Steven Harris

Saint Louis, Missouri | Website | taino22 @ live.com

Professional Profile

Information technologist with extensive experience across multinational industry, academic, research, and government environments. Expertise spanning enterprise networks, data centers, high-performance computing, virtualization, systems engineering, infrastructure migration, distributed computing, and technical project management. Research experience across computer science, pharmaceutical science, histochemistry, cellular biology, electrophysiology, computational analysis, and law.

Windows Administration | Linux Administration | Network Administration | Data Center Design
Project Management | Systems Engineering | Virtualization | Systems Migration
Storage Design & Implementation | Fiber Optics | Business Continuity | Network Design
Technical Documentation | Electrophysiology | Histochemistry | Computational Analysis

Expertise & Certifications

- **Microsoft Certification:** MCSA, MCITP – Enterprise, MCTS – Active Directory, MCTS – Network Infrastructure, MCTS – Windows 7 Configuration, MCTS – Application Infrastructure, MCTS – Server Enterprise Administration
- **CompTIA:** A+, Data Center Specialist, Linux+, Security+, Network+
- **Novell:** Certified Linux Administrator
- **Linux Professional Institute:** LPIC-1

Education

Washington University in Saint Louis

BA Mathematics, BS Computer Science, MS Computer Science, PhD Computer Engineering

Publications

- **Harris, S. D.**, Bonetta-Misteli, F., Martin, L., Gill, C. D., Chamberlain, R. D., & O'Brien, C. M. (2026). An Entropy-Bounded Thermodynamic Approach for Real-Time Maternal Hemorrhage Monitoring. In *IEEE High Performance Extreme Computing Conference (HPEC)*.
- **Harris, S. D.**, Gill, C. D., & Chamberlain, R. D. (2026). Measure-Theoretic Diagnostics of Architectural Entanglement in Asymmetric Multiprocessing Systems: A Boltzmann Uniqueness Approach. *Modelling*, 7(4), 124.
- **Harris, S. D.**, Gill, C. D., & Chamberlain, R. D. (2026). Understanding Performance-Impacting Factors. In *ACM/IEEE 17th International Conference on Cyber-Physical Systems (ICCPS)*.
- **Harris, S. D.**, Chamberlain, R. D., & Gill, C. D. (2026). Performance Models for Non-Uniform Heterogeneous Platforms and Their Validation Using Structural Equation Modeling. *International Journal of Networking and Computing (IJNC)*, 16(1), 20–51.
- **Harris, S. D.**, Chamberlain, R. D., & Gill, C. D. (2026). Heterogeneous Non-Linear Performance Modeling of Parameter Interactions. In *Proceedings of the IEEE International Parallel and Distributed Processing Symposium (IPDPS)*.
- **Harris, S. D.** (2025). Structural Equation Modeling for Heterogeneous Platforms. In *Proceedings of the ACM/IEEE International Conference for High Performance Computing, Networking, Storage, and Analysis (Supercomputing / SC25) Doctoral Showcase*.
- **Harris, S. D.**, Chamberlain, R. D., & Gill, C. D. (2025). Performance Modeling of Non-Uniform Heterogeneous Platforms. In *IEEE International Parallel and Distributed Processing Symposium Workshops (IPDPSW)*.
- Faber, C. J., **Harris, S. D.**, Xiao, Z., Chamberlain, R. D., & Cabrera, A. M. (2022). Challenges Designing for FPGAs Using High-Level Synthesis. In *IEEE High Performance Extreme Computing Conference (HPEC)*,

1–7.

- **Harris, S.**, Chamberlain, R. D., & Gill, C. (2020). OpenCL Performance on the Intel Heterogeneous Architecture Research Platform. In *IEEE High Performance Extreme Computing Conference (HPEC)*, 1–9.
- **Harris, S.** (2020). *Investigating Single Precision Floating General Matrix Multiply in Heterogeneous Hardware* (Master's thesis). Washington University in St. Louis.
- Gill, C., Orr, J., & **Harris, S.** (2018). Supporting Graceful Degradation Through Elasticity in Mixed-Criticality Federated Scheduling. In *Proceedings of the 6th Workshop on Mixed Criticality Systems (WMC)*, 19–24.
- Li, Z., **Harris, S.**, & Egan, T. M. (2009). P2X Receptors. In L. R. Squire (Ed.), *Encyclopedia of Neuroscience* (Vol. 7, pp. 349–354). Academic Press. `https://doi.org/10.1016/B978-008045046-9.01239-0`

Experience

Washington University School of Medicine in Saint Louis

Division of Statistical Genomics — Director of Information Technology — 2014–Present

- Design and maintain state-of-the-art high-performance computing (HPC) clusters supporting advanced genetic research.
- Develop tools, services, and infrastructure supporting collaboration for National Institutes of Health (NIH) Genome-Wide Association Studies (GWAS).
- Develop dynamic, secure, and reliable distributed cloud solutions supporting large NIH-sponsored multicenter family and genetics studies of complex traits, including the NHLBI Family Heart Study (heart disease genetics), Genetics of Lipid Lower Drugs and Diet Network (GOLDN) study (lipid pharmacogenetics), and Long Life Family Study (longevity genetics).
- Serve as a technical expert in programming languages, parallelizable computational transformations, and big-data analysis.

Washington University in Saint Louis

Center for Empirical Research in the Law — Researcher — 2014

- Developed advanced predictive models and adaptive topical-search solutions to extract data from large, dynamic datasets generated in real time by third-party platforms.
- Served as Linux consultant and developer for projects involving data transformation, aggregation, and visualization.
- Designed Linux-based solutions for determining contextual polarity in phrase-level sentiment expressions typically found in judicial Supreme Court rulings.
- Translated proprietary scheduling systems and data paradigms into agile, open, and standardized web-application frameworks.

22nd Circuit Court of Missouri

Juvenile Detention Center — Program Director — 2013

- Designed enterprise virtual-computing topologies and distributed high-performance cluster solutions.
- Developed a comprehensive computer science curriculum using open-source paradigms as a framework for exploration.
- Served as primary instructor, lecturing on Operating Systems, Computer Architecture, Systems Administration, Emerging Technologies, and modern enterprise solutions spanning Big Data, virtualization, and Software-Defined Networking.

Drexel University

Goodwin College of Professional Studies | Virtualization Architect | Spring 2012

- Designed virtualization solutions, identity-management standards, policies, procedures, and best practices for a campus-wide virtual computing network.
- Provided specialized enterprise-level project support and management to technology units and IT departments.
- Developed system-architecture strategies and implementation roadmaps for Microsoft, VMware, Citrix, Unix/Linux, and Apple integration.

BlackRock

Information Technology Office | Datacenter Manager | 2011

- Managed operations of the Delaware production datacenter environment, translating lines of business objectives into actionable policy and serving as liaison between the Business Continuity Advisory Board and engineering teams.
- Developed operational procedures, policy guidelines, and best-practice memorandums for production groups including Windows, Unix/Linux, Network, and Telecommunications.
- Created disaster-recovery guidelines, exit-strategy policies, and consolidation procedures; served as technical expert for hardware, operating systems, and network issue resolution.
- Managed queues for issue resolution, requests, and incident follow-up.

United States Air Force

Bradford Instrumentation Systems | Network Consultant | 2010–2011

- Translated requirements established by the Department of Defense (DOD), DARPA, and other military standards groups into operational procedures.
- Designed and developed network infrastructure for military installations.
- Served as point of interface with commanding officers and presented solutions to streamline policy requirements; mentored junior network administrators on policy and operational guidelines.
- Conducted problem resolution, network diagnostics, and network auditing; created documentation, requirement-validation records, and procedures.

JPMorgan Chase

Corporate Office | Senior Data Center Systems Engineer | 2009–2010

- Managed technical operations for several Tier 4 data center installations and worked with international lines of business to meet business requirements.
- Mentored junior engineers on operational standards and created documentation covering technical procedures, best practices, and policy guidelines.
- Delivered weekly presentations and status reports and managed problem-resolution cases and new operational guidelines.
- Served as senior technical expert for operating systems, networks, and server hardware.
- Managed a global work-request queue supporting international IT groups and served as on-site technical expert for distributed systems, multilayer networks, storage, and issue diagnosis.

Aramark Sports Entertainment

Denver District Office | Senior Systems Architect | 2008–2009

- Managed point-of-sale systems, network infrastructure, and server farms for clients including Coors Field, Pepsi Center, Dick's Sporting Goods Arena, Denver Coliseum, and Red Rocks Amphitheater, supporting teams such as the Denver Nuggets, Colorado Rockies, and Colorado Avalanche.
- Provided technical support for more than 150 corporate staff and employees in a Windows Active Directory environment; maintained SQL databases and VPN management.

- Served as liaison among General Managers, IT staff, and vendor groups.

Saint Louis University School of Medicine

Pharmacological and Physiological Science | Biological Research | 2004–2007

- Conducted research on ligand-gated ion channels activated by extracellular ATP, using molecular biology and electrophysiology to determine receptor domains involved in ion-channel gating and permeability.
- Applied methodologies including computational cell biology, electrophysiology, histochemistry, and tissue culture; performed computational analysis of research data.

Saint Louis University Parks College of Engineering

Engineering Information Technology | Senior System Administrator | 2004–2005

- Served as Windows and Linux administrator for Parks College of Engineering.
- Developed methodologies for implementation of new technologies, interoperability, and platform migration.
- Maintained campus-wide network infrastructure supporting computer labs, academic buildings, and residence halls.
- Worked closely with faculty to implement virtualization, distributed-computing, and remote-access solutions.

Nirvana Cafe

Synergy Company Headquarters | Software Engineer | 2002–2004

- Developed interfaces and applications using C++, Visual Basic, and Visual Studio .NET.
- Managed network infrastructure and served as top-tier technical support escalation manager for help-desk solutions.

Thomas P. Conaty Law Firm

Downtown Office | Consultant | 2001

- Designed migration procedures for network, storage, and server infrastructure.
- Served as technical support specialist for hardware and software resources according to firm requirements.