

*Hazhir Rahmandad*

**Associate Professor**

*MIT Sloan School of Management, System Dynamics Group*

**Affiliate Associate Professor**

*Virginia Tech, Grado Department of Industrial and Systems Engineering*

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**EDUCATION**

*Massachusetts Institute of Technology*

Ph.D. in Management, System Dynamics - Minor Organizational Behavior

August 2005

*Sharif University of Technology*

Bachelor of Science in Industrial Engineering - Minor System Analysis

1996-2000

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**JOURNAL ARTICLES (28)**

- Rahmandad, H., Repenning, N., & Henderson, R. (Forthcoming). Making the Numbers? "Short termism" & the puzzle of only occasional disasters. *Management Science*.
- Rahmandad H, Repenning N. (2016). "Capability Erosion Dynamics." *Strategic Management Journal*. 37(4): 649-672.
- Jalali, M. S., Sharafi-Avarzaman, Z., Rahmandad, H., & Ammerman, A. S. (2016). Social influence in childhood obesity interventions: a systematic review. *Obesity Reviews*. doi: 10.1111/obr.12420
- Wittenborn, A. K., H. Rahmandad, J. Rick and N. Hosseinichimeh (2016). "Depression as a systemic syndrome: mapping the feedback loops of major depressive disorder." *Psychological Medicine* 46(3): 551-562.
- Rahmandad, H. (2015). "Connecting strategy and system dynamics: an example and lessons learned." *System Dynamics Review* 31(3): 149-172.
- Parvan, K., Rahmandad, H., & Haghani, A. (2015). Inter-phase feedbacks in construction projects. *Journal of Operations Management* 39-40: 48-62.
- Hosseinichimeh, N., H. Rahmandad and A. Wittenborn (2015). "Modeling the hypothalamus-pituitary-adrenal axis: A review and extension." *Mathematical biosciences*. 268: 52-65.
- Davarzani, H., R. Zanjirani-Farahani and H. Rahmandad (2015). "Understanding econo-political risks: impact of sanctions on an automotive supply chain." *International Journal of Operations & Production Management*. 35(11):1567-1591.
- Shoham, D., R. Hammond, H. Rahmandad, Y. Wang and P. Hovmand (2015). "Modeling social norms and social influence in obesity." *Current Epidemiology Reports* 2(1): 71-79.
- Fallah-Fini, S., K. Triantis, H. Rahmandad, C. de la Garza (2015). "Measuring dynamic efficiency of highway maintenance operations." *Omega*.50(C):18-28.
- Rahmandad H. (2014). "Human growth and body weight dynamics: an integrative systems model." *PLoS One*. 9(12): e114609.
- Fallah-Fini, S., H. Rahmandad, et al. (2014). "Modeling US Adult Obesity Trends: A System Dynamics Model for Estimating Energy Imbalance Gap." *American Journal of Public Health*. 104(7): 1230-1239.
- Hall, K. D., R. A. Hammond, H. Rahmandad (2014). "Dynamic Interplay Among Homeostatic, Hedonic, and Cognitive Feedback Circuits Regulating Body Weight." *American Journal of Public Health*. 104(7): 1169-1175.
- Fallah-Fini, S., H. Rahmandad, et al. (2013). "Connecting micro dynamics and population distributions in system dynamics models." *System Dynamics Review* 29(4): 197-215.
- Sabounchi, N., Rahmandad, H., Ammerman, A. (2013). "Best-fitting prediction equations for basal metabolic rate: informing obesity interventions in diverse populations." *International Journal of Obesity*.37(10): 1364-1370.
- Ip, E. H., H. Rahmandad, D. Shoham, R. Hammond, T. Huang, Y. Wang, P. Mabry (2013) "Reconciling Statistical and Systems Science Approaches to Public Health " *Health Education & Behavior*.40(1S): 123S-131S.
- Rahmandad, H. (2012). "Impact of growth opportunities and competition on dynamics of capability development". *Organization Science* 23(1): 138-154.
- Rahmandad, H. and Sterman, J. (2012). "Reporting Guidelines for Simulation-based Research in Social Sciences." *System Dynamics Review*, 28(4):396-411.

- Rahmandad, H. and Sibdari, S. (2012) "Joint Pricing and Openness Decisions in Software Markets with Reinforcing Loops." *System Dynamics Review* 28(3):206-229.
- Hu, K.\*, Rahmandad, H., Smith-Jackson, T., & Winchester, W. W. (2011). Factors influencing the risk of falls in construction industry: a review of evidence. *Construction Management and Economics*, 29(4): 397-416.
- Rahmandad, H., K. Hu\*, R. Duintjer-Tebbens, K. Thompson (2011). Development of an individual-based model for polioviruses: Implications of the selection of network type and outcome metrics. *Epidemiology and Infection*, 139(6), 836-848.
- Zuashkiani, A., Rahmandad, H., & Jardine, A. (2011). Mapping the dynamics of overall equipment effectiveness to enhance asset management. *Journal of Quality in Maintenance Engineering*, 17(1), 74-92.
- Fallah-Fini, S., H. Rahmandad, et al. (2010). "Optimizing highway maintenance operations: dynamic considerations." *System Dynamics Review* 26(3): 216-238.
- Rahmandad, H. and K. Hu (2010). "Modeling rework cycle: comparing alternative formulations." *System Dynamics Review* 26(4): 291-315.
- Rahmandad, H., N. P. Repenning and J. D. Sterman (2009). Effect of Feedback Delays on Learning, *System Dynamics Review*, 25(4): 309-338.
- Rahmandad, H. and D. Weiss (2009). Dynamics of concurrent software development. *System Dynamics Review* 25(3): 224-249.
- Rahmandad, H. (2008). "Effect of delays on complexity of organizational learning." *Management Science* 54(7): 1297-1312.
- Rahmandad, H. and J. Sterman (2008). "Heterogeneity and network structure in the dynamics of diffusion: Comparing agent-based and differential equation models." *Management Science* 54(5): 998-1014.

Download my publications from:

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Download my working papers and those under review from:

<https://dl.dropboxusercontent.com/u/4180603/Rahmandad-UnderReview%26Working.zip>

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#### FUNDED RESEARCH (\$1,195,074 PI SHARE OF EXTERNAL GRANTS)

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- Systems Analysis of Social Pathways of Epidemics to Reduce Health Disparities, National Institutes of Health (Grant # 1R01GM109718), \$1,757,042, 8/15/2014-5/31/2019, Share: 1% (\$17,570). Co-PIs: Abbas & Marathe.
- Analyzing and improving technology investment decisions at hospitals, AHRQ, \$100,000, 5/20/2013-5/20/2014, PI Share: 30%. Co PI: Wernz.
- Modeling the dynamics of adult depression, NIH, \$417,858, 4/1/2014-3/31/2015, PI Share: 50%. Co-PI: Wittenborn.
- Dynamics of obesity intervention adoption, implementation, and maintenance, National Institutes of Health (Grant # 1R21HL113680-01), \$408,951, 8/15/2012-5/14/2014, PI Share: 100% (\$426,471). Co-PI: Ammerman.
- Impact of market behavior on the adoption and diffusion of innovative green building technologies in residential firms, Department of Housing and Urban Development, \$363475, 8/16/2011-8/15/2013, PI Share: 10%. Co PIs: McCoy and Koebel.
- Modeling and analyzing the governance of NextGen, Sponsor: Federal Aviation Administration (FAA) (Virginia Tech is subcontractor to Stevens Institute of Technology), Funding Amount: \$40,000, Period: 1/1/2011-12/31/2011, PI Share: 100%.
- Understanding the dynamics of online communities, Sponsor: National Science Foundation (Innovation and Organizational Sciences; Grant # 1027413), Funding Amount: \$149,136, Period: 1/1/2011-12/31/2014, PI Share: 100%.
- Modeling obesity dynamics in the U.S., Sponsor: National Institutes of Health (Contract #: HHSN276201000004C), Funding Amount: \$247,197, Period: 1/1/2010-5/1/2012, PI Share: 100%.
- Applications of Web 2.0 in innovation process, Sponsor: Companies PRTM and UPM, Funding Amount: \$28,820, Period: 1/1/2009-8/31/2009. PI Share: 100%.
- Efficiency and workflow analysis at MCT, Sponsor: MCT Information Services, Funding Amount \$32,130, Period: 5/15/2008, 8/15/2008, PI Share: 33%. Co PIs: Triantis and Hoopes

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#### HONORS AND AWARDS

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| • Albert and Jeanne Clear Career Development Professorship                               | 2015               |
| • Jay W. Forrester award for best system dynamics publication during previous five years | 2015<br>2013, 2015 |
| • Academy of Management Best Paper Proceedings Selection                                 | 2011               |
| • CIDER Teacher of the Week, Virginia Tech, VA   | 2005               |
| • IATC "Bridges of Hope" award and scholarship   |                    |

- Dana Meadows Award for best student paper in International System Dynamics conference 2004
- Dana Meadows Award for best student paper in International System Dynamics conference 2001
- Best paper award - National Industrial Engineering Conference - Tehran 1999
- Gold Medal- International Chemistry Olympiad - Moscow 1996

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## POSITIONS AND PROFESSIONAL EXPERIENCES

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*Massachusetts Institute of Technology*

**Associate Professor, Sloan School of Management** 2016-

2015-2016

**Assistant Professor, Sloan School of Management** 2013-2015

**Visiting Associate Professor, Sloan School of Management**

*Virginia Tech*

**Associate Professor of Industrial and Systems Engineering (with tenure)** 2012-2015

**Assistant Professor of Industrial and Systems Engineering** 2006-2012

*Massachusetts Institute of Technology*

**Post Doctoral Associate** 2005- 2006

*Avaya Corp.*

**Research Affiliate** 2004-2007

**Consultant** 2005-

*McClatchy-Tribune, IBM, Kids Risk, PWC*

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## SOFTWARE AND MANAGEMENT FLIGHT SIMULATORS

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- Human growth and body weight simulator
- Basal Metabolic Rate estimator
- Epidemics simulator
- Software Management Simulator- Available upon request

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## PROFESSIONAL SOCIETY MEMBERSHIP AND SERVICE

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*Grant reviewer for the National Science Foundation (6 proposals), the National Institutes of Health (54 proposals), and multiple international agencies.* 2006-

*Ad hoc referee (36 journal article reviews) for Management Science, Organization Science, Operations Management, Strategic Management Journal, Journal of Product Innovation Management, Operations Research, Journal of Operations Management, Production and Operations Management, European Journal of Operational Research, International Journal of Production Research, Risk Analysis, System Dynamics Review, Industrial and Corporate Change, International Journal of Production Economics, Journal of Obesity, Vaccine, Health Services Research, Decision Support Systems, Health Education and Behavior, Health Systems, Epidemiology and Infection, American Journal of Clinical Nutrition, Journal of Artificial General Intelligence, Research in Human Development, Transactions on Modeling and Computer Simulation, Computational and Mathematical Organization Theory, and multiple conferences* 2002-

*Workshop Organizer, International System Dynamics Conference* 2002-

*Coordinator, MIT-U Albany System Dynamics Ph.D. Colloquium* 2001-2006

*Member of INFORMS, System Dynamics Society, Institute of Industrial Engineers, Academy of Management* 2000-

*Farsi Teach Net (Founding Member, Member of Executive Board)* 2006

*International Association of Iranian Managers (I-AIM) (Founding Member, Member of Board of Directors)* 2006-

*Iranian Studies Group at MIT (Founding Member, Executive Board Member)* 2002-2007