

Curriculum Vitae for Sabine Koch

1. Higher education qualifications:

MSc 1993 – Medical Informatics, University of Applied Sciences, Heilbronn and Ruprecht-Karls University Heidelberg, Germany

2. Degree of Doctor

PhD (*summa cum laude*) 1998 – Medical Informatics, Ruprecht-Karls University Heidelberg, Germany, “Methoden zur diagnoseorientierten Qualitätsobjektivierung und automatischen Bildverbesserung in der zahnärztlichen Radiologie“, Prof. Dr. C.O. Köhler

3. Qualification required for appointment as a docent/habilitation

Associate Professor (Docent) 2005 – Medical Informatics, Uppsala University, Sweden

4. Present position:

Full Professor and Director of the Health Informatics Centre at Karolinska Institutet, Stockholm, Sweden – since October 2008

Deputy Head of Department, Department of Learning, Informatics, Management and Ethics, Karolinska Institutet – since June 2014

Director of Education, Department of Learning, Informatics, Management and Ethics, Karolinska Institutet – since April 2016

5. Previous positions and periods of appointment:

Programme Director, Joint Master’s Programme in Health Informatics, Karolinska Institutet and Stockholm University – September 2012 – December 2016

Visiting Professor, September 2007 – September 2008, Karolinska Institutet, Stockholm, Sweden

Director, September 2005 – October 2008, Uppsala University, Centre for eHealth.

Researcher, October 2002 - October 2008, Uppsala University, Department of Medical Sciences, Research group for Medical informatics and engineering

Post-doctoral fellow, 1998 - 2002, Uppsala University, Department of Information Science, Division of Human-Computer Interaction.

Doctoral student, 1994 - 1998, Uppsala University, Center for Human-Computer Interaction and German Cancer Research Centre, Heidelberg.

6. Current commissions of trust:

President-elect, 2017 – 2019, International Medical Informatics Association (IMIA)

Editor-in-Chief, Jan 2016 - ongoing, Methods of Information in Medicine

Associate editor, 2014 – ongoing, Applied Clinical Informatics

Editorial board, 2008 – ongoing, International Journal of Medical Informatics

KI representative, 2017 – 2018, Research, Education and Development Committée Stockholm Healthcare Services

Member, 2017 – ongoing, National eHealth Council

Reviewer for numerous journals and conferences as well as SPC member in the fields of health and biomedical informatics. Evaluator for a number of national (VR, Vinnova, SIDA, SSF, NRF, Wellcome trust, FORTE) and international research councils (EU, ESF), agencies and trusts in different countries. Opponent and evaluation committée member for a number of

PhD and licenciate theses. Evaluation of numerous lecturer positions and professorships mainly in Sweden, Germany and the Nordic countries but also in the United States. Evaluation of a German research institute.

- 7. Theses of graduate students (Ph.D.):** Main supervisor for Isabella Scandurra (Ph.D. Feb. 2008); Maria Hägglund (Ph.D. Feb. 2009); Nadim Anani (Ph.D. Feb. 2016); Aboozar Eghdam (Ph.D. Dec. 2016); Co-supervisor for Faramarz Pourasghar (Ph.D. August 2009); Nadia Davoody (Ph.D. Oct. 2016)

Current main supervisor of graduate students (year of registration): Peter Bolin (2010);
Current co-supervisor of graduate students (year of registration): Magnus Falkenhav (2008); Vasilis Hervatis (2013); Niclas Skyttberg (2014); Mirfa Manzoor (2015); Helge Brandberg (2016)

8. Other relevant qualifications:

Founding member of the International Academy of Health Sciences Informatics, 2017

Fellow of the American College of Medical Informatics, 2016

Mentorsprogram Royal Swedish Academy of Engineering Sciences, 2007 - 2008

Bank of Sweden Tercentenary Foundation, 2000 - 2001, post-doctoral scholarship.

Swedish Institute, 1995, scholarship.

More than 40 invited or keynote speeches at national and international scientific conferences.

- 9. PostDocs under my supervision:** Maria Hägglund (2009-2012), Aboozar Eghdam (2017-2018)

10. Publications (last five years)

Peer-reviewed journal publications:

1. Vikström A, Hägglund M, Nyström M, Strender L-E, **Koch S**, Hjerpe P, Lindblad U, Nilsson GH. Coding of procedures documented by general practitioners in Swedish primary care - an explorative study using two procedure coding systems. *BMC Family Practice* 2012, 13:2
2. **Koch S**, Vimarlund V. Critical Advances in Bridging Personal Health Informatics and Clinical Informatics. *Yearb Med Inform* 2012; 7(1): 48-55
3. Maojo V, Fritts M, Martin-Sanchez F, De la Iglesia D, Cachau RE, Garcia-Remesal M, Crespo J, Mitchell JA, Anguita A, Baker N, Barreiro JM, Benitez SE, De la Calle G, Facelli JC, Ghazal P, Geissbuhler A, Gonzalez-Nilo F, Graf N, Grangeat P, Hermosilla I, Hussein R, Kern J, **Koch S**, Legre Y, Lopez-Alonso V, Lopez-Campos G, Milanese L, Moustakis V, Munteanu C, Otero P, Pazos A, Perez-Rey D, Potamias G, Sanz F, Kulikowski C. Nanoinformatics: developing new computing applications for nanomedicine. *Computing* (2012) 94:521–539
4. Vimarlund V, **Koch S**. Identifying where the values come from IT-innovations in health and social care. *Intelligent Information Management* 2012; 4:296-308
5. Eghdam A, Scholl J, Bartfai A, **Koch S**. Information and Communication Technology to Support Self-management of Patients with Mild Acquired Cognitive Impairments: Systematic Review. *J Med Internet Res* 2012; 14(6):e159
6. Koch S. Achieving holistic health for the individual through person-centered collaborative care supported by informatics. *Healthc Inform Res* 2013 March; 19(1):3-8

7. Forsman J, Anani N, Eghdam A, Falkenhav M, **Koch S**. Integrated information visualization to support decision making for use of antibiotics in intensive care: Design and usability evaluation. *Inf Health Soc* 2013; 38(4): 330-353
8. Rigby M, **Koch S**, Hill P, Keeling D. Policies to enable integrated health-related support to a changing population. *Eur J Public Health* 2013; 23(1): 147-8
9. Anani N, Chen R, Prazeres-Moreira T, **Koch S**. Retrospective checking of compliance with practice guidelines for acute stroke care: a novel experiment using openEHR's Guideline Definition Language. *BMC Med Inf Dec Mak* 2014; 14:39
10. **Koch S**. Säkra den elektroniska journalen! Bättre e-journalsystem kan bidra till bättre patientsäkerhet. *Läkartidningen*, 2014;111(20):864
11. Davoody N, **Koch S**, Krakau I, Häggglund M. Collaborative interaction points in post-discharge stroke care. *Int J Integr Care*. 2014 Oct-Dec; 14: e032
12. Anani N, Mazya MV, Bill O, Chen R, **Koch S**, Ahmed N, Wahlgren N, Prazeres-Moreira T. Changes in European Label and Guideline Adherence After Updated Recommendations for Stroke Thrombolysis: Results From the Safe Implementation of Treatments in Stroke Registry. *Circ Cardiovasc Qual Outcomes*. 2015 Oct;8(6 Suppl 3):S155-62.
13. Haux R, **Koch S**. Improving Bridging from Informatics Theory to Practice. *Appl Clin Inform* 2015; 6(4): 748–756
14. Haux R, **Koch S**, Lovell NH, Marschollek M, Nakashima N, Wolf KH. Health-enabling and ambient assistive technologies: Past, Present, Future. *Yearb Med Inform* 2016, 25: Suppl. 1:S76-91
15. Skyttberg N, Vicente J, Chen R, Blomqvist H, **Koch S**. How to improve vital sign data for use in clinical decision support systems? A qualitative study in nine Swedish emergency departments. *BMC Med Inf Dec Mak* 2016 Jun 4;16(1):61.
16. Eghdam A, Bartfai A, Oldenburg C, **Koch S**. How do persons with Mild Acquired Cognitive Impairment use e-services and social media? Results from a Swedish national survey. *PLOS One* 2016; Jul 18;11(7):e0159362
17. Al-Shorbaji N, Bellazzi R, de Quiros FGB, **Koch S**, Kulikowski CA, Lovell N, Maojo V, Park HA, Sanz F, Sarkar IN, Tanaka H. Discussion of “The New Role of Biomedical Informatics in the Age of Digital Medicine”. *Meth Inform Med* 2016; 55(5): 403-421
18. Davoody N, **Koch S**, Krakau I, Häggglund M. Post-discharge stroke patients' information needs as input to proposing patient-centred eHealth services. *BMC Med Inf Dec Mak* 2016;16(1):66
19. Hardardottir GA, Andreassen H, **Koch S**, Hypponen H. Comparability, availability and use of Medication eHealth Services in the Nordic Countries. *International Journal on Advances in Life Sciences*, 2016; vol. 8 (1&2)
20. Wollmann T, Alzahi F, Eghdam A, Seoane F, Lindecrantz K, Haag M, **Koch S**. User-Centred Design and Usability Evaluation of a Heart Rate Variability Biofeedback Game. *IEEE Access* 2016:4
21. Anani N, Chen R, Prazeres Moreira T, Mazya MV, Bill O, Ahmed N, Wahlgren N, **Koch S**. Retrospective Checking of Compliance with Practice Guidelines via Standardized Knowledge Modeling and Registry Data: Applying openEHR's Guideline Definition Language to an the SITS International Stroke Treatment Registry. *BMC Med Inf Dec Mak* 2017; 17: 7
22. Haux R, Kulikowski CA, Bakken S, deLusignan S, Kimura M, **Koch S**, Mantas J, Maojo V, Marschollek M, Martin-Sanchez F, Moen A, Park Hyeoun-Ae, Sarkar IN, Leong TY, McCray AT. Research Strategies for Biomedical and Health Informatics - Some Thought-Provoking and Critical Proposals to Encourage Scientific Debate on

the Nature of Good Research in Medical Informatics. *Methods Inf Med* 2017 56 Open: e1-e10

23. Mohd Suleiman 'I, Karlsson D, **Koch S**. Mapping acute coronary syndrome registries to SNOMED CT: A comparative study between Malaysia and Sweden. *Methods Inf Med* 2017; 56(4):330-338
24. Dufendach KR, **Koch S**, Unertl KM, Lehmann CU. A Randomized Trial Comparing Classical Participatory Design to VandAID, an Interactive Crowdsourcing Platform. *Methods Inf Med* 2017; 56(5):344-349
25. Skyttberg N, Chen R, Blomqvist H, **Koch S**. Exploring Vital Sign Data Quality in Electronic Health Records with Focus on Emergency Care Warning Scores. *Appl Clin Inform* 2017, 8(3): 880-892
26. Eghdam A, Hamidi U, Bartfai A, **Koch S**. Facebook as a communication support for persons with potential mild acquired cognitive impairment: A content and social network analysis study. *PLOS One* 2018 Jan 29;13(1):e0191878

Peer-reviewed conference articles:

1. Eghdam A, Forsman J, Falkenhav M, Lind M, **Koch S**. Combining Usability Testing with Eye-Tracking Technology: Evaluation of a visualization support for antibiotic use in intensive care. *Stud Health Technol Inform.* 2011;169: 945-9
2. Anani N, Rong C, **Koch S**. Exchanging Data via openEHR for Patient-Specific Overviews in Intensive Care: A Case Study. 23rd International Conference of the European Federation for Medical Informatics MIE2011, Short Communication
3. Hägglund M, Scandurra I, **Koch S**. Supporting Citizen-Centered Care for Seniors – Experiences from Two Swedish Research Projects. *IEEE CBMS 2012*, Pisa, 20-22 June
4. Anani N, Chen R, Prazeres-Moreira T, **Koch S**. openEHR-Based Representation of Guideline Compliance Data through the Example of Stroke Clinical Practice Guidelines. *Stud Health Technol Inform.* 2012; 180:487-91
5. Davoody N, **Koch S**, Krakau I, Hägglund M. Supporting Self-care and Collaboration in Stroke Care through Information and Communication Technology. 24th International Conference of the European Federation for Medical Informatics MIE2012, Short Communication
6. **Koch S**. Improving quality of life through eHealth – the patient perspective. *Stud Health Technol Inform.* 2012; 180:25-9
7. Vimarlund V, Davoody N, **Koch S**. Steps to consider for effective decision making when selecting and prioritizing eHealth services. *Stud Health Technol Inform.* 2013; 192:239-43
8. Lundberg N, **Koch S**, Hägglund M, Bolin P, Davoody N, Eltes J, Jarlman O, Perlich A, Vimarlund V, Winsnes C. My Care Pathways – creating open innovation in healthcare. *Stud Health Technol Inform.* 2013; 192:687-91
9. Hyppönen H, Faxvaag A, Gilstad H, Audur Hardardottir G, Jerlvall L, Kangas M, **Koch S**, Nøhr C, Pehrsson T, Reponen J, Walldius Å, Vimarlund V. Nordic eHealth Indicators: Organisation of research, first results and plan for the future. *Stud Health Technol Inform.* 2013; 192:273-77
10. Chen R, Valladares C, Corbal I, Anani N, **Koch S**. Early Experiences from a Guideline-based Computerized Clinical Decision Support. *Stud Health Technol Inform.* 2013; 192:244-47
11. Rigby M, **Koch S**, Hill P, Keeling D. Moving towards the Vision of truly Integrated Support for the Health of Citizens in Europe – a European Science Foundation Identification of the Challenges and Necessary Action. In: Cunningham P and

- Cunningham M (eds). eChallenges e-2013 Conference Proceedings. IIMC International Information Management Cooperation, 2013
12. Gilstad H, Faxvaag A, Hyppönen H, **Koch S**, Nohr C, Skauli K. Multinational surveys for monitoring eHealth policy implementations –usefulness and pitfalls. *Stud Health Technol Inform.* 2014; 205: 231-35
 13. Hägglund M, Bolin P, **Koch S**. Experiences as input to eHealth design – a hip surgery patient journey case. *Stud Health Technol Inform.* 2015; 210: 672-4
 14. Zhang Y, **Koch S**. Mobile health apps in Sweden: What do physicians recommend? *Stud Health Technol Inform.* 2015; 210: 793-7
 15. Hägglund M, Bolin P, **Koch S**. Living with Lung Cancer – Patients’ Experiences as Input to eHealth service Design. *Stud Health Technol Inform.* 2015; 216:391-5
 16. Gilstad H, Faxvaag A, Nohr C, Villumsen S, Reponen J, Andreassen H, Jerlvall L, Pehrsson T, Kangas M, Audur Hardardottir G, Koch S, Hypponen H. Challenges of Comparing Medication eHealth Services in the Nordic Countries. *GLOBAL HEALTH 2015 : The Fourth International Conference on Global Health Challenges.* Nice, France, IARIA 2015
 17. Issom DZ, Zosso A, Ehrler F, Wipfli R, Lovis C, **Koch S**. Exploring the Challenges and Opportunities of eHealth Tools for Patients with Sickle Cell Disease. *Stud Health Technol Inform.* 2015; 216:898
 18. Issom DZ, Zosso A, Wipfli R, Ehrler F, Lovis C, Hartvigsen G, Kjellander C, Samii K, **Koch S**. Meeting Sickle Cell patients’ unmet needs with eHealth tools: a preliminary study. *SHI 2015*
 19. Issom DZ, Hartvigsen G, Bonacina S, **Koch S**, Lovis C. User-Centric eHealth Tool to Address the Psychosocial Effects of Sickle Cell Disease. *Stud Health Technol Inform.* 2016; 225:627-8
 20. Nohr C, Wong MC, Turner P, Almond H, Parv L, Gilstad H, **Koch S**, Harðardóttir GA, Hyppönen H, Marcilly R, Sheik A, Day K, Kushniruk A. Citizens' Access to Their Digital Health Data in Eleven Countries - A Comparative Study. *Stud Health Technol Inform.* 2016;228:685-9.
 21. **Koch S**, Hägglund M. Mutual learning and exchange of health informatics experiences from around the world - Evaluation of a Massive Open Online Course in eHealth. *Stud Health Technol Inform.* 2017;245:753-757.
 22. Kabukye JK, **Koch S**, Cornet R, Orem J, Hägglund M. User Requirements for an Electronic Medical Records System for Oncology in Developing Countries: A Case Study of Uganda. In: *Proceedings of AMIA 2017, Washington, DC (2017)*; 2017:1004-1013.
 23. Eghdam A, Hamidi U, Bartfai A, **Koch S**. Social Media as a Communication Support for Persons with Mild Acquired Cognitive Impairment: A Social Network Analysis Study. *Stud Health Technol Inform.* 2017;245:129.

Other:

1. Rigby M, Koch S, Keeling D, Hill P, Alonso A, Maeckelberghe E. Developing a New Understanding of Enabling Health and Wellbeing in Europe - Harmonising Health and Social Care Delivery and Informatics Support to Ensure Holistic Care. ESF SCSS Science Position Paper, European Science Foundation 31.01.2013
http://www.esf.org/fileadmin/Public_documents/Publications/Health_Wellbeing_Europe.pdf

2. Hyppönen H, Faxvaag A, Gilstad H, Audur Hardardottir G, Jerlvall L, Kangas M, **Koch S**, Nøhr C, Pehrsson T, Reponen J, Walldius Å, Vimarlund V. Nordic eHealth Indicators: Organisation of research, first results and plan for the future. *Tema Nord* 2013;522 <http://www.norden.org/en/publications/publikationer/2013-522>
3. Hyppönen H, Kangas M, Reponen J, Nøhr C, Villumsen S, **Koch S**, Audur Hardardottir G, Gilstad H, Jerlvall L, Pehrsson T, Faxvaag A, Andreassen H, Brattheim B, Vimarlund V, Kaipio J. Nordic eHealth Benchmarking. *Tema Nord* 2015;539 <http://norden.diva-portal.org/smash/get/diva2:821230/FULLTEXT01.pdf>
4. Hägglund M, **Koch S**. Commentary: Sweden rolls out online access to medical records and is developing new e-health services to enable people to manage their care. *BMJ (Clinical research ed.)*, 2015; 350: h359
5. Tan SSL, Gao G, **Koch S**. Big Data and Analytics in Healthcare. Editorial. *Meth Inform Med* 2015; 54(6):546-547
6. **Koch S**. Guiding Methods of Information in Medicine into the next generation: Welcome note from the new Editor-in-Chief. Editorial. *Meth Inform Med* 2016; 55(1): 1-3
7. **Koch S**, Lehmann CU, Haux R. On Bridges and Stacks. Editorial. *Meth Inform Med* 2016; 55(4):1-2.
8. **Koch S**, Lehmann CU, Haux R. On Bridges and Stacks. Editorial. *Appl Clin Inform* 2016 Jul 20;7(3):707-10
9. **Koch S**, Haux H, Gefeller O, Sarkar IN, Bergemann D. Methods Open - A New Journal Track starting in 2017. Editorial. *Meth Inform Med* 2016; 55(6): 478-480
10. Hyppönen H, **Koch S**, Faxvaag A, Gilstad H, Nøhr C, Audur Hardardottir G, Andreasson H, Bertelsen P, Kangas M, Reponen J, Villumsen S, Vimarlund V. Nordic eHealth benchmarking - From piloting towards established practice. *Tema Nord* 2017: 528 <http://norden.diva-portal.org/smash/get/diva2:1093162/FULLTEXT01.pdf>
11. Haux R, Geissbuhler A, Holmes JH, Jaulent MC, **Koch S**, Kulikowski CA, McCray AT, Lehmann CU, Séroussi B, Soualmia LA, van Bommel J. On Contributing to the Progress of Medical Informatics as Publisher - Congratulations to IMIA Honorary Fellow Dieter Bergemann on his 80th Birthday! *IMIA Yearb* 2017
12. **Koch S**, Gefeller O, Sarkar IN, Haux R. Back on Track. *Methods Inf Med* 2017; 56(4):274-275
13. **Koch S**, Gefeller O, Haux R. One Year with Methods Open. *Methods Inf Med* 2017; 56(6):414-415
14. **Koch S**. Health Informatics in Sweden – a personal view. *IJBH* 2017; 5(2):29–32