

Thomas Maillart

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Journal Publications

19. **Maillart, T.**, Gomez, L., Lombard, E., Nolte, A. and Pisano, F. Computational Diplomacy: How “Hackathons for Good” Feed a Participatory Future for Multilateralism in the Digital Age, *Royal Society Phil. Trans. A*, 382(2285), 20240103, 2024.
18. Natraj, S., Kojovic, N., **Maillart, T.**, & Schaer, M., Video-Audio Neural Network Ensemble For Comprehensive Screening of Autism Spectrum Disorder in Young Children. *PLOS ONE* 19(10): e0308388. <https://doi.org/10.1371/journal.pone.0308388>, 2024.
17. Chernov, I., Elsler, M., **Maillart, T.**, Cacciatori, C., Tavazzi, S., Gawlik, B.M., Vystavna, Y., Anastasaki, A., DuBois, C., Warner, S. and Neely, M.B. Innovative solutions for global water quality challenges: insights from a collaborative hackathon event. *Frontiers in Water*, 6, p.1363116, 2024.
16. Mezzetti, A. Percia David, D., Anton Moreno, S., Tsemelis, M., Mermoud, A., and **Maillart, T.**, TechRank: A Network-Centrality Approach for Informed Cybersecurity-Investment, *Journal of Alternative Investments* 26(3), 57-83, 2024,
15. Gillard, S., Percia David, D., Mermoud, A., & **Maillart, T.** Efficient collective action for tackling time-critical cybersecurity threats. *Journal of Cybersecurity*, 9(1), tyad021, 2023.
14. Percia David, D., Maréchal, L., Lacube, W., Gillard, S., Tsemelis, M., **Maillart, T.**, & Mermoud, A., Measuring security development in information technologies: A scientometric framework using arXiv e-prints. *Technological Forecasting and Social Change*, 188, 122316 (2023). doi:<https://doi.org/10.1016/j.techfore.2023.122316>.
13. Percia David, D., Moreno, S.A., Maréchal, L., **Maillart, T.**, & Mermoud, A., Forecasting Labor Needs for Digitization: A Bi-Partite Graph Machine Learning Approach. *World Patent Information*, 73, 102193, <https://doi.org/10.1016/j.wpi.2023.102193> (2023).
12. Kojovic, Natraj, S., N., Mohanty, S., P., **Maillart, T.** and Schaer M., Using 2D Video based Pose Estimation for Automated Prediction of Autism Spectrum Disorders in Preschoolers, *Nature Scientific Reports* 11, 15069 (2021).
11. Falco, G., Eling, M., Jablanski, D., Weber, M., Miller, V., Gordon, L. A., Wang, S.S., Schmit, J., Thomas, R., Elvedi, M., **Maillart, T.**, Donovan, E., Dejung, S., Durand, E., Nutter, F., Scheffer, U., Arazi, G., Ohana, G., Lin, H., (2019). Cyber risk research impeded by disciplinary barriers. *Science*, 366(6469), 1066-1069.
10. Miller, K. E., Bähler, L., **Maillart, T.**, Faerman, A., & Woodward, S. H. (2019). Sleep/Wake Detection by Behavioral Response to Haptic Stimuli. *Journal of Clinical Sleep Medicine*, 15(11), 1675-1681.
9. **Maillart, T.** & Sornette, D., Aristotle vs. Ringelmann: On superlinear production in open source software, *Physica A: Statistical Mechanics and its Applications*, 523, 964-972, 2019.
8. **Maillart, T.**, Zhao, M., Grossklags, J. & Chuang, J., Given Enough Eyeballs, All Bugs Are Shallow? Revisiting Eric Raymond with Bug Bounty Programs, *Journal of Cybersecurity*, tx008, 2017.
7. Wheatley, S., **Maillart, T.**, and Sornette, D. The Extreme Risk of Personal Data Breaches & The Erosion of Privacy, *European Physical Journal B* 89 (7), 2016.
6. Sornette, D., **Maillart, T.**, & Ghezzi, G., How much is the whole really more than the sum of its parts? $1 \boxplus 1 = 2.5$: Superlinear productivity in collective group actions. *PLoS ONE* 9, e103023+, 2014.
5. Sornette, D., **Maillart, T.** & Kröger, W., Exploring the limits of safety analysis in complex technological systems, *Journal of Disaster Risk Reduction* 6, 59-66. 2013.
4. Saichev, A., **Maillart, T.** & Sornette, D., Hierarchy of temporal responses of multivariate self-excited epidemic processes, *European Physical Journal B* 86 (124), 1-19, 2013.
3. **Maillart, T.**, Sornette, D., Frei, S., Duebendorfer, T., Saichev, A., Quantification of Deviations from Rationality with Heavy-tails in Human Dynamics, *Physical Review E*, 82, 056101, 2011.
2. **Maillart, T.**, Sornette, D., Heavy-tailed Distribution of Cyber Risks, *European Physical Journal B*, 75, 357-364, 2010.
1. **Maillart, T.**, Sornette, D., Speath, S., von Krogh, G., Empirical tests of Zipf's law Mechanism in Open Source Linux Distribution, *Physical Review Letters*, 101, 218701, 2008.

Peer-Reviewed Conference Papers

34. Tafasca, S., Gupta, A., Kojovic, N., Gelsomini, M., **Maillart, T.**, Papandrea, M., Schaer, M. and Odobez, J.M., The AI4Autism Project: A Multimodal and Interdisciplinary Approach to Autism Diagnosis and Stratification. In *Companion Publication of the 25th International Conference on Multimodal Interaction* (pp. 414-425), 2023.
33. Roitel, J., Percia David, D., Mermoud, A., **Maillart, T.**, Forecasting Technological Convergence: A Network-Analytics Approach, *Global Tech Mining Conference*, 2022.
32. Glavackij, A., Percia David, D., Mermoud, A., **Maillart, T.**, Forecasting Technology Development in Computer Science: A Carrying-Capacity Indicator, *Information Processing & Management Conference (IP & MC2022)*, 2022.
31. Günster, A. M., M., **Maillart, T.**, Innovation and certainty in law: the case of European Antitrust Enforcement in *6th Annual Conference on Competition Policy*, Bergen, Norway, 2022.
30. Günster, A. M., M., **Maillart, T.**, “Innovation and certainty in law: the case of European Antitrust Enforcement in *European Association for Research in Industrial Economics (EARIE)*, Vienna, Austria, 2022.
29. Gillard, S., Percia David, D., Mermoud A. and **Maillart, T.**, Efficient Collective Action for Tackling Time-Critical Cybersecurity Threats, *Workshop on Economics of Information Security*, Tulsa, Oklahoma, 2022.
28. Miendlarzewska, E., Anastasaki, A., Gomez Teijeiro, L., **Maillart, T.** and Ugazio, G., Play and work for greater good: the case of hackathons, *Annual Conference of European Group for Organizational Studies (EGOS)*, 2021.
27. Falco, G., Eling, M., Jablanski, D., Gordon, L.A., Wang, S.S., Schmit, J., Thomas, R., Elvedi, M., **Maillart, T.**, Donovan, E., Dejung, S., Weber, M., Durand, E., Nutter, F., Scheffer, U., Arazi, G., Ohana, G. & Lin, H., A Research Agenda for Cyber Risk and Cyber Insurance, *Workshop on the Economics of Information Security*, Boston, 2019.
27. Miller, K., Bähler, L., **Maillart, T.**, Faerman, A., & Woodward, S.H., Detection by Behavioral Response to Haptic Stimuli, *Sleep*, 42, A130–A131, 2019.
26. Kuypers, M., **Maillart, T.**, Designing organizations for cyber security resilience, *Workshop on the Economics of Information Security*, Innsbruck, 2018.
25. von Krogh, G., **Maillart, T.**, Haefliger, S., Sornette, D., Designing Organizations for Productive Bursts, *Open User Innovation (OUI) Conference*, Innsbruck, 2017.
24. **Maillart, T.** The social bio-sensory lab: Unpacking the origins of collective intelligence, *Workshop on Computational Modeling, VR, Robotics, Neuroscience, Campus Biotech*, Geneva, 2017.
23. **Maillart, T.** & Shmueli, E., On the Stability of the Scale-Free Principle to Fine-Grained Non-Linear Dynamics, *NetSci-X, Tel-Aviv*, January 2017.
22. **Maillart, T.**, Enhancing Online Community Building & Long-Term Production with Co-Located Events, Open Science for an Open Society, *Conference on Complex Systems*, 2016.
21. **Maillart, T.**, Bechtold, S. & Helbing, D., Cooperation on the Tipping Point: How do rules, norms and law violations undermine society?, Law and Complexity, *Conference on Complex Systems*, 2016.
20. **Maillart, T.** & Castner, J., Patterns of Human Learning in Complex Systems, *Conference on Complex Systems*, 2016.
19. **Maillart, T.**, Zhao, M., Grossklags, J. & Chuang, J., Given Enough Eyeballs, All Bugs Are Shallow? Revisiting Eric Raymond with Bug Bounty Programs, *Workshop on the Economics of Information Security, Berkeley*, 2016.
18. **Maillart, T.**, On the Importance of Co-Located Events for Community Building and Long-Term Online Production, *Collective Intelligence*, New York, 2016.
17. Johnson, B., Laskowski, P., **Maillart, T.**, Chuang, J. & Christin, N., Caviar and Yachts: How Your Purchase Data May Come Back to Haunt You, *Workshop of Economics of Information Security*, Delft, The Netherlands, 2015.

16. Merrill, N., **Maillart, T.**, Johnson, B., & Chuang, J. Improving Physiological Signal Classification Using Logarithmic Quantization and a Progressive Calibration Technique, *2nd International Conference on Physiological Computing Systems (PhyCS'15)*, 2015.
15. Klein, M., **Maillart, T.**, Chuang, J., The Virtuous Circle of Wikipedia, Recursive Measures of Collaboration Structures, *CSCW'2015*, Vancouver, BC, Canada, 2015.
14. Johnson, B., **Maillart, T.** and Chuang, J. My Thoughts Are Not Your Thoughts, *UbiComp '14*, Seattle, WA, USA, 2014.
13. Laskowski, P., Johnson, B., **Maillart, T.** and Chuang, J. Government Surveillance and Incentives to Abuse Power, *Workshop of Economics of Information Security*, State College, PA, USA, 2014.
12. Klein, M., **Maillart, T.**, Chuang, J., Characterizing Contribution Strategies and Quality with Bi-Partite Networks in Wikipedia, *NetSci 2014*, Berkeley, 2014.
11. **Maillart, T.** and Sornette, D., Using Prediction Markets to Incentivize and Measure Collective Knowledge Production, *Collective Intelligence*, Boston, MA, USA 2014.
10. **Maillart, T.**, Productive Bursts in Group Collaboration, *poster presented at IPAM Conference on Mathematics of Social Learning*, UCLA, USA, 2014.
9. **Maillart, T.**, and Bechtold, S., Disentangling Reuse Practices and License Violations in Open Source Software, *3rd Workshop for Junior Researchers on the Law & Economics of IP and Competition Law*, Schloss Ringberg, Germany, 2012.
8. **Maillart, T.**, Long Memory Processes in Human Dynamics and their Implications for Fast-Changing Regulation: The Example of Software Updates, *IMPRS-CI*, München and Wildbad Kreuth, Germany, 2011.
7. Cauwels, P., **Maillart, T.**, & Sornette, D., Nuclear Energy and the Stability of Human Societies, *International Workshop on Coping with Crises in Complex Socio-Economic Systems*, Zurich, Switzerland, 2011.
6. **Maillart, T.** and Bechtold, S. License reuse practices and violations in open source software, *7th Annual EPIP Conference, "IP in Motion"*, Leuven, Belgium, 2012.
5. Sornette, D., **Maillart, T.** & Kröger, W., Exploring the limits of safety analysis in complex technological systems, *poster presented at the Latsis Symposium, ETH Zurich*, Zurich, Switzerland, 2012.
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3. Tellenbach, B., Burkhart, M., Sornette, D., **Maillart, T.**, Beyond Shannon, Characterizing Internet Traffic with Generalized Entropy Metrics, *Passive and Active Network Measurement, Lecture Notes in Computer Science*, **5448**, 239-248, 2009.
2. **Maillart, T.**, D. Sornette, Multi-Scale Approach to Decipher and Understand Cyber-Risks, *International Workshop on Coping with Crises in Complex Socio-Economic Systems*, Zurich, Switzerland, 2009.
1. **Maillart, T.**, D. Sornette, The Heavy-Tailed Distribution of Cyber-Risks, From Potential Threats to Measurable Damages, *ISIS Conference on Information Risk*, Ascona, Switzerland, 2008.

Book Chapters

6. **Maillart, T.**, Gomez, L., Sharada, M., Chakraborty, D., & Nanavati, S. (2024). Altruistic collective intelligence for the betterment of artificial intelligence. In *The Routledge Handbook of Artificial Intelligence and Philanthropy* (pp. 344-360). Routledge.
5. Mezzetti, A., Maréchal, L., Percia David, D., Blonay, W., Gillard, S., Tsesmelis, M., **Maillart, T.** & Mermoud, A. (2023). A Novel Algorithm for Informed Investment in Cybersecurity Companies and Technologies. In *Cyberdefense: The Next Generation* (pp. 87-101). Cham: Springer International Publishing.

4. Gillard, S., **Maillart, T.**, & Keupp, M. M. (2023). Reducing Time to Response in Cyber Defense: An Agent-based Model. In *Cyberdefense: The Next Generation* (pp. 11-25). Cham: Springer International Publishing.
3. Percia David, D., Blonay, W., Gillard, S., **Maillart, T.**, Mermoud, A., Maréchal, L., & Tsesmelis, M. (2023). Identification of Future Cyberdefense Technology by Text Mining. In *Cyberdefense: The Next Generation* (pp. 69-86). Cham: Springer International Publishing.
2. Moreno, S. A., Percia David, D., Mermoud, A., **Maillart, T.**, & Mezzetti, A. (2023). Anticipating Cyberdefense Capability Requirements by Link Prediction Analysis. In *Cyberdefense: The Next Generation* (pp. 135-145). Cham: Springer International Publishing.
1. Teijeiro, L. G., & Maillart, T. (2023). Trends in Open Source Software for Data Protection and Encryption Technologies. In *Mulder, V., Mermoud, A., Lenders, V., Tellenbach, B. (eds) Trends in Data Protection and Encryption Technologies . Springer, Cham.* https://doi.org/10.1007/978-3-031-33386-6_40

Book

1. Percia David, D., Mermoud, Alain, **Maillart, T.**, Critical Information Infrastructures Security, revised papers from the 16th International Conference, CRITIS 2021, Lausanne, Switzerland, September 27–29, 2021, *Lecture Notes in Computer Science*, volume 13139, Springer Cham, 2021.

Patents

1. Tellenbach, B., Burkhart, M., Sornette, D., **Maillart, T.**, Detecting network traffic anomalies in a communication network (Patent No 2413).

Manuscripts in Preparation and in Revision

5. Gillard, S. and **Maillart, T.**, Resilience and Cooperation: An Agent-Based Model, *in preparation*, 2025.
4. Tir Raazia, E., Huebert, M. and **Maillart, T.**, PeerAI: Enhanced Peer Review for Hackathons and Collective Intelligence, *submitted to CSCW workshop on Augmenting Collaborative Problem-Solving: Exploring the Design and Use of GenAI for Groupwork*, 2025.
3. **Maillart, T.**, Gomez, L., Chataing, T., Mermoud, A., Jang-Jaccard, J., Federated Modularity: How Ecosystem Structure and Dynamics Sustains Digital Societies, *in revision EPJ Data Science Special Issue on Smarter Cities and Societies: What We Can and Cannot Optimize For*, 2025.
2. Lombard, E., Gomez Teijeiro, L., **Maillart, T.** and Ugazio, G., Collaborative Innovation for Grand Challenges: Unleashing Motivation and Play in Hackathons for Sustainable Development Goals, *in revision*, 2025.
1. Lombard, E., Anastasaki, A., Gomez Teijeiro, L., **Maillart, T.** and Ugazio, G., Play and work for greater good: the case of hackathons, *pre-print*, 2024.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4783197

Press Coverage

Un pour tous, Tous pour un, UNIGE Campus magazine, Dossier le Gout des Autres, issue 156, 2024 (UNIGE Press); Using video for the early detection of autism, [UNIGE Press Release](#), relayed by most local media, i.e., *Leman Bleu*, *RTS (Matinale and 1930)*, *Heidi News*, *Le Dauphiné Libéré*, *la Voix de l'Ain* and various international science dissemination outlets (sept. 2021); [Le hackathon international au service de la Finance Durable](#), *Léman Bleu* (2020); Chauvet, Z., [Open Geneva: Bringing the Silicon Valley spirit to Geneva](#), *Geneva Solutions* (2020). Delaye, F., [Un hackathon géant pour préparer l'après coronavirus en Suisse](#), *heidi news* (2020); Floret, E., [Open Geneva à la conquête de la Chine](#), *AGEFI* (2019); [Open Geneva ou le partage libre des savoirs](#), *La Matinale RTS* (2019); Floret, E., [Open Geneva valorise l'entrepreneuriat inclusif](#), *AGEFI* (2019); Hiard, F., [Hacker pour la science à Genève](#), *le Temps* (2019) ; Festival Open Geneva, [On en parle sur RTS La 1^{ère}](#) (2019) ; [Hackathon: le jeu vidéo au service de la santé](#), *19h30, RTS* (2019); [L'innovation à l'ère des hackathons](#), *La Matinale RTS* (2018) ; [Hackathons : innover pour soulager](#), *Le 19h30 RTS* (2018). Du mind reading au speed reading, *Revue*

Horizons (2016).