# **Henry Kim**

Associate Professor of Decision Technologies Schulich School of Business York University Toronto, Canada hmkim@yorku.ca (416) 882-8748 [txt & ph] http://blockchain.lab.yorku.ca

## **Employment**

1999 – Present Schulich School of Business, York University

Associate Professor of Decision Technologies, 2004 -

• Co-Director, BlockchainLab, 2015-

Assistant Professor, 1999-2004

2017 - Present Lassonde School of Engineering, York University

Cross-appointment as Graduate Faculty

2018 - Present New Capital Ltd., Toronto, Ontario Canada

Co-Chief Technology Officer

2015 Indigo Canada, Toronto, Ontario Canada

Visiting Research Scientist

2008 IBM Centre for Advanced Studies, Markham, Ontario Canada

Visiting Faculty Fellow

1999 BT Labs, Martlesham Health, UK

Research Fellow

1998 – 1999 Talus (now part of JDA Software), Mountain View, CA USA

Management Consultant

1995 – 1996 BHP Research Laboratories, Melbourne, Australia

Visiting Research Engineer

1991 – 1992 Hewlett Packard Canada, Mississauga, Ontario Canada

• Systems Engineer & Technical Consultant

#### **Education**

1999 Ph.D., Industrial Engineering, University of Toronto

1991 M.Eng., Industrial and Operations Engineering, University of Michigan, Ann Arbor

1989 B.A.Sc., Industrial Engineering, University of Toronto

#### **Grants & Awards**

2018 - 2019 Collaborator with Getu Hailu (Guelph) and Henry An (Alberta), "Trade and

Competitiveness: Productivity, Innovation, and Product Differentiation", Ontario

Ministry of Agriculture, Food, and Rural Affairs – Research Program (\$151,600)

2018 Principal Investigator with Hero Engineering, "Blockchain Enabled Smart

Microgrids", Ontario Centre of Excellence Voucher for Innovation and Productivity I Research

*Grant – OCE VIP I* (\$45,246)

2018	Principal Investigator with Nuco Networks, "Applying Deep Neural Networks for Blockchain Interoperability I", Ontario Centre of Excellence V oucher for Innovation and Productivity I Research Grant – OCE VIP I (\$45,000)
2018	Principal Investigator with Nuco Networks, "Applying Deep Neural Networks for Blockchain Interoperability II", National Research Council Industrial Research Assistance Program – NRC IRAP (\$20,200)
2017 – 2018	Recipient, Schulich School of Business Fellowship for Research (\$12,500)
2016 – 2017	Principal Investigator with Opterus, "Ontology-Based Reference Model for Financial Business Processes in Retail for Opterus", <i>Natural Sciences and Engineering Research Council of Canada</i> – Engage Grant (\$52,234)
2015 – 2016	Principal Investigator with Indigo, "Developing a Social and Trust-Based Book Recommender System for Indigo", Natural Sciences and Engineering Research Council of Canada – Engage Grant (\$52,900)
2015 – 2016	Principal Investigator with Sphere3D, "Enabling Data Management for Big Data Business Analytics for Sphere3D using Context-Aware Ontologies", <i>Natural Sciences and Engineering Research Council of Canada</i> – Engage Grant (\$52,800)
2015 – 2016	Co-Applicant with Charles Shier, "Ontology formalizations of Marketing Principles and Exploring Blockchain Research Opportunities", Natural Sciences and Engineering Research Council of Canada – Undergraduate Student Research Award (\$9,000)
2014 – 2015	Principal Investigator with QLogitek, "Leveraging Supply Chain Automation Expertise to Develop Supply Chain Analytics Capabilities", <i>Natural Sciences and Engineering Research Council of Canada</i> – Engage Grant (\$53,100)
2009 – 2015	Principal Investigator, "Using ontologies and social network analysis for web 2.0 enabled knowledge sharing", <i>Natural Sciences and Engineering Research Council of Canada</i> – Discovery Grant (\$95,000)
2012	Co-Applicant with Jackie Cheung, "Applications of a Computational Ontology for Distance for the Semantic Web", <i>Natural Sciences and Engineering Research Council of Canada</i> – Undergraduate Student Research Award (\$4,500)
2004 – 2008	Principal Investigator, "Enabling Knowledge Sharing over the Semantic Web using Ontologies and Network Analysis", <i>Natural Sciences and Engineering Research Council of Canada</i> – Discovery Grant (\$53,925)
2008 – 2010	Co-Applicant with Hossam Ali-Hassan, "Corporate Social Computing", <i>IBM</i> – PhD Fellowship Award (\$43,432)
2007	Principal Investigator, "IT Productivity and other Research Issues in Service Science", <i>IBM</i> – Faculty Award (\$20,150)
2000 – 2004	Principal Investigator, "Enabling Integrated Decision Making: Business Process and Data Driven Information Integration using Ontology-Based Enterprise Models", Natural Sciences and Engineering Research Council of Canada – Discovery Grant (\$53,925)
2000 – 2008	Schulich School of Business - Various Faculty Research Awards (\$53,000)

## **Journal Publications**

**Kim, Henry M.** and Marek Laskowski (2018). "Towards an Ontology-Driven Blockchain Design for Supply Chain Provenance", *Intelligent Systems in Accounting, Finance, and Management,* Vol. 25, Issue 1, pg. 18-27.

Mehar, Muhammad Izhar, Charlie Shier, Alana Giambattista, Elgar Gong, Gabrielle Fletcher, **Henry M. Kim**, and Marek Laskowski (2018). "Understanding a Revolutionary and Flawed Grand Experiment in Blockchain: The DAO Attack," Accepted: *Journal of Cases on Information Technology*.

**Kim, Henry M.,** Marek Laskowski, and Ning Nan (2018). "A First Step in the Co-Evolution of Blockchain and Ontologies: Towards Engineering an Ontology of Governance at the Blockchain Protocol Level", Submitted to: *Royal Society of Open Science*.

Karajovic, Maria, **Henry M. Kim**, Marek Laskowski (2018). "Thinking Outside the Block: Projected Phases of Blockchain Integration in the Accounting Industry," Submitted to: *Australian Accounting Review*.

**Kim, Henry M.**, Bita Ghiasi, Max Spear, Marek Laskowski and Jiye Li (2017). "Online Serendipity: The Case for Curated Recommender Systems", *Business Horizons*, Vol. 60, Issue 5, pp. 613-20.

Nevo, Saggi, Dorit Nevo, and **Henry Kim** (2012). "From Recreational Applications to Workplace Technologies: An Empirical Study of Cross-Context IS Continuance in The Case of Virtual Worlds", *Journal of Information Technology*, Vol. 27, No. 1, 74-86.

**Kim, Henry M.**, Kelly Lyons, and Mary Ann Cunningham (2008). "Towards a Theoretically-Grounded Framework for Evaluating Immersive Business Models and Applications: Analysis of Ventures in Second Life", *Journal of Virtual Worlds Research*, Vol. 1, No. 1.

**Kim, Henry M.** and Saggi Nevo (2008). "Development and Application of a Framework for Evaluating Multi-Mode Voting Risks", *Journal of Internet Research*, Vol. 18, No. 1, pp. 121-35.

Kim, Henry M., Arijit Sengupta, and Joerg Evermann (2007). "MOQ: Web Services Ontologies for QoS and General Quality Evaluations", *International Journal on Metadata Semantics and Ontologies*, Vol. 2, No. 3, pp. 195-200.

Kim, Henry M., Marks S. Fox, and Arijit Sengupta (2007). "How To Build Enterprise Models to Achieve Compliance to Standards or Regulatory Requirements (and Share Data)", *Journal of the Association of Information Systems*, Vol. 8, No. 2, pp. 105-28.

**Kim, Henry M.** and Arijit Sengupta (2007). "Extracting Knowledge from XML Document Repository: A Semantic Web-Based Approach", *Information Technology and Management*, Vol. 8, No. 3, pp. 205-21.

Kim, Henry M.; Arijit Sengupta, Mark S. Fox, and Mehmet Dalkilic (2006). "A Measurement Ontology Generalizable for Emerging Domain Applications on the Semantic Web", *Journal of Database Management*, Vol. 18, No. 1, pp. 20-42.

Wade, Michael, Markus Biehl, and **Henry M. Kim** (2006). "Information Systems Is/Isn't a Reference Discipline (And What We Can Do about It)", *Journal of the Association of Information Systems*, No. 5, May, pp. 247-268.

Wade, Michael, Markus Biehl, and **Henry M. Kim** (2006). "If the Tree of IS Knowledge Falls in a Forest, Will Anyone Hear?: A Commentary on Grover et al.", *Journal of the Association of Information Systems*, Vol. 7 No. 5, May, pp. 326-335.

Biehl, Markus, **Henry M. Kim**, and Michael Wade (2006). "Relationships Among the Academic Business Disciplines: A Multi-Method Citation Analysis", *Omega: The International Journal of Management Science*, Vol. 34, pp. 359.

Nevo, Saggi and **Henry M. Kim** (2006), "How to Compare and Analyze Risks of Internet Voting Versus Other Modes of Voting", *E-Government: An International Journal*, Vol. 3, No. 1-2.

**Kim, Henry M.** and Markus Biehl (2005). "Exploiting the Small-Worlds of the Semantic Web to Connect Heterogeneous, Local Ontologies", *Information Technology and Management*, Vol. 6, pp. 89-96.

**Kim, Henry M.** and Rajani Ramkaran (2004). "Best Practices in E-process Management: Extending a Reengineering Framework", *Business Process Management Journal*. Vol. 10, No. 1., pp. 27-43

Biehl, Markus, and **Henry M. Kim** (2003). "Electronic Marketplaces versus Enterprise Resource Planning: A Comparison and Decision Methodology for Supply Chain Management", *International Journal of Technology and Policy Management*, Vol. 3, No. 3/4, pp. 262-84.

Kim, Henry M. (2002). "Predicting How Ontologies for The Semantic Web Will Evolve", *Communications of the ACM*, Vol. 45, No. 2, pp. 48-54.

**Kim, Henry M.** (2002). "Enterprise Models of Measurement: A Comparison of Existing Models for Quality Management and E-Business", *Operational Research: An International Journal*. Vol. 2, No. 1.

**Kim, Henry M.** and Mark S. Fox (2002). "Towards Quality Management Web Services: An Ontology of Measurement for Enterprise Modeling", *Lecture Notes in Computer Science* 2348, pp. 230-44.

Kim, Henry M. (2000). "Enabling Integrated Decision-Making for Electronic Commerce by Modelling an Enterprise's Sharable Knowledge", *Internet Research*, Vol. 10, No. 5, pp. 418-25.

**Kim, Henry M.,** Mark S. Fox, and Michael Grüninger, (1999). "An Ontology for Quality Management: Enabling Quality Problem Identification and Tracing", *BT Technology Journal*, Vol. 17, No. 4, pp. 131-40.

# Refereed Conference Proceedings and Book Chapters

Lucena, Percival, Alecio P. D. Binotto, Fernanda da Silva Momo, and **Henry Kim** (2018). "A Case Study for Grain Quality Assurance Tracking based on a Blockchain Business Network," *Proceedings of the Symposium on Foundations and Applications of Blockchain (FAB 18)*, March 9, 2018, Los Angeles, CA.

Kim, Henry M. and Marek Laskowski (2017). "A Perspective on Blockchain Smart Contracts: Reducing Uncertainty and Complexity in Value Exchange," *Proceedings of the IEEE Workshop on Workshop on Privacy, Security, Trust & Blockchain Technologies*, August 3, Vancouver, BC.

Kim, Henry M., Jackie Ho Nam Cheung, Marek Laskowski, and Iryna Gel (2016). "Data Analytics Using Ontologies of Management Theories: Towards Implementing 'From Theory to Practice'," *Proceedings of the 17th IEEE International Conference on Information Reuse (IEEE IRI)*, July 28-30, Pittsburgh, PA.

Laskowski, Marek and **Henry M. Kim** (2016). "Rapid Prototyping of a Text Mining Application For Cryptocurrency Market Intelligence," *Proceedings of the 5th International IEEE Workshop on Data Integration and Mining (DIM)*, July 28-30, Pittsburgh, PA.

Kim, Henry M., Marek Laskowski, Seyed Moghadas, Amirehsan Sajad, and Maaz Asif (2014). "A Framework for Comparing Early Warning Systems across Domains: A Step Toward a Data-Integrated Public Health EWS," Proceedings of the 3rd International Workshop in Issues and Challenges in Social Computing – Social Media, Crowd Sourcing, and Public Health (WICSOC), August 14-16, San Francisco, CA.

Ali-Hassan, Hossam, Dorit Nevo, **Henry M. Kim**, and Stephen Perelgut (2011). "Organizational Social Computing and Employee Job Performance", *Proceedings of the 44<sup>th</sup> Annual Hawaii International Conference on System Sciences 2011 (HICSS-44)*, January 4-7 Kauai, HI.

Kim, Henry M., Kelly Lyons, and Mary Ann Cunningham (2008). "Towards a Framework for Evaluating Immersive Business Models: Evaluating Service Innovations in Second Life", *Proceedings of the 41<sup>st</sup> Hawaii International Conference on Systems Science*, January 7-10, Big Island, HI.

Kim, Henry M., (2008). "A Venture Capital Approach to IT and Services Innovation", Proceedings of Service Science Management and Engineering Workshop at University of Alberta, March 6-7, Edmonton, AB Canada.

Kim, Henry M., (2007). "Addressing the Services Science, Management, and Engineering Curriculum: Now and Future", *Proceedings of CASCON 2007 workshop of the Annual Conference of IBM Centre for Advanced Studies*, October 23-24, Canada.

**Kim, Henry M.** and Kelly Lyons (2007). "The Role of Complexity Science in the Evolution of the Services Science Discipline", *Proceedings of the 2007 DSI Services Science Mini-conference, May 24-26*, Pittsburgh.

Sengupta, Arijit and **Henry M. Kim** (2006). "SWAP - A Framework for Ontology Support in Semantic Web Applications", In: E.Y. Li, & T.C. Du (Eds.): *Advances in Electronic Business, Vol. 2 Theme: Semantic Web and Intelligent Web Services.* 

Kim, Henry M., Markus Biehl, and John A. Buzacott (2005). "M-CI2: Modelling Cyber Interdependencies between Critical Infrastructures", *Proceedings of the Third IEEE Conference on Industrial Informatics (INDIN '05)*, August 3-5, Perth, Australia.

**Kim, Henry M.** (2005). "How to Compare and Analyze Ricks of Internet Voting Versus Other Modes of Voting", E-Government: An International Journal, *Proceedings of the International Conference on e-Government (ICEG)*, October 3-4, Ottawa ON Canada.

Kim, Henry M. (2004). "Ontologies for the Semantic Web: Can Social Network Analysis Be Used to Develop Them?", Bulletin of the Association for Information Systems Special Interest Group on Semantic Web and Information Systems, July, Vol. 1, No. 2.

Biehl, Markus, **Henry M. Kim**, and Michael Wade (2003). "A Decision Methodology for Comparing Similarities & Differences in Journals," in: Kurt Engemann and George Lasker (Editors): *Advances in Decision Technology and Intelligent Information Systems Vol. IV*, pp. 26-30.

**Kim, Henry M.** and Mark S. Fox (2002). "Using Enterprise Reference Models for Automated ISO 9000 Compliance Evaluation", *Proceedings of the 35<sup>th</sup> Hawaii International Conference on Systems Science (HICSS)*, January 7-10, Big Island, HI.

**Kim, Henry M.** (2002). "XML-hoo!: A Prototype Application for Intelligent Query of XML Documents Using Domain-Specific Ontologies", *Proceedings of the 35<sup>th</sup> Hawaii International Conference on Systems Science (HICSS)*, January 7-10, Big Island, HI.

Tham, K. Donald and **Henry M. Kim** (2002). "Towards Strategic Intelligence with Ontology Based Enterprise Modelling and ABC", *Proceedings of the International Business & Economics Research Conference*, October 7-11, Las Vegas, NV.

**Kim, Henry M.** and K. Donald Tham (2002). "Designing Business Processes and Communication Structures for E-Business Using Ontology-Based Enterprise Models with Mathematical Models", In: *Enterprise Information Systems IV*, Kluwer, Netherlands, pp. 179-85.

Kim, Henry M. (2000). "Integrating Business Process-Oriented and Data-Driven Approaches for Ontology Development", *Proceedings of the AAAI Spring Symposium Series 2000 - Bringing Knowledge to Business Processes*, Stanford, CA, March 20-22, pp. 93-9.

**Kim, Henry M.** (2000). "Enabling E-Business by Modeling an Enterprise's Sharable Knowledge", *Proceedings of the 5th INFORMS Conference on Information Systems and Technology*, November 4-5, San Antonio, TX.

**Kim, Henry M.**, Mark S. Fox, and Michael Grüninger (1995). "An Ontology of Quality for Enterprise Modelling", *Proceedings of the Fourth Workshop on Enabling Technologies: Infrastructure for Collaborative Enterprises (WET-ICE)*. Berkeley Springs, WV, April 20-22, 1995, pp. 105-116.

**Kim, Henry M.** and Mark S. Fox (1994). "Formal Models of Quality and ISO 9000 Compliance", *Proceedings of the American Quality Congress (AQC) Conference, American Society for Quality Control*, Las Vegas, NV, May 1994, pp. 17-23.

## **Teaching**

Undergraduate Information Systems Concepts and Models

Introduction to Information Systems
Database Management System
Systems Analysis and Design

Graduate Introduction to Leadership and Management Skills

Introduction to Information Systems
Advanced Topics in Information Systems

E-Business Strategy

Systems Analysis and Design

Post Graduate Information Systems (Certified General Accountants of Ontario)

Management Information Systems (Bank of Montreal)

North American Information Systems (China National Tobacco Company) North American Supply Chain Management (China National Tobacco Company)

## **Consulting and Professional Services Engagements**

- 2018 Present: Director, Blockmine Development Inc.
- Blockchain Research Institute; China National Tobacco Company; Environics Research, Town of Markham, Certified General Accounts of Ontario; George Brown College; Bank of Montreal

### **Service**

Editorial Board 2018 - Frontiers in Blockchain

2015 – Service Science (INFORMS)

2005 – International Journal of Sematic Web and Information Systems

2013 – 2017 Decision Analytics

2004 – 2007 Association of Information Systems Special Interest Group on Semantic

Information Systems

2001 – 2012 Journal of Internet Research

Ad Hoc Reviewer Numerous journals and conferences including MIS Quarterly, Information Systems

Research, and Management Science

Examiner Numerous PhD and Master's at Schulich School of Business, Computer Science,

and Information Technology programs at York University

Chair Student Affairs Committee, Schulich School of Business (2015-9)

Area Coordinator Operations Management and Information Systems Area (2004-5)

Committee Member BlockchainHub @ Best, York University; Numerous T&P Committees at York

University and other institutions; Numerous NSERC and SSHRC Grant Selection Committees. Student Affairs Committee; York University Senate; BBA Committee; MBA Committee; Operating Committee; Hiring Committees; University of Toronto

Governing Council, Operating Committee, Affirmative Action for Hiring

Committees, PhD Student Selection Committees