Loizos Bitsikokos

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AI agents / organizations / networks / collective behavior

PhD candidate studying how AI systems reshape culture, communication, coordination, power, and collective behavior. Combines computational text analysis, social network analysis, software engineering, machine learning and NLP, online experiments, and agent-based modeling. Open to research industry summer internships and collaborations on AI and computational social science.

Education

PhD, Communication 08/2024–05/2028
Purdue University
Concentrations: Media, Technology, and Society; Organizational Communication.

MA, Computational Social Science 06/2024
University of Chicago
Concentration: Sociology. GPA: 3.98/4.00. Thesis: *Living in the Hub: A Platform Study of Desire Semantics*.

MSc, Mathematical Modelling & Financial Engineering 02/2022
National Technical University of Athens
Concentration: Mathematics of Data Science. GPA: 9.3/10, top 1%.

Integrated Master's, Applied Mathematics & Physics 11/2018
National Technical University of Athens
GPA: 8.87/10, top 4%. Training in computational physics, statistics, and scientific computing.

Research Experience

Graduate Researcher, AI Interventions 2024–current
Purdue University / UC San Diego
– Research whether conversational AI agents can reduce toxic discourse in online communities (Reddit); contribute to large-scale online research, computational analysis, and publications.

Ross Lynn Summer Research Assistant 06/2026–08/2026
Purdue University
– Collected and analyzed longitudinal news data on AI portrayals and corporate power; conducted computational text analysis and prepared manuscript under review.

Research Collaborator, AI-Agent Swarms 2026–current
Independent collaboration
– Contribute literature synthesis and theoretical framing to research on self-organization in AI-agent swarms as complex adaptive systems; manuscript in preparation.

Graduate Research Assistant 09/2023–current
University of Chicago
– Studied power and authority in the U.S. federal judiciary; collected court decisions and modeled legal citation networks using Python and network-analysis tools; manuscript in preparation.

Visiting Student Researcher 06/2022–07/2022
Complexity Science Hub Vienna
– Analyzed GitHub data on open-source software activity and network dynamics.

Technical Student Researcher 09/2017–09/2018
CERN, Geneva
– Developed and used PyECLOUD simulations to study electron-cloud phenomena for the Large Hadron Collider; collaborated with an international accelerator-physics task force.

Industry Experience

Backend Software Engineer 01/2020–07/2022
Intralot Tech S.A., Athens
– Developed probability models and production software for global sports-betting systems; built cash-out algorithms and performed model evaluation, risk analysis, and parameter tuning; technology stack: Java, Python, SQL, Mathematica, Git.

Selected Publications, Preprints, and Manuscripts

01 Foote, J., **Bitsikokos, L.**, Goel, H., & Kumar, D. (2026). Running Reddit Experiments with Conversational AI Agents. *Computational Communication Research, 8*(2). doi:10.5117/CCR2026.2.5.FOOT.

02 Foote, J., Kumar, D., Jha, B., Funkhouser, R., **Bitsikokos, L.**, Goel, H., & Chen, H.-C. (2026). *Taming toxic talk: Using chatbots to intervene with users posting toxic comments*. Under review. arXiv:2601.20100.

03 Helbing, J., & **Bitsikokos, L.** (2026). *Self-organized AI Agent Swarms and Complex Adaptive Systems*. Manuscript in preparation.

04 **Bitsikokos, L.**, Lee, S., & Foote, J. (2026). *CORN: The Corpus-Oriented Relationship Notation Software*. Under review.

05 **Bitsikokos, L.**, Stewart, S., & Foote, J. (2026). *You Shall Know AI by the Company It Keeps: News Discourse and Corporate Power, 1998–2016*. Under review.

06 Sawyer, H., Akom, M., Lee, S., **Bitsikokos, L.**, Reed, A. L., Ojike, F. C., Ofori Boateng, P., Nwoko, O. B., & Mohammed, I. (2026). Welcome Aboard: Simulating an Outsider-Within's Organizational Assimilation and Socialization through Role-Play. *Communication Teacher*, 1–13. doi:10.1080/17404622.2026.2726878.

Methods & Technical Skills

RESEARCH Online and computational experiments; agent-based modeling (ABM), including model conceptualization and research design; social network analysis; statistical and computational text analysis.

AI / ML Machine learning; NLP and embeddings; LLM-based research workflows; conversational agents; prompt and evaluation design; LLM-assisted NER and qualitative coding; recommender-system auditing.

AGENTIC AI Designing and orchestrating multi-agent systems; developing agent skills and subagents; Model Context Protocol (MCP) tool integration; agent harnesses and assistants (Claude Code, OpenAI Codex, Pi, Prime-Agent, OpenClaw, Muse); local and routed LLM inference (Ollama, OpenRouter).

ENGINEERING Python; R; Java; SQL; Git; Unix/Linux; AWS; LaTeX; scientific and production software development; databases; large-scale data processing.

Selected Awards & Research Support

– **College of Liberal Arts Dean's Graduate Fellowship**, Purdue University, 2024–2030.
– **Onassis Foundation Scholarship**, 2023–2027.
– **Google Academic Research Award** research team member, 2025 (PIs Jeremy Foote and Deepak Kumar).
– **Ross Lynn Summer Research Assistant Grant**, 2026 (PI Jeremy Foote).
– **University of Chicago Tuition Scholarship**, 2023–2024.