Lorenzo Alvisi

Department of Computer Science 413a Gates Hall Cornell University Ithaca, New York 14853 Phone: (607) 255-4289 Fax: (607) 255-9143 Email: lorenzo@cs.cornell.edu http://www.cs.cornell.edu/lorenzo

Born in Bologna, Italy, on October 13, 1961. Italian citizen.

A Education

Ph.D.	Computer Science, Cornell University, 1996.
M.S.	Computer Science, Cornell University, 1994.
Corso di Specializzazione	Physics, University of Bologna, Italy, 1989.
Laurea Summa cum Laude	Physics, University of Bologna, Italy, 1987.

B Academic Appointments

Tisch University Professor	Cornell University, September 2017 – present.
University Distinguished Teaching Professor Emerity	us UT Austin, September 2017 – present.
University Distinguished Teaching Professor	UT Austin, $2016 - 2017$.
Endowed Professorship #5 in Computer Science	UT Austin, $2014 - 2017$.
Professor of Computer Science	UT Austin, $2007 - 2014$.
Associate Professor (with tenure)	$\mathrm{UT}\mathrm{Austin},2002-2007$
Assistant Professor	UT Austin, $1996 - 2002$.
B.1 Visiting Positions	
TCE Henry Taub Distinguished Visiting Professor	The Technion, Haifa, Israel, Spring 2022.
Visiting Professor	Sapienza University, Rome, Italy, Fall 2021.
Visiting Scholar	Cornell University, July 2016 – August 2017.
Visiting Chair Professor	Shanghai Jiao Tong University, 2012 - 2015.
Visiting Professor	Max Planck Institute for Software Systems,
	Saarbrücken, Germany,
	June-December 2012, Summer 2013,
	Summer 2014, Summer 2015.
Visiting Researcher	Microsoft Research Asia,
	Beijing, June-September 2010.
Visiting Professor	University of Trento, Italy, Summer 2008.
Visiting Associate Professor	Sapienza University, Rome, Italy, Summer 2005.
Visiting Associate Professor	Cornell University, 2002 – 2003.
Visiting Assistant Professor	Cornell University, Summer 1997.

B.2 Other Appointments

Lecturer	Cornell University, Fall 1995.	
Research and Teaching Assistant	Cornell University, 1991–1995.	
Graduate Fellowship	Italian National Research Council, 1992–93.	
Graduate Fellowship	Inter-University Supercomputer Center,	
	Bologna, Italy, 1990 – 1991.	
Graduate Fellowship	Theoretical Chemistry, University of Bologna, 1988-89.	
Graduate Fellowship	Italian National Institute of Nuclear Physics, 1987-88.	

C Research Honors and Awards

- Tisch University Professorship, Cornell University, 2017 present.
- TCE Henry Taub Distinguished Visiting Professorship, The Technion, Haifa, Spring 2022.
- IEEE Fellow, 2016.
- Endowed Professorship in Computer Science, UT Austin, 2014.
- Google Faculty Research Award, 2014, 2016, and 2017.
- Humboldt Research Award, Alexander von Humboldt Foundation, 2012.
- Visiting Chair Professor, Shanghai Jiao Tong University, 2012.
- ACM Fellow, 2010.
- Faculty Fellow in Computer Sciences, UT Austin, 1999-2002, 2004-2007.
- Alfred P. Sloan Research Fellow, 2001-2003.
- Faculty Research Assignment, 2002-2003.
- Fellow, IBM Center for Advanced Studies, 2001-2002.
- IBM University Partnership Faculty Award, 2000-2002.
- NSF CAREER Award, 1998-2002.
- **Dean's Fellow**, 1998-99.

D Teaching Honors and Awards

- Cornell Association of Computer Science Undergraduates "Faculty of the Year", 2019.
- UT Austin Academy of Distinguished Teachers, 2016.
- UT System Regents' Outstanding Teaching Award, 2014.
- UT Austin Outstanding Graduate Adviser Award, 2010.

- UT Austin College of Natural Sciences Teaching Excellence Award, 2009.
- **Texas Exes Teaching Award** for Outstanding Professor (awarded yearly to one professor across the College of Natural Sciences), 2008.
- **Outstanding Teaching Assistant Award**, Department of Computer Science, Cornell University, 1992.

E Award papers

- Jay Lepreau best paper award, "Byzantine Ordered Consensus without Byzantine Oligarchy", Y. Zhang, Q. Chu, S. Setty, L. Zhou, and L. Alvisi. The 2020 USENIX Symposium on Operating Systems Design and Implementation (OSDI'20), November 2020.
- Best paper award "Lazy Means Smart: Reducing Repair Bandwidth Costs in Erasure-coded Distributed Storage", M. Silberstein, Y. Wang, L. Ganesh, L. Alvisi and M. Dahlin. The 7th ACM International Systems and Storage Conference (SYSTOR '14).
- Best paper award, "Zyzzyva: Speculative Byzantine Fault Tolerance", R. Kotla, L.Alvisi, M. Dahlin, A. Clement, E. Wong. The 21st Symposium on Operating Systems Principles (SOSP '07), October 2007.
- **Best paper award**, "SafeStore: A Durable and Practical Storage System", R. Kotla, L. Alvisi, and M. Dahlin. The USENIX Annual Technical Conference, June 2007.
- Best paper award "BAR Fault Tolerance for Cooperative Services", A. Aiyer, L. Alvisi, A. Clement, M. Dahlin, J.P. Martin, and C. Porth. The 20th ACM Symposium on Operating Systems Principles, (SOSP '05), October 2005.
- Award Paper "Fast Byzantine Consensus", J.P. Martin and L. Alvisi. The International Conference on Dependable Systems and Networks (DSN 2005), DCC Symposium, Yokohama, Japan, June 2005.
- **Best paper finalist** "Minimal Byzantine Storage", J.P. Martin, L. Alvisi, and M. Dahlin. The 16th International Symposium on Distributed Computing (DISC 2002), October 2002.
- Best paper award, "Engineering Server-Driven Consistency for Large Scale Dynamic Web Services", J. Yin, L. Alvisi, M. Dahlin, A. Iyengar. The International World Wide Web Conference (WWW10), May 2001.
- Award paper "The Cost of Recovery in Message Logging Protocols", S. Rao, L. Alvisi, and H. Vin. The 17th International Symposium on Reliable Distributed Systems (SRDS 98).
- Best paper finalist "Message Logging: Pessimistic, Optimistic, Causal and Optimal", L. Alvisi and K. Marzullo. The 15th IEEE International Conference on Distributed Computing Systems (ICDCS '95), June 1995.
- **Reprint** of "Nonblocking and Orphan-Free Message Logging Protocols", L. Alvisi, B. Hoppe, and K. Marzullo in the volume "Highlights from 25 Years" published in occasion of the 25th International Symposium on Fault-Tolerant Computing (FTCS25), 1995. (Paper appeared originally in the Proceedings of FTCS23).

F Publications

- Y. Pu, A. Farahbahksh, L. Alvisi, and I. Eyal. "Gorilla: Safe Permissionless Byzantine Consensus". In Proceedings of the 36th International Symposium on Distributed Computing (DISC 2023), October 2023.
- S. A. Mehdi, D. Hwang, S. Peter, L. Alvisi. "ScaleDB: A Scalable, Asynchronous In-Memory Database". In Proceedings of 17th USENIX Symposium on Operating Systems Design and Implementation (OSDI '23), July 2023.
- 3. M. Burke, F. Suri-Payer, J. Helt, L. Alvisi, and N. Crooks. "Morty: Scaling Concurrency Control with Re-Execution". In *Proceedings of Eurosys 2023*, May 2023.
- 4. Y. Pu, L. Alvisi, and I. Eyal. "Safe Permissionless Consensus". In Proceedings of the 36th International Symposium on Distributed Computing (DISC 2022), Atlanta, GA, October 2022, pp. 33:1–33:15.
 A version of the paper that includes the full proof is available in the Cryptology ePrint Archive, Paper 2022/796.
- B. Canakci, L. Alvisi, and R. Van Renesse. "Building Systems of Systems with Escher". In Proceedings of the 22nd International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS'21), November 2021, pp. 34-50.
- F. Suri-Payer, M. Burke, Z. Wang, Y. Zhang, L. Alvisi, and N. Crooks. "Basil: Breaking up BFT with ACID (Transactions)". In *Proceedings of the 28th ACM Symposium on Operating* Systems Principles (SOSP 2021), October 2021, pp. 1-17.
- Y. Zhang, Q. Chu, S. Setty, L. Zhou, and L. Alvisi. "Byzantine Ordered Consensus without Byzantine Oligarchy". In *Proceedings of the 14th USENIX Symposium on Operating Systems* Design and Implementation (OSDI'20), Banff, Canada, November 2020, pp. 633-649. Jay Lepreau best paper award.
- C. Ding, D. Chu, E. Zhao, X. Li, L. Alvisi and R. van Renesse. "Scalog: Seamless Reconfiguration and Total Order in a Scalable Shared Log". In *Proceedings of the 17th USENIX* Symposium on Networked Systems Design and Implementation (NSDI '20), Santa Clara, CA, February 2020, pp. 325-338.
- N. Crooks, M. Burke, S. Harel, E. Cecchetti, R. Agarwal, and L. Alvisi. "Obladi: Oblivious Serializable Transactions in the Cloud". In *Proceedings of the 13th USENIX Symposium on* Operating Systems Design and Implementation (OSDI '18), Carlsbad, CA, October 2018.

F.1 Teaching

Undergraduate courses

 CS 4410 Operating Systems Spring 2019, Spring 2020, Spring 2021, Fall 2022, Fall 2023.

Graduate courses

At Cornell:

- CS 6411 Systems Principles, Spring 2018.
- CS 5414 Distributed Computing Principles Fall 2018, Fall 2019, Fall 2020, Spring 2023.

Additional Teaching

- "Fundamentals of Distributed Computing", Graduate course at the Università degli Studi di Bologna, November 2021.
- "The Pit and the Pendulum" Two-lecture series at Sapienza University , Rome, Italy, October 2021.
- "The Pit and the Pendulum" Two-lecture series at 1st ACM SIGOPS Summer School on Advanced Topics in Systems, Sommarøy/Tromsø, Norway, August 2018.
- "The Pit and the Pendulum" Three-lecture series at the Cornell, Maryland, and Max Planck Pre-Doctoral Research School, Saarbrücken, Germany, August 2018.

F.2 Department and University Service

- Chair, Faculty Recruiting Committee [2023-2024, 2020-2021, 2019-2020, 2018-2019]
- Member of the Appointment and Promotion Committee, in charge of defining the procedures for hiring and promotion in the new Ann Bowers College of Information Science [8/2022 -7/2023]
- Member of the A.D. White Professor at Large Selection Committee, [2022 2025]
- Member of the Cornell International Council, [8/2019 present]
- Member of Faculty Recruiting Committee [2022-2023]
- Member of the Ad-hoc Committee on Academic Misconduct [Fall 2020-Spring 2021]
- Member of the Search Committee for the College of Information Science [Spring 2019]

G Invited Talks and Seminars

G.1 Keynote addresses

- "The Pit and the Pendulum", 22nd International Symposium on Stabilization, Safety, and Security of Distributed Systems, Austin TX, November 2020.
- "The Pit and the Pendulum", 10th ACM SIGOPS Asia-Pacific Workshop on Systems (APSys 2019), Hangzhou, PRC, August 2019.

G.2 Distinguished Lectures

- "ORDERRR! A Tale of Money, Intrigue, and Specifications", 8th Winter Seminar Series (WSS), Sharif University of Technology, Teheran, Iran, April 2023.
- "ORDERRR! A Tale of Money, Intrigue, and Specifications", Department of Computer Science and Technology, Cambridge University, UK May 2022.
- "ORDERRR! A Tale of Money, Intrigue, and Specifications", Max Plank Institute for Software Systems, Saarbrücken, Germany, May 2022.
- "Towards a High Performance Shared Log", Department of Computer Science, UiT The Arctic University of Norway, May 2022.
- "ORDERRR! A Tale of Money, Intrigue, and Specifications", Department of Computer Science, UiT The Arctic University of Norway, May 2022.
- "ORDERRR! A Tale of Money, Intrigue, and Specifications", Department of Informatics, Sapienza University, Rome, Italy, December 2021.

G.3 Other invited talks and seminars

- "Towards a High Performance Shared Log", Department of Department of Informatics, Sapienza University, Rome, Italy, July 2023.
- "ORDERRR! A Tale of Money, Intrigue, and Specifications", Department of Computer Science, University of Wisconsin, Madison, February 2023.
- "ORDERRR! A Tale of Money, Intrigue, and Specifications", Department of Computer Science, University of Massachusetts, Amherst, October 2022.
- "ORDERRR! A Tale of Money, Intrigue, and Specifications", Department of Electrical and Computer Engineering, The Technion, Haifa, Israel, June 2022.
- "ORDERRR! A Tale of Money, Intrigue, and Specifications", Department of Electrical Engineering and Computer Science, University of California, Berkeley, January 2022.
- "Scalog: Seamless Reconfiguration and Total Order in a Scalable Shared Log", Google, December 2021.
- "Reasoning with MAD Distributed Systems", Bertinoro International Center for Informatics, Bertinoro Italy, October 2021.
- "FLP", Invited Lecture in the graduate course on Distributed Computing, Department of Informatics, Sapienza University, Rome, Italy, October 2021.
- "The Pit and the Pendulum", Department of Informatics, Sapienza University, Rome, Italy, September 2021.
- "The Pit and the Pendulum", Department of Electrical Engineering and Computer Science, University of California, Berkeley, December 2019.

• "The Pit and the Pendulum", Department of Computer Science, KTH, Stockholm, Sweden, November 2018.

H Professional Activities

- Member of the Editorial Board, ACM Transactions on Computer Systems, since 2009.
- Member of the Editorial Board, Distributed Computing, Springer-Verlag, since 2008.
- Founding Co-Director, Cornell, Maryland and Max Planck Pre-Doctoral Research School, 2017 present.
- Member, Eurosys Steering Committee, 2021-present
- Member, SOSP Steering Committee, 2020-present.
- Member, SIGOPS CACM Research Highlight Nomination Committee, 2020-present.
- **Member** of the the Steering Committee and of the Scientific Advisory Board, Bertinoro International Center for Informatics, 2022 present.
- **Member** of the External Review Committee of The Andrew and Erna Viterbi Faculty of Electrical and Computer Engineering at the Technion, Haifa, Israel, January 2023.
- **Member** of the panel for ranking publication venues in the areas of Distributed Computing and Systems Software for the Computing Research and Education Association of Australasia, 2021.
- Founding Co-Director, Computer Systems Education Workshop, Beijing, 2016 2020.
- **Member** of the selection committee for the Director of the Center for Resilient Computing and Cybersecurity at KAUST, 2018.
- Member, PODC Steering Committee, 2017-2019.
- **Reviewer** Panel on Research Projects of National Relevance, Italian Ministry of Scientific Research (2018-2020).
- Committee Member, EuroSys Jochen Liedtke Young Researcher AwardAward (2020, 2019).
- Committee Member, PODC Doctoral Dissertation Award, 2018.
- Committee Chair, Eurosys Roger Needham Ph.D. Award, 2018.
- Committee Member, Eurosys Roger Needham Ph.D. Award (2019, 2017, 2016, 2013).
- Program Co-Chair, European Conference on Computer Systems (EuroSys 2021)
- Member of program Committee, European Conference on Computer Systems (EuroSys 2023)

- **Member of program committee**, 14th USENIX Symposium on Operating Systems Design and Implementation (OSDI 2020).
- Member of program committee, 27th ACM Symposium on Operating Systems Principles (SOSP 2019).
- Member of program Committee, European Conference on Computer Systems (EuroSys 2019)
- Member 2019 Edsger W. Dijkstra Prize in Distributed Computing.
- Member of program Committee 22nd International Conference on Principles of Distributed Systems, (Opodis 2018)
- **Member of Program Committee**, 2018 DSN Workshop on Byzantine Consensus and Resilient Blockchains.