Sarah Azouvi

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Driving license

Experience

Mar 2023 – Present	**Independent researcher.** Started an independent project building a decentralized subscription platform. Support from Spark/Zeitgeist and Jessy's hacker house. Pre-seed investment offer from Protocol Labs (declined).
Jan 2020 – Feb 2023	**Research Scientist**, Protocol Labs. Research on filecoin consensus protocol
Sept 2018 – Dec 2019	**Research Assistant**, University College London. Research on applied cryptography, game theory and distributed systems
June – Sept 2019	**Research Intern**, Facebook/Calibra. Research on consensus protocols
March – May 2019	**Research Consultant**, Protocol Labs. Research on consensus protocols
2017–2019	**Teaching Assistant**, University College London. Teaching assistant for a Beginner's Python course, Theory of Computation and Cryptocurrencies (MSc course)
	Various. Summer internships at Credit Suisse, CNRS, Thales Alenia Space, Tutoring

Education

2014–2019	**MRes + PhD Computer Science**, University College London. ○ PhD supervisors: Sarah Meiklejohn and George Danezis ○ Thesis: Levels of Decentralization and Trust in Cryptocurrencies: Consensus, Governance and Applications ○ Research interests: Applied Cryptography, Decentralized Systems, Game Theory ○ Scholarship granted by the EPSRC (Engineering and Physical Sciences Research Council) ○ Master of Research Dissertation: Anomaly Detection, Supervisors: George Danezis and Gianluca Stringhini
2013–2014	**MSc Financial Mathematics**, University College London, MSc Thesis : Stochastic Control with Lévy Dynamics. Grade : Distinction
2011–2013	**École Supérieure d'Electricité, Supélec**, *Paris*, One of the leading Engineering Grandes Ecoles in the fields of Electrical Engineering, Computer Science and Telecommunications, *GPA – 3.5/4.*
2008–2011	**Lycée Henri IV**, *Preparatory years for the highly competitive examination to the French "Grandes Ecoles" for scientific studies*, Paris. Mathematics Major

Computer skills

Programming	Solidity, Go, Rust ,C++, java, Python, Matlab, R, Julia
Other	LaTeX, Unix, Microsoft Office, Maple, SQL

Other Activities

2015-2019	Mentor for Bitcoin workshops at the London Cryptoparty. Co-founder of women-friendly hacking group HoneyPot. Member of the following programming groups: Pyladies London, Women Who Code London, Geekettes, LeanIn (hands-on workshops, open-source contributions, and talks)

Languages

French (mother tongue), English (fluent), Spanish (elementary)

Publications

[1] Sarah Azouvi et al. "Base Fee Manipulation In Ethereum's EIP-1559 Transaction Fee Mechanism". In: *Proceedings of the International Symposium on Distributed Computing (DISC)*. 2023.

[2] Xuechao Wang, Sarah Azouvi, and Marko Vukolić. "Security Analysis of Filecoin's Expected Consensus in the Byzantine vs Honest Model". In: *Proceedings of the fifth Conference on Advances in Financial Technologies*. 2023.

[3] Sarah Azouvi and Alexander Hicks. "Decentralisation conscious players and system reliability". In: *Financial Cryptography and Data Security: 26th International Conference, FC 2022, Grenada, May 2–6, 2022, Revised Selected Papers*. Springer. 2022, pp. 426–443.

[4] Sarah Azouvi and Marko Vukolić. "Pikachu: Securing pos blockchains from long-range attacks by checkpointing into bitcoin pow using taproot". In: *Proceedings of the 2022 ACM Workshop on Developments in Consensus*. 2022, pp. 53–65.

[5] Sarah Azouvi et al. "Modeling Resources in Permissionless Longest-chain Total-order Broadcast". In: *26th International Conference on Principles of Distributed Systems (OPODIS)* (2022).

[6] Ayelet Lotem et al. "Sliding window challenge process for congestion detection". In: *Financial Cryptography and Data Security: 26th International Conference, FC 2022, Grenada, May 2–6, 2022, Revised Selected Papers*. Springer. 2022, pp. 512–530.

[7] Sarah Azouvi. "Levels of Decentralization and Trust in Cryptocurrencies: Consensus, Governance and Applications". PhD thesis. UCL (University College London), 2021.

[8] Sarah Azouvi and Daniele Cappelletti. "Private attacks in longest chain proof-of-stake protocols with single secret leader elections". In: *Proceedings of the 3rd ACM Conference on Advances in Financial Technologies*. 2021, pp. 170–182.

[9] Sarah Azouvi, George Danezis, and Valeria Nikolaenko. "Winkle: Foiling long-range attacks in proof-of-stake systems". In: *Proceedings of the 2nd ACM Conference on Advances in Financial Technologies*. 2020, pp. 189–201.

[10] Sarah Azouvi and Alexander Hicks. "SoK: Tools for Game Theoretic Models of Security for Cryptocurrencies". In: https://cryptoeconomicsystems.pubpub.org/pub/93hc4t7q. Nov. 18, 2020. URL: https://cryptoeconomicsystems.pubpub.org/pub/93hc4t7q.

[11] Sarah Azouvi, Mary Maller, and Sarah Meiklejohn. "Egalitarian society or benevolent dictatorship: The state of cryptocurrency governance". In: *Financial Cryptography and Data Security: FC 2018 International Workshops, BITCOIN, VOTING, and WTSC, Nieuwpoort, Curaçao, March 2, 2018, Revised Selected Papers 22*. Springer. 2019, pp. 127–143.

[12] Shehar Bano et al. "SoK: Consensus in the age of blockchains". In: *Proceedings of the 1st ACM Conference on Advances in Financial Technologies*. 2019, pp. 183–198.

[13] Sarah Azouvi, Alexander Hicks, and Steven J Murdoch. "Incentives in security protocols". In: *Security Protocols XXVI: 26th International Workshop, Cambridge, UK, March 19–21, 2018, Revised Selected Papers 26*. Springer. 2018, pp. 132–141.

[14] Sarah Azouvi, Patrick McCorry, and Sarah Meiklejohn. "Betting on blockchain consensus with fantomette". In: *arXiv preprint arXiv:1805.06786* (2018).

[15] Sarah Azouvi, Mustafa Al-Bassam, and Sarah Meiklejohn. "Who am i? secure identity registration on distributed ledgers". In: *Data Privacy Management, Cryptocurrencies and Blockchain Technology: ESORICS 2017 International Workshops, DPM 2017 and CBT 2017, Oslo, Norway, September 14-15, 2017, Proceedings*. Springer. 2017, pp. 373–389.