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XIV MEDITERRANEAN CONFERENCE ON MEDICAL AND BIOLOGICAL ENGINEERING AND COMPUTING

Systems Medicine for the Delivery of Better Healthcare Services

Template for Preparation of Proposal for Medicon 2016 Special Session

First Proposer / session chair:
Christian E.H. Boehler,
PhD *European Commission, Joint Research Centre, Institute for Prospective Technological Studies*
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Christian Boehler is scientific officer at the Institute for Prospective Technological Studies, part of the European Commission's Joint Research Centre. As principle investigator of the 'MAFEIP-project', he developed a monitoring and assessment framework for the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA). Dr. Boehler holds a PhD from Brunel Universities' Health Economics Research Group (HERG), and a MSc in Health Economics from the University of York, UK. He is honorary lecturer at the University of Sheffield, School of Health & Related Research/Health Economics and Decision Sciences and external advisor to the HTA division of the International Federation for Medical and Biological Engineering (IFMBE).

Second Proposer / session co-chair:
Giuseppe Fico,PhD,
Universidad Politecnica Madrid,
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Giuseppe Fico holds a M.Sc. in Electronic Engineering, Mast in Biomedical Engineering and is an expert in applying engineering and information technology methods to health and wellbeing. His research focuses on ICT for Health, Ageing Well and Inclusion, with special attention to chronic disease management. He is the Technical Manager of FP7 and H2020 research projects in the area of e-Health applied to diabetes and cancer diseases.
Since 2012 he is coordinating the Action Group A1 Prescription and Adherence to medical plans of the EIP on AHA, and leading the user empowerment A1 subgroup. He is teacher of specialized courses in clinical and biomedical engineering courses at the Universidad Politécnica de Madrid.

Title: BUILDING AN EVIDENCE BASE FOR EARLY HEALTH TECHNOLOGY ASSESSMENT IN CLINICAL ENGINEERING THROUGH THE MONITORING AND ASSESSMENT TOOL FOR THE EUROPEAN INNOVATION PARTNERSHIP ON ACTIVE AND HEALTHY AGEING (MAFEIP-TOOL)

Theme: T.10 Clinical Engineering and Health Technology Assessment
Keywords HTA; EIP on AHA; Monitoring and Assessment Framework; Decision Support Tools; Decision Analytic Modelling

Abstract: Early HTA helps facilitating the development and fosters the uptake of innovative health technologies so to improve patient care as well as to strengthen the sustainability of European health and care systems. However, monitoring and assessing the societal, healthcare and patient impact of the innovations developed within the European Innovation Partnership on Active and Healthy Ageing is challenging for many reasons, including the diversity of interventions developed; the variety in target populations; the need for fast and iterative technology assessment; and the need to extrapolate results over time and settings.

To address these challenges, the European Commission's Institute for Prospective Technological Studies developed an online tool (MAFEIP-tool) in order to monitor the health and economic outcomes of the innovations developed within the EIP on AHA. The MAFEIP-tool allows estimation of interventions health economic impact through a generic, highly adaptable Markov model with three mutually exclusive health states, combined with an extensive database of country-specific mortality data. The tool assesses the impact of an innovation on care expenditure (both from a healthcare and societal perspective) and the quality adjusted life expectancy of patients, ultimately allowing for the iterative assessment of interventions' cost-effectiveness at various stages of the innovation development process.

After discussing its conceptual framework and a life-presentation of the MAFEIP tool, the workshop will present two case studies which were carried out to test the MAFEIP tool: one on the cost-effectiveness of a planned wearable device to predict falls in the elderly, and another one on mobile monitoring and training for diabetes. An early assessment (before and during clinical testing) was performed to estimate the possible impact of these interventions, considering various implementation scenarios. The results are relevant to determine the potential health benefit, the projected health and care system impact, and ultimately the market potential of a technology.

LIST of Speakers (whole session 90 min):

1) Christian E.H. Boehler, PhD:
Scientific Officer
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The Monitoring and Assessment Tool for the European Innovation Partnership on Active and Healthy Ageing (MAFEIP-Tool). Conceptual Framework and Implementation

Biography:
Christian Boehler is scientific officer at the Institute for Prospective Technological Studies, part of the European Commission's Joint Research Centre. As principle investigator of the 'MAFEIP-project', he developed a monitoring and assessment framework for the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA). Dr. Boehler holds a PhD from Brunel Universities' Health Economics Research Group (HERG), and a MSc in Health Economics from the University of York, UK. He is honorary lecturer at the University of Sheffield, School of Health & Related Research/Health Economics and Decision Sciences and external advisor to the HTA division of the International Federation for Medical and Biological Engineering (IFMBE).

2) Giuseppe Fico, MaSt
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Using the MAFEIP-tool for the early assessment of technologies within large innovation partnerships: the case of mobile monitoring and training for diabetes

Biography:
Giuseppe Fico holds a M.Sc. in Electronic Engineering, Mast in Biomedical Engineering and is an expert in applying engineering and information technology methods to health and wellbeing. His research focuses on ICT for Health, Ageing Well and Inclusion, with special attention to chronic disease management. He is the Technical Manager of FP7 and H2020 research projects in the area of e-Health applied to diabetes and cancer diseases.
Since 2012 he is coordinating the Action Group A1 Prescription and Adherence to medical plans of the EIP on AHA, and leading the user empowerment A1 subgroup. He is teacher of specialized courses in clinical and biomedical engineering courses at the Universidad Politécnica de Madrid.

3) Leandro Pecchia, PhD
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Engineering impact in medicine: can HTA methods inform the design of more sustainable medical devices? The case of falls prediction

Biography:
Leandro Pecchia is an associate professor in biomedical engineering at the University of Warwick, UK. He is the responsible of the Applied Biomedical Signal Processing and Intelligent eHealth Lab . His main areas of research cover Health Technology Assessment (HTA), machine learning and biomedical signal processing and Telemedicine. Leandro is the Chairman of the HTA Division of the IFMBE and he is also member of the Italian Association of the Medical and Biological engineering (AIIMB), IEEE and the Chairman of the Public Affairs Working Group of the EAMBES.