EFMI Working and Project Groups - Overview and Current Activities

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Introduction

EFMI is a nonprofit organization concerned with the theory and practice of Information Science and Technology within Health and Health Science in a European context. Apart from other activities EFMI's success heavily relies on the work been done by its working groups.

Current Working Groups

Currently EFMI has 16 active working:

- EDU - Education in Health Informatics
- EHR - Electronic Health Records
- EVAL - Assessment of Health Information Systems
- HIIC - Health Informatics for Interregional Cooperation
- HIME – Health Information Management Europe
- HOFMI - Human and Organisational Factors of Medical Informatics
- IDeS - Information and Decision Support in Biomedicine and Health Care
- LIFOSS -Libre/Free and Open Source Software in Health Informatics
- MCRO/MBDS - Casemix, Resources Management and Outcomes of Care
- MIP - Medical Image Processing
- NLU - Natural Language Understanding
- NURSIE - Nursing Informatics in Europe
- PCI - Primary Care Informatics
- PPD Personal Portable Devices
- SSE – Safety, Security and Ethics
- THI- Translational Health Informatics

Lacramioara Stoicu-Tivadar, EFMI Vice President in charge with WG activities and Ying "Helen" Wu, IMIA Vice President for WGs are working together to encourage an active collaboration between both organization's working groups. The objective is to identify common goals and to harmonize the cooperation between EFMI and IMIA WG actions.
The following paragraphs provide detailed information about selected working groups from EFMI.

EFMI WG **EDU**

Education in Health Informatics

Chair:
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http://en.hil.nurs.uoa.gr/wgedu.html

Main Objectives:

Introducing eHealth applications and the Biomedical and Health Informatics (BMHI) discipline into the health care domain requires high quality, educated, and trained professionals from the health and technology domains. Education is considered the most appropriate tool to improve the acceptance, attitude, and behavior towards eHealth applications by professionals working in the healthcare environment. EFMI is well aware of the importance of education and in its history; the working group in education was the first working group to be established. Since education has value internationally and there no limitations to its objectives, the working group seeks to achieve international cooperation as part of its main objectives which may be summarized as follows: Collection of information on existing programs and curricula in the field, dissemination of experiences in implementing educational programs, evaluation, and accreditation of programs, and finally certification of users in BMHI knowledge and skills. Specifically, the objectives are:

- To disseminate and exchange information on Biomedical and Health Informatics (BMHI) programs and courses.
- To exchange experiences of how BMHI is taught and to improve the implementation
- To establish a database on programs and courses on BMHI education
- To produce international recommendations on BMHI education
- to support BMHI courses and exchange of students and teachers within the EFMI countries.
- To foster the accreditation process of BMHI programs in Europe.
- To explore the process of certification of knowledge and skills of users in BMHI

Relevant Activities 2016:

- Representation of EFMI in the accreditation process of academic programs was raised in regards to the IMIA Accreditation program, which was founded through the dedicated efforts of several European informaticians. IMIA agreed that EFMI will be presented in the IMIA accreditation committee that EFMI informaticians will be involved in the accreditation processes in EFMI countries, and that EFMI's role in the accreditation is adequately promoted.
- The EFMI Board initiated the Accreditation and Certification process (AC2). A Task Force was established to coordinate these activities. The Chair of the WG EDU chairs the Task Force.
- The activities of the WG EDU and important outcomes will be cited in the new website of the WG EDU.
- A number of educational related papers were presented during the International Conference in Informatics, Management and Technology in Healthcare in Athens on July 2016.
- EFMI is providing an operational website for the WG EDU.
- A workshop of the WG EDU was organized at MIE 2016 in Munich.

Activities Planned for 2017:

- Enhancing the cooperation between EFMI and IMIA in the accreditation process
- Reviewing the certification process by the Task Force of the AC2 initiative
- Providing, updating, and supporting an operational website for the WG EDU
- Updating the database of the educational programs in Europe hosted at WG website
- Organizing WG/Panel meetings at MIE2017 and Medinfo2017

Relevant Recent Publications:

- Hasman A, Mantas J. IMIA Accreditation of Health Informatics Programs. Healthc Inform Res. 2013 Sep;19(3):154-61.
- Mantas J, Hasman A, Shortliffe EH. Assessment of the IMIA educational accreditation process. Stud Health Technol Inform. 2013;192:702-6.
- Zogas S, Lialiou P, Gallos P, Mantas J. The e-learning programmes in Greek Universities: a literature review. Stud Health Technol Inform. 2013;190:89-91.
- Lialiou P, Mantas J. Evaluation of health professionals in the use of internet information

EFMI WG EDU
(continued)

EFMI WG **EVAL**

Assessment of Health Information Systems

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https://iig.umit.at/efmi/

retrieval systems in health: a literature review. Stud Health Technol Inform. 2013;190:80-2.
- Friedman C, Hasman A, Holmes J, Mantas J, Saranto K. International Perspectives on Program Accreditation for Professional Education in Informatics. MedInfo 2013: 1241.
- Hasman A, Mantas J, Zarubina T. An abridged history of medical informatics education in Europe. Acta Inform Med. 2014 Feb;22(1):25-36.
- Manifava E, Kolokathi A, Mantas J. Exploring the biomedical and health informatics educational programs in Europe. Stud Health Technol Inform. 2014;202:67-70.
- Mantas J, Hasman A. IMIA Educational Recommendations and Nursing Informatics. Stud Health Technol Inform. 2017;232:20-30.
- Mantas J. Biomedical and Health Informatics Education - the IMIA Years. Yearb Med Inform. 2016 Aug 2;Suppl 1:S92-S102. doi: 10.15265/IY-2016-032.

Main Objectives:

Information and communications technologies (ICTs) are increasingly being used in health care. It is evident that the use of modern ICT offers tremendous opportunities to reduce clinical errors, to support health care professionals, and to increase the efficiency of care. However, there are also hazards associated with such technologies. Therefore, rigorous, generalizable evaluations of ICT applications in health care are necessary. Therefore, the aims of the working group are:

- To foster transdisciplinary dialogues between experts from informatics, medical informatics, economics, health care, health services research, clinical epidemiology, biometry, psychology, sociology, ethnography, organizational development, operations research, and other evaluation fields on a European level, and to encourage exchange on methodological issues between researchers from different traditions
- To offer an opportunity to share knowledge with the aim of obtaining profitable cross-fertilization among different fields of expertise and especially between quantitative and qualitative research
- To promote a combined research agenda to develop frameworks and toolkits for information systems evaluation, offering guidelines for an adequate combination of evaluation methods and tools
- To discuss and clarify the networking needs for long-term evaluation research in medical informatics and to promote combined research proposals at a European level.

Relevant Activities 2016:

- The working group organized or co-organized the following activities at HEC/MIE 2016 in Munich (27.8. – 2.9.2016):
  o Workshop on "The two-sided market perspective of e-health" (Vivian Vimarlund, Tobias Mettler, Pirkko Nykänen, Michael Rigby)
  o Presentation on "Theoretical foundations for evidence-based health informatics: Why? How?" (Philip Scott, Andrew Georgiou, Hannele Hypponen, Catherine Craven, Michael Rigby, Jytte Brender)
  o Presentation on "Mixed methods evaluations for understanding impact on patient outcomes and work practice" (Rebecca Randell, Dawn Dowding, Philip Scott, Andrew Georgiou)
  o Presentation on "Challenges on personalized medicine and digital health literacy" (Pirkko Nykänen) at the EFMI WG summit
  o Poster presentation on "Recommendations for Health IT Evaluation Training as a Key Prerequisite to Obtaining Evidence" (Elske Ammenwerth, Nicolette de Keizer, Jytte Brender, Catherine Craven, Eric Eisenstein, Andrew Georgiou, Paula Otero, Pirkko Nykänen, Michael Rigby, Saif Khairat, Philip Scott, Farah Magrabi, Charlene Weir)
  o Participation in "HEC 2016 - Meet the Expert"
- At HEC/MIE 2016 in Munich, Elske Ammenwerth and Michael Rigby as editors organized the official Book Launch Reception for their new book: Evidence-Based Health Informatics - Promoting Safety and Efficiency through Scientific Methods and Ethical Policy.

EFMI WG EVAL
(continued)

Around 50 colleagues, friends and authors joined the celebrations and congratulated the editors and authors. The book is open access available at http://ebooks.iospress.nl/volume/ evidence-based-health-informatics-promoting-safety-and-efficiency-through-scientif-ic-methods-and-ethical-policy and got > 3.700 downloads until January 2017.

- The working group contributed to a position paper entitled "Evaluation considerations for secondary uses of clinical data: Principles for an evidence-based approach to policy and implementation." This paper will be published in the IMIA Yearbook of Medical Informatics 2017.
- The working group submitted a paper entitled "How to Teach Health IT Evaluation: Recommendations for Health IT Evaluation Courses" to MIE 2017, Manchester
- The working group continued its close collaboration with the IMIA Working Group on Technology Assessment and Quality Development in Health Care. Phone conferences to discuss cooperation and joint activities were held regularly.
- The bibliography on health IT Evaluation is available at https://iig.umit.at/efmi/bibliography.htm. The list contains journal papers and books considered as milestone publications.

Activities Planned for 2017:
- Presentation of a contribution entitled "How to Teach Health IT Evaluation: Recommendations for Health IT Evaluation Courses" at MIE 2017.
- Development of a taxonomy for health IT systems and health IT evaluation and subsequent update of the health IT Evaluation Inventory.
- Contributions to a book entitled "theoretical foundations of health informatics" initiated by Philip Scott.
- Continuing the links to the sister WGs of AMIA and IMIA by joint activities

Relevant Publications 2016:
- Magrabi F, Ammenwerth E, Hyppönen H, de Keizer N, Nykänen P, Rigby M, Scott P, Talmon J, Georgiou A. Improving Evaluation to Address the Unintended Consequences of Health Information Technology. Yearb Med Inform 2016; 61-69.
- Rigby M, Magrabi F, Scott P, Doupi P, Hypponen H, Ammenwerth E. Steps in Moving Evidence-Based Health Informatics from Theory to Practice. Health Informatics Research 2016; 22(4): 255-60.
- Ammenwerth E, de Keizer N, Brender J, Craven CK, Eisenstein E, Georgiou A, Khairat S, Magrabi F, Nykänen P, Otero P, Rigby M, Scott P, Weir C. Recommendations for Health IT Evaluation Training as a Key Prerequisite to Obtaining Evidence. Poster at the MIE2016/HEC2016 conference, 28.8.-2.9.2016, Munich.
- Ammenwerth E, Rigby M. Evidence-based Health Informatics - Promoting Safety and Efficiency Through Scientific Methods and Ethical Policy. Stud Health Tech Inform. Vol 222. 2016. IOS Press. Here are selected chapters from this book that were written by core members of the working group:
- Rigby M, Ammenwerth E. The need for Evidence in Health Informatics. pp. 3 - 13.
- Magrabi F, Ong M-S, Coiera E. Health IT for Patient Safety and Improving the Safety of Health IT. pp. 25-36.
- Brender McNair J. Theoretical Basis of Health IT Evaluation. pp. 39-52.
- Scott PJ. Mixed Methods: A Paradigm for Holistic Evaluation of Health IT. pp. 102-113.
- Hyppönen H, Ronchi E, Adler-Milstein J. Health Care Performance Indicators for Health Information Systems. pp. 181-194.
- Nykänen P, Kaipio J. Quality of Health IT Evaluations. pp. 291-303.
- Ammenwerth E, de Keizer N. Publishing Health IT Evaluation Studies. pp. 304-311.
- Georgiou A. Finding, Appraising and Interpreting the Evidence of Health IT. pp. 312-323.
- Ouloch T, De Keizer N. Evaluation of Health IT in Low-Income Countries. pp. 324-35.
- Rigby M, Ammenwerth E, Talmon J. Forward Outlook: The Need for Evidence and for Action in Health Informatics. pp. 355-366.

EFMI WG **HIIC**

Health Informatics for Interregional Cooperation

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http://www.efmi.org/index.php/workinggroups/hiic-health-informatics-for-interregional-cooperation

Main Objectives:

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

Relevant Activities 2016:

- Participation with scientific contributions in EFMI STC2016, Paris, France
- Participation in EFMI MIE2016, Munich, Germany and organizing the workshop on regional projects and low cost solutions for financially challenged regions: Sustainability of Telemedicine Projects for Resource Challenged Regions (L cr mioara Stoicu-Tivadar, Michael Weinhara, Monika Hubler, Nora Hinsch)
- Consolidating close cross-border cooperation with neighbors, Hungary (Szeged) and Serbia (Vrsac) in medical informatics education and e-health projects, as example of good practice.

Activities Planned for 2017:

- Identifying European needs in relation with cross-border cooperation in e-Health and presenting it in a future EFMI event
- Supporting with research papers and a workshop the EFMI conferences ICIMTH in Greece and STC2017 in Israel

Relevant Publications 2016:

- Integrated System for Monitoring and Prevention in Obstetrics-Gynaecology, Robu, Andreea, Gauca, Bianca, Crisan-Vida, Mihaela, Stoicu-Tivadar, Lacramioara, Ed by: Hofdijk, J; Seroussi, B; Lovis, C; Ehrler, F; Sieverink, F; Ugon, A; HercigonjaSzekeres, M, TRANSFORMING HEALTHCARE WITH THE INTERNET OF THINGS, Book Series: Studies in Health Technology and Informatics, Volume: 221, Pages: 8-12, 2016.
- Evaluating Open-Source Full-Text Search Engines for Matching ICD-10 Codes, Jurcau, Daniel-Alexandru; Stoicu-Tivadar, Vasile, Ed by:Mantas, J; Hasman, A; Gallos, P; Kolokathi, A; Househ, MS, UNIFYING THE APPLICATIONS AND FOUNDATIONS OF BIOMEDICAL AND HEALTH INFORMATICS, Book Series: Studies in Health Technology and Informatics,Volume: 226 Pages: 127-130, 2016.
- Sustainability of Telemedicine Projects for Resource Challenged Regions, L cr mioara Stoicu-Tivadara,b, Michael Weinharac, Monika Hublerd, Nora Hinsche, EFMI WG Healthcare Informatics for Interregional Cooperation, bUniversity Politehnica Timi oara, Romania, Rehabilitation of Northern Afghan Hospitals, University of Basel, Switzerland, Institute for Pathology, Health Care Center, Lukaskrankenhaus Neuss.

EFMI PG **HIME**

Health Information Management Europe

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http://www.efmi.org
http://www.linkedin.com/groups/EFMI-HIME-Health-Information-Management-4550722/about

Main Objectives:

The group operates as a "think-tank" drawing together leading-edge expertise not only from across the medical documentation and medical informatics spectrum but also from other professions with relevant generic input to focus on selected topic areas in support of clinical and healthcare research and routine processes.

- To promote exchange of experience in development, implementation, education, and use of health record systems
- To promote exchange of standards in close co-operation with SDOs (standard development organizations) and institutions working in the field on national and European level.
- To investigate the needs, opportunities, and obstacles for health information management.
- To disseminate results and experiences across EFMI members
- To facilitate access to European educational facilities and EFMI members

Activities in general:

- Supporting activities of EFMI, its members (resp. their national societies), and IFHIMA-Europe, especially MIE and STC conferences.
- Organizing workshops on a national and European level
- Initiation of a Forum using Internet and other publication media
- Making educational and promotional material available
- Preparation of IFHIMA (International Federation of HIM associations) conferences

Relevant Actiities 2016:

- LinkedIn group EFMI-HIME.
  Number of members: 468
  Diverse topics for discussion and announcements
- Participation in ICIMTH2016 14th International Conference on Informatics, Management and Technology in Healthcare Athens, Athens
- Participation at ICIST2016, Druskininkai/Lithuania
- Discussion of possible conferences in Europe during MICE events CONVENTA, IBTM, MICE-peak, etc.

Activities Planned for 2017:

- Organization of discussions and promotions on the LinkedIn group EFMI-HIME
- Publications in proceedings, books, and journals
- Special Topic Conference STC2017 "Assa Reichert" in cooperation with Israel Health Information Management Association, 23-24 Oct 2017, Tel Aviv
- Organization of eHealth Session and workshop and presentation at Digital Economy Show DES2017 , 14-16 June 2017, Guadalajara/ Mexico
- Participation in ICIMTH2017, 15th International Conference on Informatics, Management and Technology in Healthcare Athens, 7-9 July, 2017
- ICIST2017, Druskininkai Lithuania, Session "eHealth Information Management Systems" and Satellite Conference in Kaunas / Lithuania, 12-15 October 2017

EFMI WG **HOFMI**

Human and Organizational Factors of Medical Informatics

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Co-Chair:
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https://www.efmi.org/index.php/workinggroups/hofmi-human-and-organisational-factors-of-medical-informatics

Main Objectives

- To establish a network of researchers and practitioners interested in the role of human and organizational factors in the use of healthcare technologies.
- To organize workshops, panels, and tutorials dedicated to this topic at the Medical Informatics Europe (MIE) conference and other events.
- To disseminate knowledge about the role of human and organizational factors in the use of healthcare technologies through various activities, including journal publications.
- To support exchange and discussion between researchers and practitioners as well as European collaborations.

Relevant Activities 2016:

- A HOFMI sponsored panel 'Healthcare Complexity from a Human Factors Perspective' was held at HEC 2016: Health – Exploring Complexity, An Interdisciplinary Systems Approach.
- A workshop was held in collaboration with the EVAL working group on 'Mixed Methods Evaluations for Understanding Impact on Patient Outcomes and Work Practice' at HECS 2016.
- HOFMI has established a sub-theme within the working group on Consumer Health Informatics, which is being led by Maria Hägglund and Isabella Scandurra.

Activites Planned for 2017:

- A working group meeting will take place at Informatics for Health in Manchester in April. As part of this meeting, Maria Hägglund and Isabella Scandurra will introduce the sub-theme of Consumer Health Informatics and plans will be made for panel and workshop proposals for MIE 2018.
- A HOFMI sponsored workshop on 'Reinventing Heuristic Evaluations: Exploring Methods to Engage Clinicians in Usability Evaluations' will take place at Informatics for Health.

Relevant Publications 2016:

Members of the working group were involved in several publications on human and organizational factors of medical informatics, for example:

- Lamer A, Jeanne M, Marcilly R, Kipnis E, Schiro J, Logier R, Tavernier B. (2016) Methodology to automatically detect abnormal values of vital parameters in anesthesia time-series: proposal for an adaptable algorithm. Computer methods and programs in biomedicine 129, pp.160-171
- Randell R, Honey S, Alvarado N, Pearman A, Greenhalgh J, Long A, Gardner P, Gill A, Jayne D, Dowding D. (2016) Embedding robotic surgery into routine practice and impacts on communication and decision making: A review of the experience of surgical teams. Cognition, Technology & Work 18(2), pp.423-437
- Randell R, Backhouse M, Nelson EA. (2016) Videoconferencing for site initiations in clinical studies: Mixed methods evaluation of usability, acceptability, and impact on recruitment. Informatics for Health and Social Care 41(4), pp/362-372
- Randell R, Keen J, Gates C, Ferguson E., Long A, Ginn C, McGinnis E, Willis S, Whittle J. (2016) Managing Quality and Safety In Real Time? Evidence From an Interview Study. Studies in Health Technology & Informatics 228, pp.23-7
- Ruddle R, Thomas R, Randell R, Quirke P, Treanor D. (2016) The Design and Evaluation of Interfaces for Navigating Gigapixel Images. ACM Transactions on Computer-Human Interactions 23(1), article 5
- Sockolow P, Dowding D, Randell R, Favela J. (2016) Using Mixed Methods in Health Information Technology Evaluation. Nursing Informatics 2016, Studies in Health Technology and Informatics 225, pp.83-87

EFMI WG **IDeS**

Information and Decision Support in Biomedicine and Health Care

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https://www.efmi.org/workinggroups/ides-information-and-decision-support-in-biomedicine-and-health-care

Main Objectives

Decision support systems (DSS) in biomedicine and health care, in the form of various applications, guidelines, or reminders, are applied more often to assist the decision making processes. The complexity of decision-making procedures in these areas caused the development of various decision support systems in order to provide help to the decision makers. DSS are using existing knowledge and evidence to help the decision maker to make appropriate decision for the specific situation. The quality and comprehensiveness of existing evidence and knowledge that are used in such systems influence how appropriate decisions are derived and indirectly affect decision maker`s behavior. DSS must be analyzed, systematized, and validated before adopting them for routine use because of its influence on decisions and decision makers.

- Analysis of currently available Decision Support Systems in biomedicine and health care, especially in the European environment
- Classification of existing Decision Support Systems
- Definition of the recommendations set for successful evaluation and implementation of the Decision Support Systems

Relevant Activities 2016:

- Presentation: Sović Brkičić Lj, Sović S, Sonicki Z. e-medication in Croatia at Advancing and challenging e-medication around the globe - how to achieve patient safety through nationwide medication processes. Session 3 "nationwide solutions". MIE 2016; August 28 – September 2 2016. Munich, Germany. (Program overview available at https://hec2016.online-registry.net/download/sessionlist/overview.html)
- Lectures about Decision Support Systems at postgraduate study Leadership and Management of Health Services, University of Zagreb, School of Medicine, Zagreb, Croatia, November 24th-26th 2016. (http://lmhs.eu/)
- Predictive model development in prediction of the success of haemodialysis arteriovenous fistulas based on intraoperative vein distensibility (ongoing research and PhD thesis)
- Individual presentations

Activites Planned for 2017:

- Round table "Developing and validating clinical decision rules", moderator: Mark Ebell, College of Public Health, Epidemiology and Biostatistics, University of Georgia, USA, planned for April 2017, venue: University of Zagreb, School of Medicine, Zagreb, Croatia
- Working group meeting in Croatia
- Extension on predictive model development in prediction of the success of hemodialysis arteriovenous fistulas based on intraoperative vein distensibility (ongoing research and PhD thesis)
- Individual presentations at different meetings focused on decision support topics

EFMI WG **LIFOSS**

Libre/Free and Open Source Software

Chair:
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http://www.efmi.org/index.php/workinggroups/lifoss-librefree-and-open-source-software

Main Objectives:

Libre/Free Open Source Software holds a great potential to overcome the fragmentation in health IT and to foster collaboration among different disciplines and stakeholders. The WG promotes this approach, organizes workshops, and serves as a networking platform for individuals interested in this approach. In particular, the LIFOSS WG aims

- To help replicate the success of free/libre and open source projects in the health informatics domain, in particular those within education, research, clinical practice, and administration
- To build a repository of knowledge about free/libre and open source developments of relevance to the health informatics domain
- To develop an Open Source Market Place
- To explore the implications of digital rights management, digital signatures, copyright, and intellectual property issues
- To liaise with other organizations and groups with related or similar objectives

Relevant Activities 2016:

- Co-organization of and participation in IWEEE 2016, 18-20 November 2016, Las Palmas, Gran Canaria
- Co-organization of FLOSS Village at Med-e-Tel 2016, 6-8 April 2016, Luxemburg
- Co-organization of FLOSS workshop at HEC2016, 29-31 August 2016, Munich, Germany
- Maintenance of the MedFLOSS.org database

Activities Planned for 2017:

- Co-organization of FLOSS Village at Med-e-Tel 2017, 5-7 April 2017, Luxemburg
- Co-organization of IWEEE 2017, Las Palmas, Gran Canaria, Spain
- Maintenance of the MedFloss.org database
- Collaboration with other EFMI & IMIA WGs

EFMI WG **NURSIE**

Nursing Informatics in Europe

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Main Objectives:

- To support nurses and nursing organizations in the European countries with information and contacts from the field of informatics
- New objectives are in preparation to allow this working group to bring high value to members' countries.

Relevant Activities 2016:

- NI2016 was conducted by IMIA NI. European group were very active. This congress had 708 participants from 42 countries giving 348 presentations/posters. The proceedings with more than 1'000 pages is available from IOS Press at http://ebooks.iospress.nl/ISBN/978-1-61499-658-3
- The post conference dedicated on Forecasting Informatics Competencies for Nurses in the Future of Connected Health published a reference book at IOS Press at: http://ebooks.iospress.nl/ISBN/978-1-61499-738-2.
- Geneva Tourism and Convention awarded NI2016 for "Largest International Attendance" 2016

EFMI WG **PPD**

Personal Portable Devices

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Co-Chair:
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http://www.efmi.org/index.php/workinggroups/ppd-personal-portable-devices

Main Objectives:

EFMI Working Group (WG) Personal Portable Devices (PPD) aims at being a European competence center to monitor ongoing activities and to provide knowledge to policy makers and architect designers involved in the deployment of projects related to personalized, portable devices (PPD) such as cards, tokens, wearable and portable devices, sensors and actuators, and similar technologies including advanced network infrastructures mainly in the domain of healthcare and welfare. WG PPD links its activities to the domain of Ambient Assisted Living by liaising with the IMIA WG on Smart Homes and AAL.

Furthermore, WG PPD representatives are actively involved in standardization activities in various fields and domains including security, safety, management, ethics, medical devices, and sensor networks. Members of WG PPD act as a ambassadors to additional standards developing organizations in various other domains, where aspects of personal portable (mobile) devices are addressed.

Moreover, the WG PPD actively supports the organization of meetings of various kinds to disseminate the WG achievements and to exchange knowledge and information about any topic linked to the interest of the WG PPD members. The main topics the WG PPD is focused on include:

- Personal(ized) Portable Devices, sensors and actuators as well as the underlying networks that enable personal and even personalized health service provision going far beyond traditional care procedures. It includes wellness, lifestyle, and safety aspects. Applications from other domains stimulate the respective paradigm shift towards personalized services (addressing citizens rather than patients) in the healthcare and welfare domain as well.
- The paradigm shift from health cards to personalized devices and sensor networks for providing personal health services addresses various technical, medical, organizational, legal, and standardization aspects of portable devices (EFMI WG PPD) and related work on sensor networks (ISO/IEC JTC1 SGSN). The EFMI WG PPD is aiming from a technological viewpoint to advance the present and the near future of personal health service provision supported by devices of any technology, any kind and any size either directly applied to the human body, or placed inside the body.
- Patient safety, data and communication security, ethics and legal issues become more important as the personal devices, wearables, and related technologies are penetrating the market. With the expected interconnection with Internet of Things these non-technical issues must be analyzed in depth and recommendations prepared for development of new applications.

Relevant Activities 2016:

- Strengthening the links to relevant societies and their working groups
- Active participation in Int. Conference Electronic Healthcare Documentation 2016, Prague, Czech Republic
- Active participation in MIE 2016, Munich, Germany – Lenka Lhotska was member of the SPC; workshop Personal Health Data - Privacy Policy Harmonization and Global Enforcement jointly organized by EFMI Working Groups Security, Safety and Ethics and Personal Portable Devices in cooperation with IMIA Working Group "Security in Health Information Systems"
- Active participation in EFMI STC 2016, Paris, France – Peter Pharow was invited as keynote speaker

Activities Planned for 2017:

- Strengthening the links to relevant societies and their working groups
- Active participation in Int. Conference Systems for Medical Decision Support and Forensic Identification 2017, Prague, Czech Republic
- Active participation in pHealth 2017, Eindhoven, The Netherlands – Lenka Lhotska is invited as keynote speaker
- Active participation in EFMI STC 2017, Tel Aviv, Israel – Lenka Lhotska is member of the SPC

EFMI WG SSE

Security, Safety and Ethics

Chair:
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http://www.efmi.org/index.php/workinggroups/sse-security-safety-and-ethics

Main 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. Close collaboration with other EFMI WGs and beyond, as well as with IMIA WG4, for securing ICT solutions for health care.

Relevant Activities 2016:

- During MIE 2016 in Munich, SSE organized the second Joint Workshop together with IMIA SiHiS WG. The title for the SSE part of the WS was "Personal health data - Privacy policy harmonization and global enforcement". It covered balance of use of patient information and management of potential conflicts, due to privacy, between health professionals, patients and secondary users. Workshop participants analyzed privacy expectations that take place in different real-life contexts such as portable health devices and personal health records and discussed mechanisms to balance them to ensure that global protection of health data and its meaningful use are realized simultaneously.
- Working Group Meeting at MIE 2016 in Munich. It included a summary of past activities and a discussion on a plan for next year's activities (it was stated that the WG also needed an updated business plan, more young members, and better visibility). Furthermore, the situation of WG leadership was discussed and new WG chairs were elected.
- Transfer of the WG Leadership from Pekka Ruotsalainen to Jaime Delgado during and after MIE 2016 in Munich.

Activities Planned for 2017:

- Develop a long-term activity plan for SSE, discuss it, and accept the plan in the formal Business Meeting to be held in Manchester during MIE 2017:
  o As a part of this plan, SSE will expand current joint work to cover other EFMI WG/SIGs such as: consumer health informatics, Data mining and Big Data Analysis, HIS, Health Record Banking, Wearable Sensors in Health care and smart homes and ambient assisted living. This indicates the future role of SSE as a horizontal activity. This enables also SSE and other WGs to share expertise and domain specific ethical, security and privacy concerns.
  o Develop further the collaboration with IMIA SiHiS (Security in Health Information Systems) WG.
- Develop the way SSE Workshops are functioning. Workshops should include research papers, theory papers, methodology and conceptual papers, all mixed to provide the widest possible view on the chosen topic. Workshops will be as interdisciplinary as possible, including researchers from different institutions and research fields. An important part of the workshop's time should be reserved for discussion, small groups, or other forms of interaction.
- Develop the visibility of SSE's work and encourage young experts to participate more actively in the work of the SSE.
- Consider new activities, such as producing regular bulletins devoted to specific issues (that could be the basis for future Workshops), re-activating the web site as a means of communication between members and to the public outside, etc.
- Organize a new Workshop form MIE 2017 in Manchester. The Workshop topic will be "Security and Privacy Standardization in Healthcare - Impact on Patient´s New Roles". The workshop will include four 15 min presentations with a thirty minute discussion between presenters and attendees. The presentations will focus on standards and related initiatives in security and privacy in healthcare and will focus on their connection to patients' security taking into account the clear current trend towards patient empowerment.

EFMI WG SSE

(continued)

EFMI WG THI

Translational Health Informatics

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http://www.efmi.org/index.php/workinggroups/thi-translational-health-informatics

Relevant Publications 2016:

- Blobel B. Paradigm Changes of Health Systems Towards Ubiquitous, Personalized Health Lead to Paradigm Changes of the Security and Privacy Ecosystems. International Journal on Biomedicine and Healthcare 2015;3,1:6-11.
- Blobel B, Ruotsalainen P, Lopez DM, Gonzalez C. How to Use the HL7 Composite Security and Privacy Domain Analysis Model. International Journal on Biomedicine and Healthcare 2015;3,1:12-17.
- Ruotsalainen P, Blobel B. The New Role of Patients in Future Health Settings. Stud Health Technol Inform. 2015;211:71-78.

Main Objectives:

Translational medicine is a relatively new discipline targeted at removing barriers in utilizing new scientific discoveries in healthcare, moving from bench to bedside, on to communities and finally to policy. The biomedical discoveries need to be accompanied by studies in areas such as health economy as well as sociological and psychological aspects. In order to manage the information generated by each of these disciplines, it is crucial to use advanced informatics that could fuse the various types of data into computerized systems that support the translational processes.

This Working Group will be focused on the health informatics needed for accommodating the translational challenges. In particular, we will target the following goals:

- Explore a proposal for a Translational Health Information Language to underlie translational info-structure
- Demonstrate feasibility of common translational infostructure for the currently distinct environments of biomedical research and health care
- Support studies focusing on informatics underlying translational research and medicine
- Foster better interrelation of bioinformatics and medical informatics
- Discuss major challenges in the new OMICS era with regard to translational health informatics and analytics

Relevant Activities 2016:

- The 4th i2b2 European Academic User Group meeting held in Pavia from September 15th to September 16th. The program included presentations on projects using i2b2/tranSMART and related platforms to collect and aggregate data from clinical, genomic, and other domains, both for single institution and collaborative projects. Among several aspects presented in the meetings, the most relevant for the EFMI THI WG were the use of standards to enforce the re-use of clinical data in research, the interaction between next generation genomic and clinical data, and the state of the art and future challenges of IT infrastructure to support precision medicine

Activities Planned for 2017:

- Holding EFMI THI WG Workshop and business meeting at MIE 2017
- Verifying the possibility of converging synergies with Translational initiatives in the medical field like "European Infrastructure for Translational Medicine (EATRIS)"

Relevant Publications 2016:

- Parra Calderón CL. [Big data in health in Spain: now is the time for a national strategy]. Gac Sanit. 2016 Jan-Feb;30(1):63-5. doi: 10.1016/j.gaceta.2015.10.005. Spanish. PubMed PMID: 26613831.