# **Experience**

Principle Network and Security Architect, ForwardingPlane, LLC 1998 - Present

* Provide consultation, design, and strategic input for data center and service provider networks.
* Specialties include FTTx, Metro networks, community fiber projects, BGP, DNS, security, network analytics including flow data, IDS, capacity planning, IPv6 planning and integration.
* Freelance technical writing and speculation / insight on security and networking industry.

Network Engineer, Planning and Architecture Group, Energy Sciences Network (ESnet) 2013 - Present

* Member of a distributed team responsible for all aspects of an international high performance network connecting all US Department of Energy sites and other research and education networks.
* Member of the planning and architecture team responsible for strategy and architecture.
* Provide prototyping, support, assessment, and expertise for disruptive technologies.
* Act as security strategist for internal and externally facing networking and services.
* Guide framework and policy on change management process.
* Present to community as subject matter expert on various topics including but not limited to IPv6, SDN/SDX, performance analytics, and open perimeter security architectures.
* Manage vendor relationships.
* Mentor students and junior engineers.

## Lead Network Engineer, University of Illinois, ICCN, UC2B, PeoriaNEXT 2008 - 2013

* Team lead and architect for regional optical network connecting all University of Illinois campuses, NCSA, and administrative networks to each other and external resources.
* Backup optical engineer for the InterCampus Communication Network (ICCN)
* Team lead and architect for campus research networking initiatives including Science DMZ architecture and deployment.
* Primary engineer, architect and representative for PeoriaNEXT, a layer2/3 hub site for Peoria, IL campuses as well as multiple medical facilities and private industry.
* Networking team lead and primary network architect for UC2B, a BTOP funded fiber to the premises ISP and NATOA broadband project of the year awardee.
* Mentor, provide direction and technical expertise to junior network engineers.
* Guest lecturer for CS security and IT networking and security courses.

## SCinet 2003, 2005-2006, 2009, 2011-2012, 2014-2016, 2018-2019

* Patricipation in SCinet working group in various roles including wireless, routing, network security, SDN, and UNIX services.
* Team lead for SC15 SDN team.
* Create, deploy, maintain SDN architecture for SC15 network.
* Architect and coordinate 100G SDN QoS scheduling production testbed for SC16 network.
* Team Lead for [production heterogenous SDN network](https://noviflow.com/sc18/) (2018)
* Group Lead for Experimental Networks Group (2019)

Network Engineer, National Center for Supercomputing Applications 2002 – 2008, 2012 - 2013

* Member of a small team responsible for all Layer1 – Layer3 services.
* Worked as network engineering liaison and advisor to incident responders and network security team, including management of high capacity Bro IDS systems.
* Collaborated with FBI on NCDIR project to assist and train field agents in network security and black hat techniques.
* Managed network based UNIX services including DNS, DHCP, RADIUS and NetFlow collectors.
* Design and maintain network monitoring infrastructure.

Senior Network Engineer, IT Architect, Sol Tec Internet services 2000-2002

* Managed all technical teams consisting of full and part time employees including system engineers, network engineers, and help desk professionals.
* Provided technical leadership and strategy to fast growing regional internet service and early broadband provider.
* Authored and executed a detailed architecture expansion plan that included tripling capacity and relocation of all transit, infrastructure, UNIX, and colocation services.
* Designed, deployed, and supported extensive broadband services throughout greater central Illinois and southern Chicago areas.
* Managed all vendor relationships.

Network Analyst, Country Financial 2000-2000

* Tested and evaluated new technologies such as intrusion detection systems, content filtering engines, filtering platforms.
* Evaluated, installed, and maintained remote access services including dial-up and VPN.
* Jointly maintained firewall, web caching, and network access control appliances.
* Provided overlay support to UNIX, security, windows, and networking teams.

Additional work history available upon request

**Education, Certifications, and Awards**

* Illinois State University 1999 B.S. fine arts in technology, photography sequence. Minor in film studies
* CCNA, CCDA (2000), BCNE (2010), JNCIA (2011), ITILv3 Foundation, HE IPv6 Sage Level
* Recipient of Letter of Commendation from U.S. Department of Energy Office of Science
* Department of Justice top secret clearance (2008)
* Co-Principal Investigator for NSF CC-NIE grant award [#1341025](http://www.nsf.gov/awardsearch/showAward?AWD_ID=1341025&HistoricalAwards=false)
* Co-author, collaborator and sub-awardee for NSF CICI award #[1642142](https://nsf.gov/awardsearch/showAward?AWD_ID=1642142)
* Principal Investigator for ESnet / Berkeley Lab collaboration with Office of Veterans Affairs project ([MVP Champion Project](https://www.energy.gov/articles/doe-and-va-team-improve-healthcare-veterans))
* [Network Field Day 7](http://techfieldday.com/event/nfd7/) , [9](http://techfieldday.com/event/nfd9/), [17](https://techfieldday.com/event/nfd17/) and [segment routing round-table](http://techfieldday.com/event/srr1/) delegate
* Primary author at <http://www.forwardingplane.net/>
* Guest and subject matter expert for [Packet Pushers podcast](http://packetpushers.net/podcast/)
* Frequent subject matter expert and co-host on [software gone wild podcast](https://www.ipspace.net/Podcast/Software_Gone_Wild/About)
* IPSpace AG Technical advisory board member
* Frequent contributor and subject matter expert for [The Network Collective Podcast](https://thenetworkcollective.com/?s=buraglio)
* Experienced international collaborator
* RouteViews Project Member of the Board of Advisors
* NSF Panel Reviewer 2013 - As needed
* Co-Creator of [modem.show](https://wwww.modem.show) technical podcast
* Co-author of IETF Draft [draft-horley-v6ops-expand-doc](https://datatracker.ietf.org/doc/draft-horley-v6ops-expand-doc/)
* Co-Authored publication [CoreFlow: Enriching Bro security events using network traffic monitoring data](http://delaat.net/pubs/2017-j-2.pdf)
* Co-Authored publication [Toward live inter-domain network services on the ExoGENI testbed](https://ieeexplore.ieee.org/abstract/document/8407026)
* [Additional contributions](https://scholar.google.com/scholar?scilib=1&scioq=buraglio&hl=en&as_sdt=0,14)
* Experienced public speaker and technical presenter.
* Consulting Information Technology Architect; Advisory Board Member New Mexico Internet Exchange (NMIX)
* A list of presentations and publicans can be found at <https://www.forwardingplane.net/about/publications/>