Shunryu Colin Garvey

Curriculum Vitae, January 5, 2022
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*I probe decision making under the conditions of complexity, uncertainty, and disagreement,
with a focus on the governance of risky sociotechnical systems, such as AI, and the facilitation of flourishing futures.*

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EDUCATION

2019   PhD, Science & Technology Studies (STS), Rensselaer Polytechnic Institute (RPI)

2015   MS, STS, RPI

2008   BA, Japanese Literature & Language, Media Studies, Vassar College

PROFESSIONAL APPOINTMENTS

2020 ~   Affiliate Fellow, Stanford Institute for Human-Centered Artificial Intelligence (HAI)

2020 ~   Network Affiliate, Stanford Center for International Security & Cooperation (CISAC)

2019 – 2020   Postdoctoral Fellow (with joint appointments at HAI & CISAC), Stanford University

PUBLICATIONS

Journal Editor

2021   "Artificial Intelligence & its Discontents." Double Issue, *Interdisciplinary Science Reviews* 46(1-2)

Peer-Reviewed Journal Articles

2021   **Garvey, Shunryu C.** "Unsavory Medicine for Technological Civilization: Introducing 'Artificial Intelligence & its Discontents'." *Interdisciplinary Science Reviews* 46(1-2): 1-18. https://doi.org/10.1080/03080188.2020.1840820

2021   **Garvey, Shunryu C.** "The 'General Problem Solver' Does Not Exist: Mortimer Taube and the Art of AI Criticism." *IEEE Annals of the History of Computing* 43(1): 60-73. https://doi.org/10.1109/MAHC.2021.3051686

2020   Mustafa Bayram, Simon Springer, **Colin Garvey**, and Vural Özdemir. "COVID-19 Digital Health Innovation Policy: A Portal to Alternative Futures in the Making." *OMICS: A Journal of Integrative Biology* 24(8): 460-469. https://doi.org/10.1089/omi.2020.0089

2020   **Garvey, Colin** and Chandler Maskal. "Sentiment Analysis of the News Media on Artificial Intelligence Does Not Support Claims of Negative Bias Against AI." *OMICS* 24(5): 286-299. https://doi.org/10.1089/omi.2019.0078

2020   Vural Özdemir, Yalçın Arga, Ramy K. Aziz, Mustafa Bayram, Shannon N. Conley, Collet Dandara, Laszlo Endrenyi, Erik Fisher, **Colin Garvey**, … Rene Von Schomberg, Aymen S. Yassin, Gürçim Yılmaz, Wei Wang. "Digging Deeper into Precision/Personalized Medicine." *OMICS* 24(2): 1-19.

2019   **Garvey, Colin**. "Artificial Intelligence and Japan's Fifth Generation: The Information Society, Neoliberalism, and Alternative Modernities." *Pacific Historical Review* 88(4): 619-658.

2014   Caporael, Linnda R. and **Colin Garvey**. "The Primacy of Scaffolding within Groups for the Evolution of Group-Level Traits." *Behavioral and Brain Sciences* 37(3): 255-256.

Refereed Conference Proceedings

2020   **Garvey, Colin.** "'AI for Social Good' and the First AI Arms Race: Lessons from Japan's Fifth Generation Computer Systems (FGCS) Project." In *Proceedings of the 34th Annual Conference of the Japanese Society for Artificial Intelligence,* 4pp.

2018   **Garvey, Colin**. "A Framework for Evaluating Barriers to the Democratization of Artificial Intelligence." In *Proceedings of the Thirty-Second AAAI Conference on Artificial Intelligence,* 8079-8080. Palo Alto, CA: AAAI Press.

2018   **Garvey, Colin**. "AI Risk Mitigation Through Democratic Governance: Introducing the 7-Dimensional AI Risk Horizon." In *Proceedings of the 2018 AAAI/ACM Conference on AI, Ethics, and Society*, 366-367. New York: ACM.

Book Chapters

2018   **Garvey, Colin** and Daniel Chard. "Disrupting the AAA$." In *Science for the People: Documents from America's Movement of Radical Scientists*. Schmalzer, Chard, and Bothelo, eds., 36-61. Cambridge, MA: University of Massachusetts Press.

2015   Eglash, Ron and **Colin Garvey**. "Satoyama as Generative Justice: Humanity, Hybridity, and Biodiversity in a Horizontal Social Ecology." In *Shape Shifting.* Marhöfer and Lylov, eds., 58-68. Berlin: Archive Books.

2014   Eglash, Ron and **Colin Garvey**. "Basins of Attraction for Generative Justice." In *Chaos Theory in Politics*. Banerjee, Erçetin, and Tekin, eds., 75-88. Dordrecht: Springer Netherlands.

Book Reviews

2018/2019   **Garvey, Colin.** "Review of *Homo Deus: A Brief History of Tomorrow,* by Yuval Harari, New York: Vintage, 2017." *ICON* 24: 234-236

2017   **Garvey, Colin.** "Review of *Robots*, by John M. Jordan, Cambridge, MA: The MIT Press, 2016." *ICON* 23: 200-202

2016   **Garvey, Colin.** "Review of *Superintelligence: Paths, Dangers, Strategies,* by Nick Bostrom, Oxford: Oxford University Press, 2014." *ICON* 22: 144-146.

Online Publications

2018   **Garvey, Colin.** "Broken Promises & Empty Threats: The Evolution of AI in the USA, 1956-1996." *Technology's Stories* (Society for the History of Technology) https://www.technologystories.org/ai-evolution/

Editorials

2020   Özdemir, Vural, Simon Springer, **Colin Garvey**, and Mustafa Bayram. "COVID-19 Health Technology Governance, Epistemic Competence, and the Future of Knowledge in an Uncertain World." *OMICS* 24(8): 451–53. https://doi.org/10.1089/omi.2020.0088.

2019   **Garvey, Colin**. "Hypothesis: Is 'Terminator Syndrome' a Barrier to Democratizing Artificial Intelligence and Public Engagement in Digital Health?" *OMICS* 23(7): 362-363.

2018   **Garvey, Colin**. "Interview with Colin Garvey, Rensselaer Polytechnic Institute. Artificial Intelligence and Systems Medicine Convergence." *OMICS* 22(2): 130-132.

Book Manuscript in Preparation

Working Title - *Terminated? Strategic Governance for AI Catastrophe Aversion*

Manuscripts in Preparation

Garvey, Colin. "Against AI Ethics: A View from Political Decision Theory." *IJCAI-22 Conference*
Garvey, Colin. "AI Ethics?: A Strategic Alternative." *Nature Machine Intelligence*
Garvey, Colin. "Bounded by Rationality: The Limits of Bounded Rationality" *Social Studies of Science*
Garvey, Colin. "Two Thousand Years of Intelligent Machines: A Review." *Technology & Culture*

AWARDS, FELLOWSHIPS, GRANTS

Awards

2017   Society for the History of Technology (SHOT) Best Early Career Panel/Paper

Fellowships

2017 – 2019   Humanities, Arts, and Social Sciences (HASS) Fellowship, RPI
2017   Alger Engineering Ethics Fellowship, RPI
2012 – 2014   GK-12 "Triple Helix" Fellowship, National Science Foundation (NSF)

Grants

2019   Travel Grant to "Towards a History of Artificial Intelligence," Columbia University, NYC
2018   Travel Grant from RPI Institute for Data Exploration and Application (IDEA) for "AI: Expert Systems Pioneers," Computer History Museum, Mountain View, CA
2018   NSF Travel Grant to Society for the History of Technology, St. Louis, MO
2018   AAAI/ACM Travel Grant to Artificial Intelligence, Ethics, and Society, New Orleans, LA
2017   Travel Grant to History of Science Society, Toronto, Canada
2017   NSF Travel grant to Society for the History of Technology, Philadelphia, PA
2017   Travel Grant to Society for New and Emerging Technologies, ASU
2017   NSF + 4S Travel Grant to Society for the Social Study of Science (4S), Boston, MA
2016   Travel Grant to De Lange Conference X, Rice University
2016   NSF/SHOT Travel Grant to Society for the History of Technology, Singapore
2016   Travel Grant STGlobal Conference, Washington DC
2015   Travel Grant to Society for the Social Studies of Science, Denver, CO
2015   NSF Travel Grant to Society for the History of Technology, Albuquerque, NM,
2015   Travel Grant to International Society for the History, Philosophy, and Social Studies of Biology (ISHPSSB), Montreal, Canada
2013   Travel Grant to ISHPSSB, Montpellier, France

PRESENTATIONS

<u>Invited Talks</u>

2020   "Can AI Help? The Politics of Digital Health Technologies for COVID-19." Cybersecurity Center, New Mexico Institute of Mining and Technology, July 22

2020   "Second Time as Farce? Trans-Pacific AI Arms Races, Then and Now." Center for Strategic and International Studies (CSIS), Washington DC, February 28

2019   "Who Needs What Intelligence?" Supreme Court of California, December 12

2019   "Scanning the AI Risk Horizon: Cybersecurity, Trust, and Other Challenges." Cybersecurity Center, New Mexico Institute of Mining and Technology, September 20

2019   "Hiring, Firing, and Wiring: AI in Human Resources." College of Saint Rose, February 26

2019   "AI in Context: History, Ethics, and Politics." Saratoga City Center's "The AI Opportunity: Developing an AI Ecosystem in Upstate New York." Saratoga Springs, NY, January 24

2015   "The Risks of Artificial Intelligence and their Governance."
New Mexico Institute of Mining and Technology, November 9

<u>Campus Talks</u>

2020   "Strategies for Coping with Complexity, Uncertainty, and Disagreement in AI Risk Governance." Stanford CISAC, April 30

2019   "Averting AI Catastrophe: Challenges for Democratic Governance." Stanford HAI, Oct. 25

2019   "The Seven Deadly Risks of AI and the Future of Humanity." RPI, July 29

2016   "Risky Machines: AI and Lethal Autonomous Weapons." STS Colloquium Series on Artificial Intelligence, Robots, and the Future of Work, RPI, Sept. 14

<u>Media Appearances</u>

2021   「三条のお寺で修行中！アメリカ人僧侶」まるどりっ！*UP*, July 10.
http://www.uxtv.jp/marudori/backnumber/710-三条のお寺で修行中！アメリカ人僧侶/

2021   "American Buddhist priest, sociologist working for regional revitalization in Japan." *The Mainichi*, July 2. https://mainichi.jp/english/articles/20210702/p2a/00m/0na/011000c

2020   "HAI Fellow Colin Garvey: A Zen Buddhist Monk's Approach to Democratizing AI." *Stanford HAI* (blog), May 28. https://hai.stanford.edu/blog/hai-fellow-colin-garvey-zen-buddhist-monks-approach-democratizing-ai.

2020   "A Zen Approach to Making AI Work for All of Us," *Techsequences* podcast series, July 8. https://www.techsequences.org/podcasts/

2019   *Contributor.* "Talking to Machines: LISP and the Origins of AI." Redhat *Command Line Heroes* podcast, Season 3, Episode 7. https://www.redhat.com/en/command-line-heroes/season-3/talking-to-machines

CONFERENCE ACTIVITY

<u>Panels Organized</u>

2020   Single session. "Situating Artificial Intelligence: Medicine, Green Energy, & Justice." Society for the Social Study of Science (4S), August 18-21, 2020

2018   Presidential Roundtable, "An Offering of Tools and Advice for a Post-Grad Work/Life; Or, 'Get a Job!'" Society for the History of Technology, St. Louis, MO, October 11-14

2017   Two stringed sessions. "The History of Artificial Intelligence and its Discontents." SHOT, Philadelphia, PA, October 26-29

2017   Three stringed sessions. "Making Sense of Autonomous Technologies, 40 Years Later." 4S, Boston, MA, August 30-Sept. 2

Conferences/Workshops Organized

2018   Organizer, Graduate Student Workshop, SHOT, St. Louis, MO, October 11-14

2017   Co-Organizer, Graduate Student Workshop, SHOT, Philadelphia, PA, October 26-29

2016   Organizer, Northeast STS Graduate Student Conference (NESTS), RPI, March 12-13

Papers Presented

2020   "Averting AI Doomsday." Society for the Social Study of Science (4S), August 18-21

2020   "'AI for Social Good' and the First AI Arms Race: Lessons from Japan's FGCS Project." Japanese Society for Artificial Intelligence (JSAI), Kumamoto City, Japan, June 9-12

2019   "Was the Fifth Generation a Failure? Fuchi, Feigenbaum, and the Japanese FGCS Project, 1978-1995." Towards a History of Artificial Intelligence, Columbia University, May 23-24

2018   "The 'General Problem Solver' Doesn't Exist: Mortimer Taube & The Art of AI Criticism." SHOT, St. Louis, MO, October 11-14

2018   "A Framework for Evaluating Barriers to the Democratization of Artificial Intelligence." Thirty-Second AAAI Conference (AAAI-18). New Orleans, LA, February 2-7

2018   "AI Risk Mitigation through Democratic Governance." AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES-18), New Orleans, LA, February 2-3

2017   "Broken Promises & Empty Threats: The Evolution of AI in America, 1956-1996." SHOT, Philadelphia, PA, October 26-29

2017   "Evaluating Barriers to the Democratization of AI R&D." Society for New and Emerging Technologies (SNET), Arizona State University, October 9-11

2017   "Barriers to the Democratization of AI R&D." 4S, Boston, MA, August 30 - September 2

2017   "On the Democratization of Artificial Intelligence." Data Power, Carleton University, Ontario, Canada, June 22-23

2017   "A Framework for Evaluating Barriers to the Democratization of AI." Engineering and Liberal Education Symposium, Union College, June 7

2016   "Evaluating Barriers to the Democratization of AI R&D through Intelligent Trial & Error (ITE)" De Lange Conference X, Rice University, December 5-6

2016   "Risk and Governance of Artificial Intelligence in the USA and Japan." SHOT, National University of Singapore, June 22-26

2016   "Appropriate Intelligence? AI and the Governance of Emerging Technologies." STGlobal Conference, National Academy of Sciences, Washington DC, April 8-9

2015   "Faster vs Smarter: Governance and AI." *4S*, Denver, CO, November 11-15

2015   "Economic Threats, National Defense, and the 'Manifest Destiny' of AI: The Failure of the Japanese FGCS Project, 1982-1994." SHOT, Albuquerque, NM, October 8-11

Discussant

2021   "Tech History in Tech Policy." SHOT, New Orleans, LA, November 19.

2020   "Disingenuous Rhetoric." Mellon Sawyer Seminar on "Histories of AI: A Genealogy of Power," University of Cambridge, August 19

2019   "Death Valley." Theorizing the Web, New York, NY, April 12-13

2018   "The Future of SHOT: Gateways to the Next 60 Years." Presidential Roundtable, Society for the History of Technology, St. Louis, MO, October 11-14

2016   "Where Do They See STS Headed?" 40th Anniversary of the Inaugural Meeting of the Society for the Social Studies of Science, Cornell University, October 27-28

TEACHING EXPERIENCE

Rensselaer Polytechnic Institute: Large (100+ Students) Introductory Courses:

- Science, Technology, and Society - Co-Instructor (Fall 2015, Spring 2016)
- Information Technology and Society - Teaching Assistant (Spring 2015, 2017)
- Cultures of Scientific Revolution - Teaching Assistant (Fall 2016)

COURSES PREPARED TO TEACH

Introductory

- Introduction to Science, Technology, and Society (STS 101)
- Artificial Intelligence, Ethics, and Society (AI Ethics 101)

Advanced Undergraduate/Graduate

- Governing 21st Century Risks: AI, Cybersecurity, and Life Extension (Upper Level/Grad)
- "No Innovation Without Representation?" The Politics of Technology (Upper Level/Grad)
- 5,000 Years of Computation: Global Histories of Intelligent Machines (Upper Level/Grad)

SERVICE TO PROFESSION

2021 –   Reviewer, *AI & Society*
2020 –   Reviewer, *ACM Transactions on Computing Education*
2020 –   Program Committee, Reviewer, Thirty-Fifth AAAI Conference (AAAI-21)
2020 –   Reviewer, MIT Press
2020 –   Reviewer, *Nature: Machine Intelligence*
2019 –   Reviewer, *OMICS: A Journal of Integrative Biology*
2019 –   Member, SHOT ECIG
2016 – 2018 Member, Executive Council, Society for the History of Technology (SHOT)
2016 – 2018 Chair, Co-Chair, SHOT Early Career Interest Group (ECIG)
2016   Co-Founder, SHOT ECIG

DEPARTMENTAL SERVICE

Member, Social Science Reading Group, Nuclear Reading Group, Stanford CISAC, (2019 – 2020)
Graduate Student Mentor, STS Department, RPI (2017 – 2019)
Graduate Student Representative, STS Department, RPI (2016 – 2017)

LANGUAGE SKILLS

Japanese: **Fluent Speaker, Excellent Reader, Skilled Writer**
2014 – 2018   Professional Translator (75+ scientific articles and abstracts)
2012   JLPT N1 (Japanese Language Proficiency Test Level 1) Fluency Certification

REFERENCES

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