

# YUAN TIAN

Saskatchewan Health Quality Council | Saskatoon, SK, Canada

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## Education

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- **Master of Science, Department of Computer Science, University of Saskatchewan, Saskatoon, Canada, 2011.**
  - **Relevant Coursework:** Software engineering, Advanced Intelligent System; Biostatistics.
  - **GPA: 87 on a scale of 100.**
- **Bachelor Degree in Information Management & Information System, Department of Mathematics, Jinan University, Guangzhou, China, 2009.**
  - **Relevant Coursework:** Management Information System, Object-Oriented Program Designing, Advanced Mathematics, Data Structure.
  - **GPA: 87.6 on a scale of 100. (Top 10%)**

## Professional Experience

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### 1. Researcher, Saskatchewan Health Quality Council, Saskatoon, Canada, 01/2015-present

- **Duties:** Develop computer simulation models to understand the bottlenecks of ED overcrowding and streamline the patient flow in the hospitals in Saskatchewan.

### 1. Research Associate, Program in Health Services & Systems Research, Duke-NUS Graduate Medical School, Singapore, 01/2013-12/2014

- **Duties:** applied System Dynamics and Individual-based methodology to national policy making and implementation, especially in the long-term care section and stroke rehabilitation.

### 2. Research Officer, Department of Computer Science, University of Saskatchewan, Canada, 11/2011-10/2012

- **Duties:** developed computational models to evaluate the cost-effectiveness of health policies in stroke control; performed rigorous sensitivity and uncertainty analysis; worked with health specialists in simulation design and data analysis; coded in Java, AnyLogic software and MySQL.

### 3. Part-time Research Analyst with Pythagorus Consulting, Guelph, Canada, 05/2011-12/2011

- **Duties:** Provide programming, modeling and analysis support for developing a dynamic model for transmission and control of Neisseria meningitides; coded in **Matlab**.

### 4. Research Assistant/Student, Department of Computer Science, University of Saskatchewan, Canada 09/2009 – 10/2011.

- **Thesis Topic: Agent-based Modeling on Transmission of Tuberculosis in Saskatchewan.**
- **Duties:** Developed Individual-based model for TB transmission using Java and AnyLogic; implemented a database using MySQL Server to backup the simulation results concurrently; conducted sensitivity analysis to produce potential prevention countermeasures for the spread of Tuberculosis in Saskatchewan.

## Teaching Experience

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### 1. Faculty member, Short Course on Introduction to System Dynamics for Health Care Services, 35<sup>th</sup> Annual Meeting of Society for Medical Decision Making, Baltimore, MD, 2013.

### 2. Teaching Assistant and Tutor, Agent-based Modeling Bootcamp for Health Researchers 2011, Saskatoon, Canada, 08/2011.

- Assist participants in development of agent-based models in AnyLogic; present good practices regarding agent-based modeling, debugging and testing.

### 3. Teaching Assistant of “Developing Object-oriented Systems” Course and “Data Structures and Algorithms” Course, Department of Computer Science, University of Saskatchewan, Canada, 09/2009-12/2011

- **Duties:** Tutored undergraduate students on Object-oriented Java Programming, provided feedbacks on their assignments with respect to java programming, data structure and algorithms.

### Awards and Honors

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1. **Graduate Scholarship**, Department of Computer Science, University of Saskatchewan, Canada, 2009-2011.
2. **Honorable Mention** in American Interdisciplinary Contest in Modeling, USA, 2008.
3. **President's Scholarship Award**, Jinan University, Guangzhou, China, 2006-2007.
4. **First-Class Scholarship** for Excellent Student in Jinan University, China, 2005-2006.

### Publications

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- **Tian, Y.**, Lich, K.H., Osgood, N., Eom K., and Matchar D.B. Linked Sensitivity Analysis, Calibration, and Uncertainty Analysis Using a System Dynamics Model for Stroke Comparative Effectiveness Research. **Medical Decision Making** (accepted).
- Matchar, D.B., Nguyen, H.V. and **Tian, Y.**, 2015. Bundled Payment and Care of Acute Stroke What Does it Take to Make it Work?. **Stroke**, 46(5), pp.1414-1421.
- Lich, K. H., **Tian, Y.**, Beadles, C. A., Williams, L. S., Bravata, D. M., Cheng, E. M., ... and Matchar, D. B. 2014. Strategic Planning to Reduce the Burden of Stroke Among Veterans Using Simulation Modeling to Inform Decision Making. **Stroke**, 45(7), 2078-2084.
- **Tian, Y.**, Osgood, N, Al-Azem A, Hoepfner, V. 2013. Evaluating the Effectiveness of Contact Tracing on Tuberculosis Outcomes in Saskatchewan Using Agent-Based Modelling. **Health Education & Behavior** (accepted, waiting for publication).
- Zia, A., Koliba C., **Tian, Y.** 2013. Governance Network Analysis: Experimental Simulations of Alternate Institutional Designs for Intergovernmental Project Prioritization Processes. In: COMPACT I: Public Administration in Complexity. Litchfield Park, AZ; 2013. p. 144-165.
- Osgood, N., **Tian, Y.** 2012. 15 Things System Dynamics can Learn from Software Development. In Proceedings, the 30th International conference of the System Dynamics Society. July 2012, St. Gallen, Switzerland.
- **Tian, Y.**, Alawami, F., Al-Azem, A., Osgood, N., Hoepfner, V., Dutchyn, C. 2011. A System Dynamics model of tuberculosis diffusion with respect to contact tracing investigation. Proceedings of the 2011 Winter Simulation Conference.
- **Tian, Y.** and Osgood, N. 2011. Comparison between Individual-based and Aggregate Models in the context of Tuberculosis Transmission. In Proceedings, the 29th International Conference of the System Dynamics Society. July 2011, Washington, D.C.
- Osgood, N., Mahamoud, A., Hassmiller-Lich, K., **Tian, Y.**, Al-Azem, A., Hoepfner, V. 2011. Estimating the Relative Impact of Early-Life Infection Exposure on Later-Life Tuberculosis Outcomes in a Canadian Sample. **Research in Human Development**. 8(1). Pp 26-47. Winter 2011. 22pp.

### Technical Skills

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- **SAS Certified Advanced Programmer (Certified Dec 2015)**
- **Extensive technical skills in** Agent-based Modeling, System Dynamics Modeling, Sensitivity Analysis, Statistical Analysis methods, Operational Research methods.
- **Analytical and modeling Tools:** AnyLogic, MATLAB, R, SAS, Vensim

*Updated on May 23, 2016.*