

**DOCTORAL CANDIDATE:** Stine Loft Rasmussen  
**DEGREE:** Philosophiae Doctor  
**FACULTY:** Mathematics and Natural Sciences  
**DEPARTMENT:** Informatics  
**AREA OF EXPERTISE:** Health Informatics and ICT4D  
**SUPERVISORS:** Sundeep Sahay and Jørn Braa

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**DISSERTATION TITLE:** *Understanding Uncertainty in Disease  
Surveillance and Response in Burkina Faso*

Data is currently in so high demand that the media sometimes refer to it as “the new gold”. More data is thought to enable organizations to make better decisions, for example within health care. The source of this data is often IT systems, which are introduced to enable data-driven decisions through the provision of more and better data.

But collecting more data is not always the solution. Through a study of how data is handled in the health sector in Burkina Faso in West Africa, this doctoral thesis shows that taking action for health is as much about finding ways to handle uncertainty in existing data as it is about producing more and better data. Based on ethnographic fieldwork, the research explores how both precise and unprecise data is used to spot and avoid outbreaks of epidemic diseases.

Explained pragmatically by a local health manager: If clinical staff must wait treating patients until a diagnosis can be confirmed in the laboratory, it will put lives at stake. Consequently, taking action based on uncertainty is required.

Although the thesis builds on fields work in Burkina Faso, the findings are relevant to design of IT systems in Scandinavia, where provision of health care also can be uncertain. The articulation of uncertainty supplements the data-centric approach to IT development, and it challenges IT researchers and practitioners to find ways to better support this condition. Viewing uncertainty as a resource rather than something that should be avoided at all costs, could be a starting point.

About the candidate:

*Stine Loft Rasmussen is a PhD fellow with the HISP (health information systems program) network. During the four-year period of the research she lived in Burkina Faso. She has extensive experience as a health information systems practitioner, including 7 years of electronic health record development across the 15 University Hospitals in the Capital Region of Denmark. She now works for a large Danish NGO with alignment of data collection and use across humanitarian and long-term development.*