## Rolf Engelbrecht<sup>1</sup>, Arie Hasman<sup>2</sup>

<sup>1</sup>IBMI - Medical Informatics Laboratory, Helmholtz-Centre-Munich, Munich-Neuherberg, Germany <sup>2</sup>Academic Medical Center, University of Amsterdam, The Netherlands

EFMI is a nonprofit organisation concerned with the theory and practice of Information Science and Technology within Health and Health Science in a European context. Its activities focus on annual conferences, MIE (Medical informatics Europe), STC (Special Topic conference), tutorials and workshops. EFMI publishes proceedings and special issues of its activities in scientific journals. It has national societies in 31 member countries in Europe. Personal members are welcome in working groups. The EFMI portal provides very actual international news and information about the use of computers in health care. http://www.EFMI.org.

# **Working Groups**

CARDS - Cards in Health Care, Social Security and Welfare
Paul Cheshire, UK; Peter Pharow,
Regensburg
(paul.cheshire@atosorigin.com,
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EDU - Education in Health Informatics John Mantas, Athens; Arie Hasman, Amsterdam (jmantas@cc.uoa.gr, a.hasman@amc.uva.nl)

EHR - Electronic Health Records Bernd Blobel, Regensburg (bernd. blobel@klinik.uni-regensburg.de) EVAL - Assessment of Health Information Systems
Elske Ammenwerth, Innsbruck;
Pirkko Nykanen, Tampere; Jytte
Brender, Aalborg
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HOFMI - Human and Organisational Factors of Medical Informatics Jos Aarts, The Netherlands; Marie-Catherine Beuscart-Zéphir, Lille, France (j.aarts@erasmusmc.nl, mcbeuscart@univ-lille2.fr)

IDR - Informatics for the Disabled and Rehabilitation
Cristina Mazzoleni, Italy
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LIFOSS -Libre/Free and Open Source Software in Health Informatics Peter J. Murray, Nocton, UK; Karl Oyri, Oslo, Norway (peterjmurray@gmail.com, karl.oyri@rr-research.no)

MCRO/MBDS - Casemix, Resources Management and Outcomes of Care Francis Roger-France, Brussels; Jacob Hofdijk, Leiden (frf@skynet.be, jhofdijk@ dbconderhoud.nl)

MICIT - Medical Informatics in Countries in Transition Lacrimioara Stoicu-Tivadar, Timisoara; (lacramioara.stoicutivadar@aut.upt.ro) MIP - Medical Image Processing Alexander Horsch, Munich; Thomas Wittenberg, Germany; Vytenis Punys, Kaunas (alexander.horsch@imse.med.tumuenchen.de, wbg@iis.fhg.de, vpunys@mmlab.ktu.lt)

NLU - Natural Language Understanding Robert Baud; Patrick Ruch (Robert.Baud@sim.hcuge.ch, patrick.ruch@sim.hcuge.ch)

NURSIE - Nursing Informatics in Europe Patrick Weber, Lausanne; Thomas Buerkle, Erlangen (patrick.weber@nicecomputing.ch, thomas.buerkle@imi.med.unierlangen.de)

PCI - Primary Care Informatics Simon De Lusignan, London (slusigna@sgul.ac.uk)

SSE – Safety, Security and Ethics Bernd Blobel, Regensburg (bernd.blobel@klinik.uniregensburg.de)

TRACE - Traceability of supply chains
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# EFMI WG CARDS

#### Chair:

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### Co-Chair:

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### Former Chairs (2004-2006)

Claudia Hildebrand (Germany) Tomás Tripsovský (Czech Republic)

Homepage: http://CARDS.EFMI.Info

# EFMI WG EDU

# Education in Health Informatics

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# **Objectives:**

EFMI WG CARDS aims at being a European competence centre to watch ongoing activities and to provide knowledge to policy makers and systems designers involved in projects related to personalised, portable devices (PPD) like cards, tokens, and similar technologies in the domain of healthcare and welfare:

- Competence and know-how focused on health care identity management (ID) schemes
- Vision of personalised, portable device technology applications.
- Marketing, dissemination and deployment of WG ideas and results on national and European level

## **Recent and Future Activities:**

The following activities are planned for

- PPD oriented competence and know-how
- Vision of Smartcard technology applications
- Marketing, dissemination and deployment of WG ideas and results

The activity plan is being resumed on a yearly basis.

The EFMI Working Group "CARDS" co-operates with EHTEL so as with other activities appearing in this professional sector like the World ID steering committee or SDO (especially ISO TC 215, CEN TC 251, and CEN TC 224). Liaison persons link between the WG and the identified bodies.

# **Objectives:**

- To disseminate and exchange information on Health and Medical Informatics (HMI) programs and courses.
- To advance the knowledge of how HMI is taught to health care professionals, to students in Europe
- To promote a database on programs and courses on HMI education
- To produce international recommendations on HMI education
- To support HMI courses and exchange of students and teachers.

- Globalization of Health Informatics Education, Studies in Health Technology and Informatics, Edited by: E.J.S. Hovenga and J. Mantas 2004, 276 pp., IOS Press, Volume 109hardcover ISBN: 1 58603 454 5.
- The STC conference "Health and Medical Informatics Applications Educational Aspects" took place in Athens, Greece in 19-20 March 2005
- WG was held during the MIE2006 Conference in Maastricht
- Task Force to revise the Educational Recommendations on HMI Education. A special meeting was held during Medinfo 2007 in Brisbane
- Collection of data to update the database of programmes and courses on the WG website.

# EFMI WG EHR

## Electronic Health Records

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# EFMI WG EVAL

# Assessment of Health Information Systems

## Chair:

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# **Objectives:**

The working group deals with the issue electronic health records in the different levels of development. Such levels concern the case level, organisational level, regional level, national level, and international level. In that context, the Working Group supports

- studies on specification, implementation, and promotion of standards for EHR,
- the modelling of its architecture and its interoperability, as well as
- the education on that topic.

## Recent and Future Activities.

The following activities have been realised:

- Workshop at STC 2007 "Medical Informatics in Enlarged Europe", Brijuni, Croatia. The results have been published in J.S.Bryden, S.deLusignan, B.Blobel, M.Petrovecki (Edrs.): Medical Informatics in Enlarged Europe. IOS Press and Aka. Berlin 2007.
- Joint workshop with EFMI Working Group "Security, Safety and Ethics" entitled "The Paradigm Change Challenge towards Personal Health", at the ICMCC 2007, 8-10 June 2007 in Amsterdam. The results have been published in L.Bos and B.Blobel (Edrs.): Medical and Care Compunetics 4. Series Studies in Health Technology and Informatics, Vol. 127. IOS Press, Amsterdam 2007.

Support of, and contributions to:

- Joint workshop with EFMI Working Group "Security, Safety and Ethics" at the MIE 2008
- Joint workshop with EFMI Working Group "Security, Safety and Ethics" at the ICMCC 2008, 9-11 June 2008 in London, UK.

# Objectives:

- To foster interdisciplinary discussion on evaluation issues in health informatics.
- To support communication of experiences by organizing tutorials and workshops.
- To promote European networking on evaluation issues in health informatics.

- Finalisation of **STARE-HI** (Standards for Reporting on Evaluation Studies in Health Care), available at http://iig.umit.at/efmi. STARE-HI is just going to be published. An accompanying paper is just under preparation.
- Further work on Good Evaluation Practice Guidelines (GEP-HI).
- A workshop on STARE-HI and GEP-HI is being held at MIE 2008, May 2008, Göteborg.
- A working group meeting was held at **Medinfo 2007**, September 2007, Brisbane.
- Several members of the WG participated in the Scientific Program Committee of the **Human Factors Engineering in Health Informatics**, June 7 8 2007, Aarhus, Denmark, http://www.v-chi.dk/HFEinHI2007
- Members of the WG participated with their evaluation expertise within several **FP7 proposals**.
- Operation of a **web-based Evaluation Inventory** of now more than 1.250 abstracts of IT evaluation studies in healthcare is now made available for free at http://evaldb.umit.at.

# EFMI WG HOFMI

# Human and Organisational Factors of Medical Informatics

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#### Co-Chair.

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# FFMI WG IDR

# Informatics for the Disabled and Rehabilitation

#### Chair:

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http://www.EFMI.org

# **Objectives**

- To organize workshops and tutorials dedicated to the WG topics
- To establish networks of people involved in human and organizational issues in the healthcare domain, and to learn about new developments and their activities
- To disseminate knowledge about human and organizational factors in medical informatics by various activities, such as conferences, educational events, publications.

## **Recent and Future Activities:**

- Conference "Human Factors Engineering in Health Informatics", 7 and 8 June 2007, Aarhus. This conference was preceded by a doctoral colloquium (http://www.v-chi.dk/HFEinHI2007/). A selection of the papers will be published in the Journal of the American Medical Informatics Association. There were about 100 participants.
- 4th conference "Information Technology in Health Care: Sociotechnical Approaches", Sydney, Australia, 28 30 August 2007. The conference also included a doctoral colloquium. Papers published in "Studies in Health technology and Informatics", Vol. 130, IOS Press. There were over 100 participants. A selection of the best papers will be published in a special issue of the International Journal of Medical Informatics.
- A business meeting will take place at MIE2008 in Göteborg, including paper presentations.

# **Objectives:**

- Support of research, developmental work and education/information in the field through a systematic progressive collection of the relevant literature and the promotion of a discussion forum
- To promote a multidisciplinary collaboration among the healthcare and informatics professionals on one hand, and the consumer associations on the other hand in order to pursue, and also spread the culture of, accessibility and usability.
- To involve researchers belonging to different disciplines and users through the organization of workshops

## **Recent and Future Activities:**

The WG is at its very beginning.

A list of interested people has been collected. On March 7<sup>th</sup> 2007, a work meeting, with Italian participants of the most representative research institution in the field of rehabilitation, has been organized in Pavia.

A questionnaire will be circulated to gather consensus on the most relevant and "popular" fields of interest. Moreover, we are designing a database to collect and catalog papers published on both medical informatics and medical literature about the informatics topics related to rehabilitation and disabilities.

# EFMI WG LIFOSS

# Libre/Free and Open Source Software in Health Informatics

#### Co-Chair.

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# EFMI WG MCRO

# MBDS - Casemix, Resources Management and Outcomes of Care

### Chair:

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#### Co-Chair:

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# **Objectives:**

- evaluation of free/libre and open source materials and approaches
- exploration and development of open standards
- use of free/libre and open source systems, and knowledge transfer about these systems
- a European focus, including activities aimed at, but not exclusive to, the European Union.

## **Recent and Future Activities:**

Development of:

- a webspace and discussion forum
- a repository of knowledge about free/libre and open source developments of relevance to the health informatics domain
- discussion papers on specific topics.
- Support of the EFMI STC2008, September 2008, London

## **Objectives:**

- The organisation of special topic conferences, workshops, teaching sessions in the European Region
- The communication of up to date experiences and/or references between members, including national data sets, terminology, coding system and patient classification methods for resource management and quality of care
- The dissemination of results about informatics tools and telematics systems in this specific area among EFMI and IMIA affiliated members and participants to their meetings.

- Conference in collaboration with PCS-E (Patient Classification Systems Europe). "Case Mix: Global Views, Local Actions", 2001, Bruges, Belgium
- Workshop on Case Mix and Nursing. MIE2005 Geneva, Switzerland
- Workshop on "Patient Summaries and Case Mix Funding", MIE2006 Maastricht (the Netherlands).

# FFMI WG MICIT

# Medical Informatics in Countries in Transition

#### Chair.

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# FFMI WG MIP

# Medical Image Processing

#### Chair-

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## **Objectives:**

- To promote exchange of information and experiences between actors in Europe, especially in developing regions
- To investigate the needs, opportunities and obstacles for e-health and to review and select from different education options for developing regions.
- To facilitate access to European groups and their facilities and outcomes by students and health professionals from developing regions
- To disseminate European and world-wide results and experiences across developing regions and professionals

## **Recent and Future Activities:**

- Satellite workshop at eHealth week Berlin 2007 From Strategies to Applications: "eHealth: the way of transition to a Europe of tomorrow".
- EMMIT 2007, Mangalia, Romania, Euro-Mediterranean Medical Informatics and Telemedicine, organised a session."Young persons involved in eHealth"
- STC 2007, Croatia, Medical Informatics in Enlarged Europe.
- Co-editing with IMIA WG HID a book regarding "The comparative situation of developed and transition countries all over the world -common and different experiences".
- Investigating the success of master degree in Medical Informatics in countries with different levels of economical development.
- Round table (MIE2008, STC2008, CONTI2008) to debate the EU young persons involvement and expectations in Healthcare Informatics domain

# **Objectives:**

- Support of communication and common attempts of academia and industry to increase quality of innovation, research and development in the field of medical image processing.
- A reference image database for medical image processing R&D groups (RID-MIP) and a web-based Information System (IS) about European Image Processing including Groups and their current activities.
- to maintain the MIP website and establish a web-based information system for European image processing groups and their current activities
- To organise and conduct workshops at EFMI conferences and other events.
- To build and maintain close relationship with persons, groups, organisations and standardisation bodies

- An application for the 7th Framework Programme has been elaborated and will be discussed at the next working group meetings.
- WG Wiki has been set up by Sarah Barman. The platform shall be utilized to intensify the collaboration of the WG members to overcome workforce shortcomings more smoothly.
- At Medinfo 2007 a joint workshop with IMIA WG Pattern Recognition has been held. It was agreed to collaborate more closely in the future.
- Cooperation with CARS, NIH and industries has continued and will continue.
- Support of the 15th CATAI Winter Course of the University of La Laguna, Tenerife, Spain, March 2007
- At CARS conference in June 2008 in Barcelona, a workshop on Computer Aided Diagnosis will be supported

# FFMI WG NLU

# Natural Language Understanding

#### Chairs:

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# EFMI WG **NURSIE**

# Nursing Informatics in Europe

## Chair:

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#### Co-Chair:

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## Secretary:

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# **Objectives:**

- To organize workshops and special topic conferences dedicated to NLP
- To have personal connections with people involved in NLP in the medical domain, especially in Europe, and to learn about their current developments and activities. To develop connections with experts in the general NLP domain and to participate to related events (ACL, COLING...).
- To represent EFMI at IMIA WG6; at AMIA new SIG on NLP and at AIME and to participate to events of those societies.

## Recent and Future Activities:

- The NoE SemanticMining by its WG20 has setup an interchange format for multilingual medical lexicon. The WG NLU is actively represented in this initiative. The prospective of participation to the EU FP7 call for projects is now open.
- A workshop about ontology representation has taken place during the STC conference in April 2006 in Timisoara, Romania.
- The WG is actively looking for organizing a track in an EFMI STC conference

## **Objectives:**

- To support nurses and nursing organizations in the European countries with information and contacts and the field of medical informatics
- To offer nurses opportunities to build contact networks within the informatics field
- To support the education of nurses with respect to informatics and computing.
- To support research and developmental work in the field and promote publishing of achieved results.

## Recent Activities:

- April 6-7 2006 STC in Timisoara we had a paper about the European participation on the Nuring and Informatics book.
- June 11 to 14 2006 NI2006 was held in Seoul Corea. This conference was a real success. Our working group launched our new book "Nursing and Informatics for the 21st Century: an international look at practice, trends and the future".
- August 27 to 30 2006 we actively participate at the MIE conference in Maas-

# FFMI WG PCI

# **Primary Care Informatics**

#### Chair:

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# EFMI WG SSE

# Security, Safety and Ethics

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# **Objectives:**

This Working Group aims to further develop the theoretical basis for best practice, which should underpin the use of Informatics in Primary Care.

- To advance pan-European cooperation and the dissemination of information in the domain of primary care informatics.
- To promote high and common standards of applications used in primary care.
- To promote research and development aimed at developing a core generaliseable theoretical basis for primary care informatics.
- To encourage high standards in education

## **Recent and Future Activities:**

- MIE2006 Workshop + practice visits. This was organised with primary care colleagues in Maastricht and explored how routinely collected primary care computer data are "Goldmines for Research." Results have been published in Informatics in Primary Care, 2006;14(3):203-9.
- International patient safety congress Antalya, Turkey (28-31st March 2007), members were invited and talked about the role of the primary care computer system in general and in making prescribing safer.
- EFMI STC2007 Brijuni, Croatia, May 2007. A primary care half-day formed a key component of this conference.
- MEDINFO2007 Primary care study day prior to the conference on 19<sup>th</sup> August organised jointly with IMIA and AMIA primary care informatics working groups.
- At MIE2008 in Goteborg a workshop will be held:. *Using routinely collected data to improve quality and patients safety*. The focus of this workshop is on how electronic patient record (EPR) systems can improve patient safety.

# **Objectives:**

Speeding up the use of ICT for health care increases the challenge for trustworthiness, security and safety of solutions and infrastructure deployed. The WG aims to promote development, education and training on the field of security and privacy in health care. It establishes close collaboration with other WGs within EFMI and beyond for securing their ICT solutions for health care.

- Workshop at EFMI Special TopicConference 2007, Brijuni, Croatia, published in J.S.Bryden, S.deLusignan, B.Blobel, M.Petrovecki (Eds.): Medical Informatics in Enlarged Europe. IOS and Aka, Berlin 2007.
- Joint workshop with EFMI WG EHR entitled "The Paradigm Change Challenge towards Personal Health", at the ICMCC 2007, 8-10 June 2007 in Amsterdam, published in L.Bos and B.Blobel (Eds.): Medical and Care Compunetics 4. Series Studies in Health Technology and Informatics, Vol. 127. IOS Press, Amsterdam 2007.
- In cooperation with the IMIA WG 4 "Security" the tutorial "Modelling and Implementing Embedded Security and Privacy Services for Sustainable Health Information Systems" at MEDINFO 2007 in Brisbane.
- The Chair of the WG participated by invitation the Global Security Panel at MEDINFO 2007.

- Contributions to the Conference of IMIA WG "Security in Health Information Systems", 22-25 November 2007, Hiroshima, Japan
- Members participate in the European BioHealth Project (Security and Identity Management Standards in eHealth ...).
- Workshop and WG-meeting at MIE 2008, Gotenburg, Sweden
- Workshop at the ICMCC 2008, 9-11 June 2008 in London, UK.

# FFMI WG TRACE

# Traceability of supply chains

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# **Objectives:**

Traceability is an important aspect of health informatics and

- builds the net of information between supply chains, care processes, outcomes and financial flows.
- faces important challenges, such as entities identification and authentication and serialization
- implies to track and trace physical entities and linking these entities to virtualized information flows.

The major benefits of traceability are

- improving efficiency and safety of care processes, including the supply chain of drugs, devices, etc.;
- improved secondary usage of data for outcome research;
- measures against counterfeited drugs and devices.

- Members of the WG have participated actively in several meetings, gave a keynote at the GS1 2007 global forum in Brussels 2007.
- Important work is ongoing on building a model of GS1, and working around proposition to improve the current model, mostly towards clear separation between classes and instances.
- An invited paper on a survey in traceability has been published in the IMIA Yearbook 2008.
- Active search is ongoing to increase the numbers of members. Interested persons are invited to contact the chair.