

## Research Proposal

### **Rethinking Academic Practices in Socio-Informatics**

Research on the design of socially embedded systems (Socio-Informatics) is a field of research oriented to the design of innovative IT artefacts in support of social practices. The research is characterized by:

- Integrating the understanding of social practices with the design of technical artifacts
- Investigating into the appropriation of technical artefacts over a longer period in time
- Dealing with societal relevant domains and contributing to the solution of relevant problems

Socio-informatics challenges the traditional research paradigm adopted in Computer-Sciences which tended to emphasize the technical description of techniques and algorithm to resolve computational problems. While Socio-Informatics is often based on CS innovations and its artefacts need to be of high technical quality, the research paradigm is distinct. The specific emphasis on supporting social practices intrinsic in the Social Informatics approach requires focusing on social characteristics of the context where these artefacts have to be integrated. This is getting more and more important as IT artefacts are crossing boundaries and pervading everyday lives of people in very different societies. While social science methods, findings and concepts have essentially contributed to the Socio-Informatics research paradigm their objective is to understanding communities and people. The objective of Socio-Informatics is the usage of such an understanding for the design of IT artefacts. Therefore, the social science research paradigm does not fit the needs of the field, its methods and findings are to be refocused and adapted.

At their core, results in Socio-Informatics are context-specific and it is yet unclear how their transferability to other contexts can be effectively supported. It is an emerging area of research still in need to identify appropriate methods to conduct research and to define innovative solutions to aggregate and disseminate findings. The community has not yet found appropriate ways to build upon each other's work and to make research findings accessible to practitioners. The current situation is characterized by a collection of loosely related case studies, a set of controlled experimentation which not always are performed following best research practices, researcher's intuition is often poorly grounded on empirical data, and incomplete descriptions of artifacts and prototypes which are quickly outperformed by IT industry development. There is a strong need to integrate these different sources of information into a coherent and easily accessible repository which could be used to foster research and support development.

Research on developing academic practices in socio-informatics needs to deal with the following issues:

- How do we document research findings? In the past research findings were mainly documented in conference and journal papers (with different formats for work in progress). We are moving towards digital libraries, like ACM DL or EUSSET DL, which offer new opportunities to add more information to a publication (e.g. prototypes, videos, empirical data, reviews, change history of the manuscript, download statistics, citations). We believe that Socio-informatics dissemination could benefit of a more fluid way to report

information, allowing for repeated and constructive exchange between the readers and the writers.

- How do we value research findings? So far, we have a strong filter on the publication side (publication outlets are classified according to their acceptance rates, review committees select the publication before publication). We could also imagine to allow publishing in a more liberal manner (indicated by rising acceptance rates in the mayor conferences) and enable the reader with better functionality to evaluate research findings (e.g. search engines, reference links, citation information, thematical recommendations)
- How do we support review processes? The judgements and discourses during the review process (either in face to face meetings among the PC (in case of conferences) or between authors and reviewers (in case of journal publication)) are lost after the paper is accepted. However they may be interesting in reading a paper. The selection of reviewers is based on the experience and the social network of the ones organizing the review process. However, it would help in case there were more information with regard to a review(er)'s quality (specifically in large communities).
- How do we refer to earlier work? So far, the state of the art descriptions do not discuss sufficiently the context in which earlier findings were made. So it is difficult to position new findings and to understand context-specific communalites and differences in findings. We may need to better focus on contextual differences between design cases.
- How to better reach out to pracitioneers? While our community's research paradigm is closely thriving for societal impact, there are few practitioners coming to our conferences and read our papers or books (except for industry research set up in our field but even their impact on the business units could be probably improved).

To tackle some of these issues, there are a couple of interesting directions tool support could go (enhancing our research community in a Socio-informatics sense). These ideas could be implemented to improve the appeal of the EUSSET DL (explorations could be easier done than in a huge library such as ACM):

- Integrate tools which support the reviewing, publishing and perception process. So double input of data is omitted and a history of a publication get available which links reviewing and later perception.
- Document discourses around papers (during reviewing, in later perception phases), allow for commenting papers and specific parts of them.
- Tools to make the current set of papers better accessible, e.g. extended search function, add citation information (e.g. from Google Scholar), find the closest related papers (based on text matching or other techniques)
- Tools to make experts better accessible (specifically to newcomers and practitioners), expert finder functionality which would indicate knowledgable actors within the academic community
- Tools to visualize social networks within the field (based on co-authorship, citations)