# University of Cologne

## Information Privacy and Health IT

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Current and future IT environments are characterized by increasing interconnectedness and complexity, fast-paced innovation, penetration of nearly all aspects of daily life, and global access to a sheer endless number of IT offerings. Especially for complex concepts like information privacy, tools are required to enable users to make informed decisions about selection and use of IT offerings and avoid defensive user behavior like withholding or distortion of shared information. In current IT environments, users are in the disadvantage since they neither have access to the information required to choose those IT offerings catering best to users' interests nor can they observe whether providers act in a way congruent with users' interests. Thus, there is a wealth of research opportunities with a focus on empowering users to take a more active role and to make informed decisions when selecting, adopting, and using IT offerings.

Health IT constitutes a research domain where information privacy is of particular importance if users want to benefit from health IT use while avoiding potential harm through privacy infractions in the long term. Novelty and associated uncertainty of health IT, the high stakes involved, and potential to tackle global morbidity and mortality rates as well as to improve users' state of health and quality of life, make health IT an auspicious domain for research on information privacy. In addition, focusing on a context where privacy is particularly relevant facilitates transfer of results to other contexts.

Possible topics for Bachelor, Master, or Diploma theses in the subject area "Information Privacy and Health IT" include, but are not limited to:

- Information privacy and information privacy concepts (eg, privacy concerns, privacy awareness, transparency of privacy practices, or privacy empowerment)
- Overcoming challenges for making privacy practices transparent to users
- Design, development, and evaluation of privacy enhancing tools (eg, privacy policies, privacy seals, anonymization tools) and usable privacy
- Empirical studies of privacy-related user perceptions, especially, in the domain of health IT
- Identification and mastering of privacy-related challenges in health IT and the emerging mobile health environment
- Understanding and reconciling providers' and users' privacy perceptions, expectations, and objectives
- Foundations, differences, and contradictions in individual, organizational, and governmental privacy perceptions and perspectives across the globe

Introductory Literature:

- Rindfleisch, T. C. Privacy, Information Technology, and Health Care. Communications of the ACM 40 (1997).
- Pavlou, P. A. State of the Information Privacy Literature: Where Are We Now and Where Should We Go? MIS Quarterly 35 (2011).
- Solove, D. J. A Taxonomy of Privacy. University of Pennsylvania Law Review 154 (2006).
- Appari, A. & Johnson, M. E. Information Security and Privacy in Healthcare: Current State of Research. International Journal of Internet and Enterprise Management 6 (2010).
- Dehling, T., Gao, F., Schneider, S. & Sunyaev, A. Exploring the Far Side of Mobile Health: Information Security and Privacy of Mobile Health Applications on iOS and Android. JMIR mHealth uHealth 3 (2015).
- Li, Y. Theories in Online Information Privacy Research: A Critical Review and an Integrated Framework. Decision Support Systems 54 (2012).
- Tavani, H. T. Philosophical Theories of Privacy: Implications for and Adequate Online Privacy Policy. Metaphilosophy 38 (2007).
- Li, Y. A Multi-Level Model of Individual Information Privacy Beliefs. Electronic Commerce Research and Applications 13 (2014).
- Sunyaev, A., Dehling, T., Taylor, P. L. & Mandl, K. D. Availability and Quality of Mobile Health App Privacy Policies. JAMIA (2014).