First International Workshop on Population Informatics for Big Data   (PopInfo'15)

Sydney, Australia, 10 August 2015   http://dmm.anu.edu.au/popinfo2015/

Co-located with the 21th **ACM SIGKDD Conference on Knowledge Discovery and Data Mining**.

Social genomes are the digital footprints of individuals. They consist of records about people's interactions with governments, businesses, and other individuals, as collected and linked from many data sources. Social genomes are the basis of *Population Informatics*, the emerging discipline of studying populations by analyzing large population databases that contain detailed information about people, such as the health, education, financial, census, location, shopping, employment, or social networking records of a large proportion of individuals in a population.

Population Informatics is a crucial enabling technology to understand our rapidly changing dynamic societies. It is transforming how researchers in many domains address the global challenges we face today, and how businesses and governments make decisions. Population informatics can realize the potential of Big Data by employing methods such as data mining, data integration, visualization, health informatics, statistics, computational social science, and privacy technologies, on the increasingly large digital traces of individuals. It will provide fresh insights into many domains, for example the social sciences, public health, and demographics, to inform government policies and improve business processes.

PopInfo'15 will be an interdisciplinary workshop and we will call for papers on algorithms and techniques for Population Informatics, as well as papers about applications and case studies of Population Informatics in diverse areas of research and practice.

Publication and Topics

We are calling for papers from academia, government, and industry, for presentation at the workshop. All papers will go through peer–review by a program committee of international experts, and accepted papers will be published on the workshop website. Selected papers will be invited for extension and inclusion into a possible special issue of a relevant journal.

PopInfo'15 invites contributions addressing current research in Population Informatics, as well as experiences, novel applications, and future challenges. Topics of interest include, but are not restricted to:

- Algorithms and techniques for managing, processing, analyzing, and mining large population databases
- Requirements analysis for Population Informatics
- Models and algorithms for Population Informatics
- Scalable algorithms for dealing with dynamic and temporal population databases
- Scalable algorithms for dealing with uncertain and probabilistic population databases
- Scalable algorithms for dealing with privacy aspects in Population Informatics
- Parallel and distributed algorithms for large-scale Population Informatics
- Visualization, visual analytics, and user-interfaces for Population Informatics
- Architectures and frameworks for Population Informatics
- Large-scale Population Informatics in the cloud
- Research case studies of Population Informatics in health, demographics, ecology, economics, the social sciences, and other research domains
- Applications of Population Informatics in governments and businesses
- Policy issues around population databases and Population Informatics, and using Population Informatics to manage public resources
- Ethical, social, privacy, and confidentiality aspects when dealing with population databases

Keynote Speakers

We are pleased to announce that **Assoc Prof Hye-Chung Kum**, Texas A&M University / University of North Carolina at Chapel Hill (`http://sph.tamhsc.edu/hpm/faculty/kum.html`) will be giving the keynote at **PopInfo'15**. She is the leader of the **Population Informatics Research Group** (`http://research.tamhsc.edu/pinformatics/`), Texas A&M School of Public Health, Department of Health Policy and Management.

To provide an application perspective for Population Informatics, we are pleased to announce that **Dr James Farrow**, a computer scientist and software engineer working with the **SA-NT DataLink** (`https://www.santdatalink.org.au`) will be speaking on his work based on graph theory and using graph databases for the better management and exploration of linked data to enhance research outcomes. James has previously worked for **NSW Health**, mapping and visualisation of historical and near real-time geocoded information. He helped designed and prototype **SURE** (`https://www.sure.org.au`), a secure research environment for linked data for the **Population Health Research Network** (`http://www.phrn.org.au`).

Submission of Papers

We invite two types of submissions for **PopInfo'15**:

- **Research submissions**: Normal academic submissions reporting on research progress, novel algorithms and techniques relevant to Population Informatics.

- **Application / case study submissions**: Papers of this type report on example implementations, experiences, and case studies of Population Informatics from a diverse range of application areas. We encourage submissions from researchers outside of the main KDD/computer science community, as well as from practitioners working in government and industry.

Paper submissions are required to follow the standard double-column ACM Proceedings Template (`http://www.acm.org/sigs/publications/proceedings-templates`). **We accept papers of length between 4 and 10 pages**, including references, diagrams, and appendices. LaTeX styles and Word templates may be found on the above site. LaTeX is the recommended typesetting package.

We encourage shorter papers that describe ongoing work relevant to Population Informatics, or initial results of larger projects. As per KDD tradition, reviews are not double-blind, and author names and affiliations should be listed.

The electronic submissions must be in PDF only, and made through the **PopInfo'15** Submission Page, which will be available on the workshop website at:

`http://dmm.anu.edu.au/popinfo2015/`

Important Dates

Workshop paper submissions	**Friday 5 June 2015**
Workshop paper notifications	Tuesday 30 June 2015
Final submission of accepted papers	Wednesday 15 July 2015
Workshop date	**Monday 10 August 2015**

Workshop Organizers

Peter Christen	The Australian National University, Australia
Erhard Rahm	University of Leipzig, Germany
Qing Wang	The Australian National University, Australia
Dinusha Vatsalan	The Australian National University, Australia
Thilina Ranbaduge	The Australian National University, Australia (web master)

Program Committee

Robert Ackland, The Australian National University, Australia
Luiza Antonie, University of Guelph, Canada
Rohan Baxter, Australian Taxation Office, Australia
Elisa Bertino, Purdue University, USA
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Ashok Krishnamurthy, RENCI / University of North Carolina, USA

Ashwin Machanavajjhala, Duke University, USA
Brad Malin, Vanderbilt University, USA
Noman Mohammed, University of Manitoba, Canada
Christine O'Keefe, CSIRO, Australia
Rainer Schnell, University of Duisburg-Essen, Germany
Vassilios Verykios, Hellenic Open University, Greece
Jim Warren, University of Auckland, New Zealand
William Winkler, US Bureau of the Census, USA
Ping Yu, University of Wollongong, Australia