Panel:
Designing by Considering User Feedback and Personalization

Shada Alsalamah, King Saud University, Saudi Arabia
Olivia Ernestina Sanchez Graillet, CITEC, Bielefeld University, Germany
Rajeev Barua, University of Maryland, USA
Fabrizio Marangio, Institute for High Performance Computing and Networking, Italy
José Manuel Fonseca, UNINOVA, Portugal
Herwig Mannaert, University of Antwerp, Belgium
Panel Overview

- Shada Alsalamah
  - How to build trusted ecosystem for disaster victim identification for global patients
- Olivia Ernestina Sanchez Graillet
  - Precision health: is it plausible to personalize health care?
- Rajeev Barua
  - To what extent do we use user input and customization for computer security and what will happen in the future
- Fabrizio Marangio
  - The use of DLT (Distributed Ledger Technology) technologies for the development of patient-centric systems.
- José Manuel Fonseca
  - Is ethics an obstacle for Artificial Intelligence in healthcare?
  - Is Artificial Intelligence a threat to health workers?
- Herwig Mannaert
  - Some related thoughts on user input and design.
Some Related Thoughts

- Using user feedback and personalization is absolutely crucial for user acceptance and adoption

- User requirements and use cases should not be seen nor used as a design methodology
  - The relationship between user requirements and constructional primitives is many-to-many
  - Designing is about generalization use case requirements, and knowing when to halt this process

- User requirements and needs do not seem appropriate nor used for deeply innovative designs
Some Related Thoughts

Where does lasting prosperity come from? The answer: Market-Creating Innovations.
— Clayton Christensen

You decide what you will make. Herman Miller has never done any market research or any pretesting of its products to determine what the market "will accept." If designer and management like a solution to a particular furniture problem, it is put into production. There is no attempt to conform to the so-called norms of "public taste," nor any special faith in the methods used to evaluate the "buying public."
— George Nelson

It took us three years to build the NeXT computer. If we'd given customers what they said they wanted, we'd have built a computer they'd have been happy with a year after we spoke to them - not something they'd want now.
— Steve Jobs

I do zero market research. Period.
— Elon Musk
Questions, Remarks, Comments, ...
DLT for Patient-Centric Systems

Mario Ciampi, Angelo Esposito, Fabrizio Marangio, Giovanni Schmid, Mario Sicuranza

Electronic Health Records

Personal Health Records

Telemedicine

Portable Devices

Medical Treatments
Population Growth

10.9 billion by 2100

Growth rate of 0.1%

Fewer children, more elderly people

Increase in public health costs

Possible solutions: Prevention and dehospitalisation
Integration Between Electronic Health Record (EHR) and Personal Health Record (PHR)

- EHR: health info produced and stored by health providers
- PHR: a set of personal health information provided by the patient

The integration between EHR and PHR could improve patient’s health monitoring leading to significant benefits for medical diagnoses.
Portable Devices and Security Framework

- Increased use of portable medical devices

- The IECEE established the Medical Electrical Equipment Task Force (IECEE MEE) and is focusing on cybersecurity for the medical industry

Health data are valuable and exposed to significant risks

Need to develop very sophisticated protection systems
Permissioned DLT Systems

- Data access monitoring
- Transparency of processes
- Fewer disputes
- Easy retrieval of data
- Immutable
- Event driven
Permissioned DLT Systems for e-Health

- It make sense to use permissioned systems?
- Is it possible to create general transactions?
- Can we identify predefined assets?
- Can the immutability have some side effects?
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Panel on Citizen-Centric Systems
Designing by Considering User Feedback and Personalization

José Manuel Fonseca
UNINOVA / Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa
Is ethics an obstacle for Artificial Intelligence in healthcare?

• Research focused on personalized medicine has developed significantly over the past decade...

• What are the ethical, legal and social implications of this type of research?

• Is medical data kept hidden due to ethical problems fear?
Is Artificial Intelligence a threat to health workers?

- Is AI a threat or benefit to health workers?
- Can AI substitute healthcare professionals in the future?
- Will patients benefit by gaining increased access to their data?
Panel on Citizen-Centric Systems Designing by Considering User Feedback and Personalization

Olivia Sanchez-Graillet
CITEC, Bielefeld University, Germany
Introduction

- **Eminence-based medicine vs. Evidence-based medicine**
Personalize Healthcare

- Tailoring medical patient care/treatment to the individual characteristics of each patient.
- **P4:** use of tools and strategies of systems biology and medicine to quantify wellness and demystify disease for the well-being of an individual.

http://qnphc.org/personalized-health-care/
Questions

- By analyzing biomedical data on a big scale, is it feasible to tailor the right therapeutic strategy to a person at the right time?
- Would individualized healthcare help health prevention and promotion, and as a consequence, to reduce costs associated with healthcare?