

# GEORGE HEINTZ

Assistant Director at HealthCare Engineering Systems Center  
Director Health Data Analytics Initiative of GCOE

p: 217.607.4289, e: joergheintz@gmail.com

I develop and manage the Health Data Analytics Initiative of the Grainger College of Engineering University of Illinois Urbana-Champaign to advance medical research and healthcare delivery. I am a dedicated manager with an excellent understanding of enterprise architectures, governance models, and implementing data driven transformative programs. In my career as management consultant, I managed successfully more than 30 large scale IT programs and managed a team as Head of Risk Management. In my current role consistently develop and deepen relationships with faculty and health partners and identify research projects. I am the Co-Chair of the OSF HealthCare Data Subcommittee and advise clinicians and medical researchers in developing feasible research goals and executing data science projects. As part of my own R&D I provide biological modeling, algorithm design, and software development delivered in an iterative process involving the clinical stakeholders and engineering faculty.

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## EDUCATION

University of Illinois at Urbana-Champaign School of Applied Health Sciences, USA	PhD (exp. 2025)	Biomechanics / Motor Control/ Computational Neurosciences
University of Illinois at Chicago School of Public Health, USA	MSPH	Public Health Informatics, Data Analytics
University of Applied Sciences at KL, College of Engineering, Germany	Dipl. Ing.	Electrical Engineering,

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## EXPERIENCE

**Assistant Director Health Data Analytics** 2017 - to date  
Healthcare Engineering Systems Center University of Illinois Urbana Champaign

### Director Health Data Analytics Initiative

- Partnership development, funding applications, raised 1.1 \$million funding
- Launched and managed more 30 collaborative projects between medical researchers and engineers. Managed 4 strategic data science projects for partner hospitals and public health agencies: Federal Drug Administration, OSF Healthcare, Public Health District
- Current projects: Digitizing Neurological Screening Exam, Parkinson's facial expression classification
- Grant-writing, and supporting engineering faculty in applying for grants e.g., Sponsors: NSF, NIH, C3.ai, DoE, and UIUC internal grant mechanisms
- Supervised several graduate students funded projects and internships
- Data scouting: NIH, Illinois Department of Aging, Public Health Districts, and others

- Co-Chair OSF Jump ARCHES Data Subcommittee** 2021 - to date  
Data strategy development to advance Jump Arches data science driven research
- Member OSF HealthCare Infrastructure Committee** 2017 – to date  
OSF Innovation and Transforming Healthcare
- Head of Integrated Risk and Controls Systems** 2016 - 2017  
Allianz Insurance, Allianz Technology Services, Germany
- Developed and successfully implemented an Integrated Risk Control System (IRCS) to mitigate operational risks.
  - Managed a team of three senior consultants (E&Y) and two risk managers.
- Associate Director, BD2K Big Data Center** 2014 - 2016  
University of Illinois Urbana Champaign, Grainger College of Engineering
- Organized and operated back-office services such as hiring, financial planning, NIH reporting, and purchasing.
  - Developed a software recommender system in R to provide structured information on different DNA analysis pipelines and software packages.
- Chief Security Architect, National Center Supercomputing Applications NCSA** 2013 - 2014  
University of Illinois Urbana Champaign, Grainger College of Engineering  
Developed and introduced a security process to detect personnel on denied parties lists published by U.S. Departments of State.
- Implemented vulnerability scanning solution to automatically detect IT systems at risk.
  - Developed Service Level Agreements for NCSA's Help Desk, and Application Support.
- Executive Risk Manager, Internal Consulting, and Program Manager** 2011 - 2013  
Swisscom, Switzerland  
Responsible for risk decision requests for deals > 5 Mio Swiss Francs.
- Managed three Merger & Acquisition projects.
  - Policy development for Escalation and Problem Management.
  - External Audit (KPMG) preparation and execution.
- Risk Manager and Program Manager** 2010 - 2011  
1&1 Internet AG
- Developed and delivered a risk mitigation program consisting of 34 projects. Managed a team of three project managers.
  - Investigated and developed operational requirements to ensure high available and secure service operations such as email, web stores, and websites.
- Management Consultant** 2006 - 2009  
IBM Global Technology Services, Management Consulting
- Designed and delivered a governance model for a reinsurer to centralize globally distributed IT core services.
  - Executed Business Impact Analysis for banks, insurers, and automotive companies to identify the most critical services and assets.

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## AWARDS

- 2022 Named Fellow, National Center for Supercomputing Applications, NCSA
- 2022 Jump Arches Award | Few Shot Learning, Facial Expressions
- 2022 Jump Arches Award | Detection and Prediction of Facial Expression for Parkinsonism Powered by Few-Shot Learning
- 2022 Jump Arches Award | Improving the Lives of Children with Asthma by Individualizing the Asthma Care Plan Based on Children’s Home Exposure to Asthma Triggers
- 2021 Jump Arches Award | Video Enhanced Neurology (Principal Investigator)
- 2021 Jump Arches Award | 7T MRI Imaging of Severe Traumatic Brain Injury
- 2021 Jump Arches Award | Spatio-temporal Analysis with Tensor Factorization and Visualization for Pediatric Mobile Vaccination
- 2020 FDA | AFDO-Managed Retail Program Standards Grant Program: Towards a Uniform Inspection Program-Food Inspection Report Analytics Tool (FIRAT)
- 2020 C3.ai Digital Transformation Institute research grant: Secure Federated Learning for Clinical Informatics with Applications to the COVID-19 Pandemic
- 2020 Jump Arches Award | Secure Federated Learning for Collaborative Diagnostics
- 2019 Jump Arches Award | Digitizing the Neurological Examination
- 2019 Jump Arches Award | Steady, Reducing Falls of Older Adults in Rural Areas
- 2019 FDA | AFDO-Managed Retail Program Standards Grant Program: Inspection Report Text Analysis - Towards a Uniform Inspection Program
- 2019 UIUC Strategic Research Initiative Award | Digital Era Formats (Phase II)
- 2018 UIUC Strategic Research Initiative Award | Genomic Data Compression (Phase I)
- 2007 IBM Award for Excellence Achievements | Business Transformation Program, Process Management

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## PUBLICATIONS

- Junyi Gao, Chaoqi Yang, Joerg Heintz, Scott Barrows, Elise Albers, Mary Stapel, Sara Warfield, Adam Cross, Jimeng Sun; MedML: Fusing medical knowledge and machine learning models for early pediatric COVID-19 hospitalization and severity prediction, *iScience*, Volume 25, Issue 9, 2022, <https://doi.org/10.1016/j.isci.2022.104970>.
- Hoang, Trung-Hieu; Zehni, Mona; Xu, Huaijin; Heintz, George; Zallek, Christopher; Do, Minh N. (2022) Towards a Comprehensive Solution for a Vision-based Digitized Neurological Examination, *arXiv preprint arXiv:2205.07209*
- Heintz, Joerg (2020), Predicting Parkinson’s Disease in Rural America Based on Initial Examination Data
- Zhang, Y., Manjunath, M., Kim, Y., Heintz, J., & Song, J. S. (2018). SequencEnG: an Interactive Knowledge Base of Sequencing Techniques. *BioRxiv*, 319079. <http://doi.org/10.1101/319079>
- Shoajib, T., Heintz, J., Lopez-Berganza, J. A., Muro-Barrios, R., Egner, S. A., & Espinosa-Marzal, R. M. (2018). Stick-Slip Friction Reveals Hydrogel Lubrication Mechanisms. *Langmuir*. <http://doi.org/10.1021/acs.langmuir.7b02834>

## INVITED SEMINARS

- Unsupervised Machine Learning, Basic Concepts, University of Illinois at Urbana-Champaign, Department of Civil Engineering & Environmental Sciences (virtual), 6/14/2021
  - Statistical Modeling, Model Diagnosis and Variable Transformations, University of Illinois at Urbana-Champaign, Department of Civil Engineering & Environmental Sciences, 10/11/2021
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## CERTIFICATIONS / CREDIT AWARDED COURSES

2021	Anatomy & Physiology I, UIUC	2008	<b>PMP</b> Project Mgmt. Professional
2019	CITI Program, 8 Courses completed	2007	<b>CISA</b> Certified Information Syst. Auditor
2018	<b>Advanced Statistical Modeling</b> , UIUC	2006	<b>ITIL</b> Foundation IT Service Management
2015	Parkland College, <b>Leadership</b> , 12 mo.	2006	IBM Blue <b>Consulting Methods</b>

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## SERVICE

- Board Member, Spurlock Museum in Urbana Champaign 2022 to date  
[www.spurlock.illinois.edu/about/board/](http://www.spurlock.illinois.edu/about/board/)