° F).
General Information

Cloakroom
A cloakroom will be available in the registration area during the official Congress opening hours. The cost will be 30 DKK/4 € per item.

Congress website
www.medinfo2013.dk

Currency and Credit Card
The currency in Denmark is Danish Kroner (DKK). 750 DKK is approximately 100 €. ATMs/cash machines are available throughout Copenhagen. All major credit cards are accepted at hotels, stores, cafes and restaurants. Some places might charge a fee when accepting foreign credit card as payment.

Disclaimer
The medinfo2013 Congress and Congrex Sweden AB cannot accept liability for injuries or losses of whatever nature incurred by participants and/or accompanying persons, nor for loss of or damage to their luggage and/or personal belongings. Please check the validity of your travel insurance. All reasonable endeavours will be made to hold the medinfo2013 Congress and to present its programme as scheduled under circumstances which assure the comfort and safety of all participants and accompanying persons. However, neither the medinfo2013 nor its committees, representatives or agents, shall be held liable by any person as a result of the cancellation of the medinfo2013 Congress or of any of the arrangements, programmes or plans connected therewith, or for any injury, damage or inconvenience which may be suffered by any person while travelling to or from, or during such person's presence in Denmark in connection with this Congress. Participants and accompanying persons are advised to purchase their own insurance against any such occurrences.

Electricity
Denmark, like most other European countries, has 220-volt AC, 50Hz current and uses two-pin continental plugs. If you travel to Copenhagen with a device that does not accept 220 Volts at 50 Hertz, you will need a voltage converter.

Emergencies
In case of an emergency while you are in Copenhagen, always dial 112. It is a free call which will connect you to the police, fire brigade or ambulance. If you need a chemist or dentist, there are a few which are open 24 hours. Please consult your hotel for assistance.

Internet access
High speed, free wireless Internet named MEDINFO will be available at the venue in the exhibition area.

Language
The official language of the Congress is English. No simultaneous interpretation will be provided.
General Information

Local Time
Local time in Denmark follows Central European Time (CET) which is one hour ahead of Greenwich Mean Time (GMT) and six hours ahead of Eastern Standard Time (EST).

Lost and Found
Contact the registration desk in case of personal belongings being lost or found. Belongings not picked up after the congress will be handed over to the Bella Center.

Meals
Coffee/tea and lunches are included in the registration fee and will be served daily. All coffee/tea breaks will be served within the Exhibition hall at the Bella Center.

Photography
It is not allowed to use flash if taking photographs during sessions. Videotaping or photographs in the exhibition area is forbidden without permission from the exhibiting company/companies.

Press and Media
Members of the press are kindly asked to contact the registration desk for interview requests.

Registration Desk Phone Number
Please note that this number is only in use during the medInfo2013 Congress: +46 706 69 20 72

Smoking Policy
medinfo2013 is a non-smoking Congress. Smoking is allowed outside the venue.

Speakers Room
The room is located on the first floor, called meeting room 16, and is open when the registration desks are open.

Telephone policy
Please respect the congress policy and switch off your mobile phone in all session rooms and in the exhibition area.

VAT
Danish prices include 25 percent Value Added Tax (VAT). Tax free shopping is possible in many major shops and department stores in Copenhagen.

Congress Secretariat
Congrex Sweden AB, Attn: MEDINFO 2013
S. Förstadsgratan 4
S-211 43 MALMÖ

Phone: +46 40 606 19 00
Fax: +46 40 606 19 10
Mail: medinfo@congrex.com
Travel Information

**By Bus**
From Copenhagen Central Station take bus line 30. The journey between the Central Station and the Bella Center takes 20-25 minutes.
Information on bus schedules can be found on the transport company Movia's website.
www.moviatrafik.dk/dinrejse/Tourist/English-tourist/Pages/English-tourist.aspx

**By Car**
Follow the "Airport Highway", E20. The exit to Center Boulevard is number 19 and is called “Ørestad” with "Bella Center” listed below.
On Krak’s website, you can obtain precise driving directions with the most convenient route to Bella Center.
www.bellacenter.dk/en-GB/Visitors/Travel-and-Stay.aspx
For parking information, please visit www.europark.dk or www.easypark.dk

**By Metro**
The Metro line M1 runs between Vanløse and Vestamager (West Amager). The Bella Center Metro Station is located next to Bella Center’s East Entrance.
More information available at www.m.dk.

**By Taxi**
A taxi from Bella Center to the city centre costs about DKK 200.
A taxi from Bella Center to Copenhagen Airport costs about DKK 150-200.

**By Train**
All regional trains stop at Ørestad Station, from which you can take the Metro to Bella Center
Save the date!
IMIA World Congress on Medical Informatics, for the first time in Latin America!

Hotel Transamerica
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