

Janin Koch



My research interests lie in collaborative AI for Creativity. In my work, I aim to define, study, and evaluate human-machine interaction to construct ideas and concepts together with intelligent machines. With the belief that computers and humans have distinct skills to add to such a collaboration, I use knowledge from psychology, design and machine learning to enable systems to act on a human-equal stand.

Academic Publications

Journals

ImageSense: An Intelligent Collaborative Ideation Tool to Support Diverse Human-Computer Partnerships

Koch, J./ Taffin, N./ Beaudouin-Lafon, M./ Laine, M./ Lucero, A./ Mackay, W. E. | 2020
Proc. ACM Human-Computer Interaction, CSCW

International Conference Papers

SemanticCollage: Enriching Digital Mood Board Design with Semantic Labels

Koch, J./ Taffin, N./ Lucero, A./ Mackay, W. E. | 2020
ACM Conference on Designing Interactive Systems (DIS)

May AI? Design Ideation with Cooperative Contextual Bandits

Koch, J./ Lucero, A./ Hegemann, L./ Oulasvirta, A. | 2019
ACM Conference on Human Factors in Computing Systems (CHI)

Aalto Interface Metrics (AIM): A Service and Codebase for Computational GUI Evaluation.

Oulasvirta, A./ De Pascale, S./ Koch, J./ Langerak, T./ Jokinen, J./ Todi, K./ ... & Palmas, G. | 2018
ACM Symposium on User Interface Software and Technology Adjunct Proceedings (UIST)

Browsing for Inspiration:

Digital Material in Current Design Practice

Koch, J./ Lucero, A./ Oulasvirta, A./ Laszlo, M | 2018
Proceedings of the Design Research Society (DRS)

Design implications for Designing with a Collaborative AI

Koch, J. | 2017
Position Paper, AAAI Spring Symposium on User Experience of Machine Learning

Computational Layout Perception using Gestalt Laws

Koch, J./ Oulasvirta, A. | 2016
Extended Abstract, ACM Conference on Human Factors in Computing Systems (CHI)

Book Chapters

Group Cognition and Collaborative AI

Koch, J./ Oulasvirta, A. | 2018
Book chapter in 'Human and Machine Learning: Visible, Explainable, Trustworthy and Transparent', Springer

Workshops

Where Art Meets Technology: Integrating Tangible and Intelligent Tools in Creative Processes

Koch, J./ Pearson, J./ Lucero, A./ Sturdee, M./ Mackay, W.E. / Lewis, M./ Robinson, S. | 2020
Accepted Workshop proposal, CHI

Contextual Bandits for Design:

A Human-Computer Collaboration Approach

Koch, J. | 2018
Workshop paper, CHI

Tools for Inspiration Seeking: Raising Open Questions

Koch, J./ Lucero, A. | 2018
Workshop paper, DIS

Learning Layout Design: Challenges and opportunities

Koch, J./ Weir, D./Oulasvirta, A. | 2016
Workshop paper, CHI

Theses

PhD Thesis

Aalto University, FI | 2020
Title: "Collaborative Systems for Design Inspiration"

Final degree project (Grade: 1.0)

Royal Institute of Technology, SE | 2014
Title: "Bio-Data Logging in Stress Treatment"

Master thesis (Grade: 1.0)

Technical University Darmstadt, DE | 2013
Title: "Information and network benefits of social media platforms"

Bachelor thesis (Grade: 1.3)

University Magdeburg, DE | 2011
Title: "The Impact of Outlier Detection Methods on the Quality of Data Mining Models"

Janin Koch



Grants

HPY.N TUTKIMUSSÄÄTIÖ | 2017

Personal research funding of 3000€ for research on Adaptive design systems

Scholarship ELEC Department | 2017

Full doctoral scholarship

ACM WomENCourage Scholarship | 2017

Celebration of Women in Computing (ACM-W)

Academic Experiences

Post-Doc in Human-Computer Interaction

Ex)situ, Inria Université Paris-Saclay, FR | 2020 - now

Supervisor: Wendy Mackay

Topic: Human Centric Algebraic Machine Learning

PhD student in Human-Computer Interaction

User Interface Group, Aalto University, FI | 2015 - 2020

Supervisor: Antti Oulasvirta

Topic: Collaborative Systems for Inspiration

Industry research: User Interface Research

Autodesk Research Toronto, CA | 2020

Invited by: Justin Matejka

Research internship: Human-Computer Interaction

Ex)situ, Inria Université Paris-Saclay, FR | 2018-2019

Invited by: Wendy Mackay

M.Sc. Business Information Systems

Technical University Darmstadt, DE | 2011-2014

Business Major: Marketing & HR Management

IT Majors: Human-Computer Interaction

Final Grade: 1.27* (with honors)

Study Abroad - Human Computer Interaction

Royal Institute of Technology, SE | 2013-2014

B.Sc. Business Information Systems

University Magdeburg, DE | 2007-2011

Business focus: Business, Finance and Law

IT focus: Data Mining & Decision Support Systems

Final Grade: 1.6*

Study Abroad - Business Administration

Fairleigh Dickinson University Vancouver, CA | 2010

***German grading system: 1-excellent ... 4-sufficient**

Invited Talks/ Exhibition

MIT HCI Seminar (Talk)

Massachusetts Institute of Technology, USA | 2020

Topic: Designing Collaborative Systems for Inspiration

Art & AI Exhibition (Exhibition/ Talk)

Connecting the Dots, FI | 2019 - 2020

Interactive exhibition piece (May AI), Live Podcast

Design Meetup (Talk)

Helsinki Design Meetup, FI | 2018

Topic: How to design for AI

Interaction Design Association - IxDA (Talk)

IxDA Helsinki, FI | 2017

Topic: Rethinking Interaction

Review Experience

Exceptional Reviewer distinctions at

ACM CHI '17, CHI'19

Journals

TOCHI | 2020

IJHCS | 2019

IEEE Computer | 2016

Conferences

ACM Conference on Human Factors in Computing Systems (CHI) | 2016 - 2020

ACM Graphics Interface (GI) | 2020 (AC)

ACM/IEEE International Conference on Human-Robot Interaction (HRI) | 2020

ACM Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI) | 2020

ACM Symposium on User Interface Software and Technology Adjunct Proceedings (UIST) | 2020

ACM International Joint Conference on Pervasive and Ubiquitous Computing | 2016

ACM SIGCHI Conference on Designing Interactive Systems (DIS) | 2017, 2020

ACM SIGCHI Conference on Creativity and Cognition (C&C) | 2017, 2019

European Conference on Information Systems (ECIS) | 2019

International Conference on Human-Computer Interaction (INTERACT) | 2017

Janin Koch



Teaching Experience

Research Seminar (Invited Speaker)

Royal Institute of Technology, SE | 2020
Lecture on 'AI for Design'

User Research (TA)

Aalto University, FI | 2016 - 2020
Lectures on 'Large scale text analysis' (NLP) and
'Information visualization'

Computational Design (TA)

Aalto University, FI | 2016 - 2019
Lectures on 'Modern user interface design methods'
and 'Human-AI Cooperation'

Advising Experience

Master Thesis | 2016, 2019

Bachelor Thesis | 2016

Research Projects as academic advisor | 2017-20

Volunteer Work

Member of HumanE AI Consortium | 2019- now

XRDS Digital Content Editor | 2017 - 2019

Workshop Chair at SIDeR '18 | 2018

Session Chair at SIDeR '18 | 2018

ACM CHI Student Volunteer | 2018, 2020

SIGCHI Student Volunteer | 2017

Work Experience

Risk Analyst

iZettle AB Stockholm, SE | 2014 - 2015
Analyzing behavior patterns of merchants based on
credit card transactions and background analysis,
ensure legal compliance and handling financial li-
ability requests

Research Assistant

Biosync Technology AB, Mobile Life VINN Excellence
Centre Stockholm, SE | 2014
Defining value propositions for a start up, research
project for using bio-data in stress therapy: con-
ducted design process to developing a prototype/
mockup of a stress management system

Content Manager and Technical Administrator

Department of Civil and Company Law at
TU Darmstadt, DE | 2012-2013
Managing and creating web content, member of
IT-committee for standardizing IT-infrastructure
among the faculties of the TU-Darmstadt

Data Mining Analyst

b.telligent Consultancy GmbH Munich, DE | 2011
6-month internship, Bachelors thesis on Outlier
Detection, Organized in-house Data Mining trainings