

Report on Visit by Prof. Babak Esfandiari, Carleton University, August 2015

Babak Esfandiari

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1 Summary of Activities

Prof. Esfandiari made visits to the Universities of Glasgow, Edinburgh and St Andrews. He gave seminars in Glasgow and St Andrew, he participated in a roundtable in Edinburgh, and he held one-on-one meetings with interested academics. Each visit was used to explore the potential for future collaboration, and in some cases Prof. Esfandiari was able to provide contact information for researchers whose work would be of relevance to the academics in the host university. The details of the activities are as follows:

- Gave a seminar at Glasgow entitled “Decentralized Social Data Sharing”, presenting his team’s research on the topic.
- The above-mentioned seminar led to discussions with two professors from the University of Glasgow who showed interest in the presented work: Dr Nikos Ntarmos also works in this area (and provided helpful references to his work) and expressed his wish for future collaboration involving PhD student co-supervision. Dr Jeremy Singer inquired about the application of the work to computing resource allocation as well as compiler design, and possible connections with relevant colleagues and pointers to technologies were exchanged.
- Gave a seminar at St Andrews entitled “Toward Workflow Management for Experimental Science?”, presenting an early prototype and ideas for future collaboration with colleagues from Scottish universities.
- Met with several researchers at St Andrews, in particular Dr. Tristan Henderson, who presented his team’s work on the reproducibility of online social network research.
- Had several discussions with his main host, Dr. Storer, on the general topic of research reproducibility. Many interesting ideas were developed, such as the need for gathering and mining case studies in software engineering and the need to maintain snapshots of data together with the code that produces or processes it (this idea was incorporated into the seminar at St Andrews). Dr Storer also involved Prof. Esfandiari in his

team's weekly meeting, which led to further opportunities, such as the idea of mining corporate instant messaging logs to detect competencies. Prof. Esfandiari will connect Dr. Storer with a company in Ottawa that is very much interested in pursuing this idea. Finally, Prof. Esfandiari and Dr. Storer will look for funding to co-supervise PhD students (by establishing and using bilateral cotutelle agreements between the two universities) on the above-mentioned topics.

- Participated in a roundtable at Edinburgh on the topic of Research Data Management. Dr. Neil Chue Hong, the director of the Software Sustainability Institute, presented the lay of the land in research reproducibility and related open issues. Dr. James Cheney from the University of Edinburgh demonstrated a tool for collaborative data editing and tracking, which showed much synergy with a tool Dr. Esfandiari's team has developed for the purpose of collaborative note-taking.
- Met with Dr Ian Anderson, Director of Museum Studies at the Humanities Advanced Technology and Information Institute (HATII) at the University of Glasgow. The meeting was mostly on the topic of data curation. Many good ideas emerged from the conversation, in particular the need to mine lab books for meta-data. A digital lab book could become part of the output of a tool to support the scientific workflow. Dr. Storer has initiated a position paper to capture and summarize the ideas expressed at this meeting as well as the above-mentioned roundtable at Edinburgh.

2 Follow-on Activities

As mentioned above, Prof. Esfandiari will actively explore the possibility of co-supervising PhD students with colleagues from the University of Glasgow. A position paper will be collaboratively drafted with colleagues from Glasgow and Edinburgh. Based on valuable feedback gathered at St Andrew, the direction of future work on the Scientific Workflow tool was determined (in particular, the potential use of the tool for training budding researchers), and the tool will be one of the ongoing deliverables on any work conducted hereon on the general topics of Research Data Management and Research Reproducibility.

Prof. Esfandiari wishes to thank SICSA for providing this very valuable opportunity for new collaborations and exchanges of ideas, and Dr. Tim Storer for tirelessly organizing the meetings, being an endless supply of great research ideas, and being a great host in general.