

Curriculum Vitae

Summary

George Frazier is Assistant Professor of Computer Information Science at Washburn University. He is also an author of books about wild lands and the environment, including *Riverine Dreams: Away to the Glorious and Forgotten Grassland Rivers of America* and *The Last Wild Places of Kansas: Journeys into Hidden Landscapes*. His research focuses on electronic design automation, SystemC, software engineering, and environmental informatics. Previously, Dr. Frazier was Senior Software Architect at Cadence Design Systems.

Education

1993

University of Kansas, Lawrence

Doctor of Philosophy (Ph.D.) Computer Science

Thesis: Formal Models for Spatiotemporal Data

1990

University of Kansas, Lawrence

Master's Degree (M.S.) Computer Science

Thesis: Algebraic Properties and Substitution Preserving Tuples of Information Systems

1988

University of Kansas, Lawrence

Bachelor of Science (B.S.) Computer Science

Experience

2024-Present

Assistant Professor of Computer Information Science - Washburn University | Topeka, KS

Courses Taught: **Operating Systems, Software Engineering, Contemporary Programming Techniques, Networked Systems, Data Modeling with VBA/Excel**

2021-2024

Senior Software Architect - Cadence Design Systems | Lawrence, KS |

NASDAQ:CDNS

Product: **Cadence Helium Virtual and Hybrid Studio**

Founding member and user interface lead for Cadence's flagship virtual and hybrid platform product. Managed 11 direct reports (San Jose, Boston, Bangalore), developed core product infrastructure, involved in all aspects of product development.

Skills: *Product Development, Java, C++, Python, Jenkins, Jira, Assembly language, Management, Agile Project Management, Arm Fast Models, SystemC, Verilog, Virtual Platforms, EDA, Linux, Simulation, Embedded Software, Jenkins, Eclipse RCP, SWTBot, Android, RISC-V, TLM 2.0, compilers, gcc, gdb, lldb.*

2012-2021

Software Architect - Cadence Design Systems | *Lawrence, KS* | NASDAQ:CDNS

Product: **Cadence Xcelium Save/Restart**

Co-developed process-based save/restart solution for SystemC-based simulations.

Skills: *Product Development, C++, C, process checkpointing, Linux, Simulation, Assembly Language, Memory Management.*

Product: **Cadence Verisium ESWD Debug**

Part of small team that developed post-process embedded software debug product for ARM RTL cores.

Skills: *Product Development, Java, C++, SQLite, JNA.*

2002-2012

Senior Member of Consulting Staff - Cadence Design Systems | *Lawrence, KS* | NASDAQ:CDNS

Product: **Cadence Virtual System Platform (VSP)**

Led the team that developed the Eclipse-based user interface for embedded software debug for Cadence's first virtual platform product.

Skills: *Product Development, Java, Eclipse RCP, C++, C, JNI, SQLite, Android, Linux, Embedded Software, Arm Fast Models, SystemC, TLM 2.0, simulation, compilers, GCC, gdb.*

Product: **Cadence Xcelium SystemC**

Part of the simulator team that produced one of the first commercial SystemC products.

Skills: *Product Development, SystemC, C++, Performance tuning, simulation, compilers, GCC, gdb.*

1997-2002

Member of Consulting Staff - Cadence Design Systems | *Lawrence, KS* | NASDAQ:CDNS

Product: **Cadence Virtual Component Co-Design (VCC)**

Virtual Component Co-Design was an environment for System and Architectural Design that predated standardized system level frameworks like SystemC. Worked on the simulation team.

Skills: *Product Development, C++, Simulation, lexical analyzers, performance analysis and tuning, OS porting.*

1997

Director of Software Development - Dove, Inc. | *Lawrence, KS* | *Privately Held*

Product: **Monitor 5 for Windows**

Managed team of 5 engineers for short-lived startup that developed Monitor 5 for Windows and Unix, a vertical market tool for managing reporting and compliance for environmental cleanup compliance.

Skills: *Product Development, C++, Active X, SQL, Crystal Reports, ESRI ArcInfo, Grass GIS.*

1994-1997

Senior Software Developer - Netopia, Inc. | *Lawrence, KS* | *NASDAQ:NTPA*

Products: **Replica for Windows** | **Netopia Virtual Office** | **Timbuktu**

During my three-plus years at Netopia, I served as engineering lead for the Windows version of Replica, a portable document exchange product that predated Adobe Acrobat. I also contributed to the development of Netopia Virtual Office, an early web-based collaboration platform for professional communication. The company, originally named Farallon, became Netopia during my tenure, went public, and was later acquired by Motorola Mobility, Google, and eventually Arris International.

Skills: *Product Development, Web Development, C++, Active X, Visual Studio, Microsoft DDK, MFC, HTML.*

Books

2025 **George Frazier.** *Riverine Dreams: Away to the Glorious and Forgotten Grassland Rivers of America.* University of Chicago Press.

2016 **George Frazier.** *The Last Wild Places of Kansas: Journeys into Hidden Landscapes.*

University Press of Kansas. **Awards:** Ferguson Book Award, Midwest Book Award, Hamlin Garland Prize, Kansas Notable Book.

Conference Papers

2025 **George Frazier, Nan Sun, Joseph Kendall-Morwick.** "Applying Software Engineering Principles to Interdisciplinary AI Curriculum Development" in *Proceedings of Frontiers in Education Conference 2025*. Nashville, Tennessee. (**UNDER REVIEW**)

2012 **George Frazier, Neeti Bhatnagar.** "Memory Debugging of Virtual Prototypes using TLM 2.0" in *Proceedings of the Design & Verification Conference*. San Jose, California.

- 2011 **George Frazier, Neeti Bhatnagar.** "Automatic Quantitative Analysis of Simulations of TLM 2.0 Loosely Timed Models" in *Proceedings of the Design Conference*. San Jose, California.
- 2010 **George Frazier, Neeti Bhatnagar.** "An Automatic Visual System Performance Stress Test for TLM Designs" in *Proceedings of the Design & Verification Conference*. San Jose, California.
- 1993 **George Frazier.** "An Incremental Algorithm for Building Temporal Quadrees" in *Association for Computing Machinery 1993 Computer Science Conference*. Kanas City, Missouri.
- 1992 **George Frazier.** "Temporal Quadrees." in *ACM International Conference on Information and Knowledge Management*. Baltimore, Maryland.
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Journal Papers

- 1991 **William Baker, Steven Egbert, George Frazier.** "A Spatial Model for Studying the Effects of Climatic Change on the Structure of Landscapes Subject to Large Disturbances" in *Ecological Modeling*. 56(1991),pgs.109-125.
- 1990 **William Baker, Steven Egbert, George Frazier.** "A GIS-based Model for Studying Changes in the Structure of Landscapes Subject to Large Disturbances" in *IBulletin of the Ecological Society of America*. 1990, 71(2-supl.), pg. 83.
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Trade Press Articles

- 2011 **George Frazier.** "OpenX for App Developers" in *Smart Developer Magazine*, Summer, 2011.
- 2011 **George Frazier.** "Realtime Geocoding for iPhone" in *Smart Developer Magazine*, Autumn, 2010.
- 2005 **George Frazier.** "System Verification with SystemC" in *Dr. Dobb's Journal*, January 1, 2005.
- 2004 **George Frazier.** "System Design with SystemC" in *C/C++ Users Journal*, March 2004.
- 2001 **George Frazier.** "Cross Platform Coroutines in C++." in *Dr. Dobb's Journal*, March, 2001, pgs 56-62.

1999 **George Frazier**. "Porting C++ Code From NT to Unix." in *Dr. Dobb's Journal*, April, 1999, pgs 84-89.

1997 **George Frazier, Don Griffin**. "Do the Combo-Mambo." in *Windows Development Journal*, July, 1997, pgs. 36-40.

1996 **George Frazier**. "Removing Blocking I/O from Windows Programs." in *Dr. Dobb's Journal*, June, 1996, pgs 56-59.

1996 **George Frazier**. "Estimating Time-to-Transfer" in *C/C++ Users Journal*, March, 1996, pgs. 25-27.

Patents

2022 **US 11487561** - *Post Simulation Debug and Analysis Using a System Memory Model*.

Andrew Wilmot, Neeti Bhatnagar, Qizhang Chao, **George Frazier**

2020 **US 10650174** - *System and Method for Visualizing Event Sequences for Expression using both Hardware and Software State Information*.

Andrew Wilmot, Rohan Kangralkar, **George Frazier**, Neeti Bhatnagar

2020 **US 10802852** - *Method for interactive embedded software debugging through the control of simulation tracing components*.

Andrew Wilmot, Neeti Bhatnagar, Qizhang Chao, **George Frazier**, Yevgen Ryazanov

2019 **US 10176276** - *Determining an optimal global quantum for an event-driven simulation*.

Qizhang Chao, Neeti Bhatnagar, **George Frazier**, Tuay-Ling Lang, Andrew Wilmot

2014 **US 8838430** - *Detection of Memory Access Violation in Simulations*.

Tuay-Ling Lang, Neeti Bhatnagar, Jai Gulabeela, **George Frazier**, Qizhang Chao

2014 **US 8903696** - *System and Method for Controlling Granularity of Transaction Recording in Discrete Event Simulation*.

Vincent Motel, Neeti Bhatnagar, **George Frazier**, William Larue

2012 **US 8296119** - *Saving and restarting discrete event simulations*.

William Larue, Neeti Bhatnagar, **George Frazier**, Andrew Wilmot

2010 **US 7720665** - *Method and system for realizing reset in discrete event simulation*. **George Frazier**, Qizhang Chao, Tuay-Ling Lang, Neeti Bhatnagar, Andrew Wilmot

Trade Press Columns

1998-2002 **Tech Tips** - *Dr. Dobb's Journal and Windows Development Journal*. I wrote and edited this monthly column in DDJ and WDJ that focused on exposing three new development tips or optimizations in each issue.

Invited Plenary Presentations

2022 **Kansas Natural Resources Conference** - "Wild Places in the Time of Pandemic", February 23, 2022. Keynote Address.

Other Invited Talks

2025 **Kansas Book Festival Fund Friends of the Festival Sneak Peek Fundraiser**. April 10, 2025. Topeka.

2024 **Public Lecture** - MidAmerica Nazarene University. Talk on *The Last Wild Places of Kansas*. January 27, 2024. Olathe.

2020 **Public Lecture** - Johnson County Public Library. Talk on *The Last Wild Places of Kansas*. January 24, 2020. Leawood.

2018 **Public Lecture** - Topeka Public Library. Talk on *The Last Wild Places of Kansas*. October 18, 2018. Topeka.

2018 **Museum After Hours** - Kansas Historical Society Museum. Talk on *The Last Wild Places of Kansas*. September 14, 2018. Topeka.

2018 **Public Lecture** - Topeka Chapter of the Sierra Club. Talk on *The Last Wild Places of Kansas*. September 10, 2018. Topeka.

2018 **Kansas Day Lecture** - Washburn University. January 29, 2018. Topeka.

2018 **Annual Meeting Lecture** - Center for Great Plains Studies. Emporia State University. April 27, 2018. Emporia.

2018 **Public Lecture** - Bonner Springs Public Library. Talk on *The Last Wild Places of Kansas*. March 15, 2018. Bonner Springs.

2018 **Public Lecture** - Clinton Historical Society. Talk on *The Last Wild Places of Kansas*. February 24, 2018. Clinton.

2017 **Annual Fundraising Dinner Lecture** - Friends of the Garnett Public Library. November 9, 2017. Garnett.

2017 **Public Lecture** - Haysville Public Library. Talk on *The Last Wild Places of Kansas*. September 30, 2017. Haysville.

2017 **Public Lecture** - Lawrence Public Library. Talk on *The Last Wild Places of Kansas*. September 19, 2017. Lawrence.

2017 **Public Lecture** - Hays Public Library. Talk on *The Last Wild Places of Kansas*. August 19, 2017. Hays.

2017 **Public Lecture** - Smoky Hill Museum. Talk on *The Last Wild Places of Kansas*. September 7, 2017. Salina.

2017 **Prairie Day Lecture** - Mine Creek Battle Field. June 10, 2017.

2017 **Public Lecture** - Ellen Plumb Bookstore. Talk on *The Last Wild Places of Kansas*. April 29, 2017. Emporia.

2017 **Public Lecture** - Great Plains Nature Center. Talk on *The Last Wild Places of Kansas*. March 29, 2017. Wichita.

2017 **Public Lecture** - Wichita Public Library. Talk on *The Last Wild Places of Kansas*. March 25, 2017. Lenexa.

2017 **Public Lecture** - Flint Hills Discovery Center. Talk on *The Last Wild Places of Kansas*. February 18, 2017. Manhattan.

2017 **Kansas Day Lecture** - Johnson County Community College Institute for Kansas Studies. January 30, 2017. Lenexa.

2017 **Public Lecture** - Pittsburg Public Library. Talk on *The Last Wild Places of Kansas*. January 29, 2017. Pittsburg.

2017 **Public Lecture** - Bluebird Bookstore. Talk on *The Last Wild Places of Kansas*. January 28, 2017. Hutchison.

2016 **Public Lecture** - Jayhawk Audubon Society. Talk on *The Last Wild Places of Kansas*. November 28, 2016. Lawrence.

2016 **Public Lecture** - Watermark Books. Talk on *The Last Wild Places of Kansas*. September 8, 2016. Wichita.

2016 **Kansas Book Festival** - Talk on *The Last Wild Places of Kansas*. September 10, 2016. Topeka.

2016 **All Souls Forum** - All Souls Unitarian Church. Talk on *The Last Wild Places of Kansas*. September 2, 2016. Kansas City.

2016 **Free State Festival Lecture** - Talk on *The Last Wild Places of Kansas*. June 25, 2016. Lawrence.

Media Appearances

2019 **Sunflower Journeys** KTWU Public Television. Interview about Wild Places in Kansas. Season 32, Episode 3209. Topeka

2019 **Central Standard** KCUR 89.3 NPR Public Radio. Panel discussion on travel in the Kansas and Missouri area. June 2, 2019. Kansas City

2017 **Positively Kansas!** KPTS TV, Wichita. Interview about Kansas wild places. May 24, 2017. Wichita

2017 **Radio Interview** KSAL, Salina. Interview about *The Last Wild Places of Kansas*. February 20, 2017. Salina.

2017 **Timeline Radio** KLWN Radio, Lawrence. Interview about *The Last Wild Places of Kansas*. February 20, 2017. Lawrence

2016 **Eco Radio** KKFI Community Radio. Interview about *The Last Wild Places of Kansas*. June 6, 2016. Kansas City

2016 **Central Standard** KCUR 89.3 NPR Public Radio. Interview about *The Last Wild Places of Kansas*. May 19, 2016. Kansas City

Teaching

Spring 2025 **CM 245 - Contemporary Programming Methods**
Intermediate undergraduate course in object-oriented programming with Java. 30 students.

Spring 2025 **CM 261 - Networked Systems**
Intermediate undergraduate course. 17 students.

Spring 2025 **CM 334 – Data Modeling with VBA/Excel**
Data and VBA language class. Cross-listed as MA 390. 17 students.

Fall 2024 **CM 245 - Contemporary Programming Methods**
Intermediate undergraduate course in object-oriented programming with Java. 26 students. Upgraded labs for VS Code/Java support to encourage use of modern IDEs and debuggers.

Fall 2024 **CM 261 - Networked Systems**
Intermediate undergraduate course. 27 students.

Fall 2024 **CM 322 - Operating Systems**
Upper-level undergraduate course. 21 students.

Fall 2024 **CM 333 - Software Engineering**
Upper-level undergraduate course. 21 students. Updated end-of-semester project to simulate the experience of a junior team of engineers developing a project using Agile processes. Facilitated three guest talks attended by CIS majors, featuring (a) Robert Hindman, Senior Project Manager, Microsoft, (b) Mike Silverman, Principal Quality Assurance Engineer, Matterport, and (c) Lacy Deiter, VP of Enterprise Project Management, Advisors Excel.

Grants

2025 **Washburn Curriculum Development Grant.** Awarded grant to develop curriculum for two new courses: AI Fundamental and AI Methods.

2025 **Funded Conference Travel.** For the 2025 DAC conference in San Francisco.

2024 **Washburn Small Research Grant.** Awarded grant to purchase ubuntu server for research into evaluating the efficiency and scalability of database formats for SystemC.

Service to Washburn University

2024 – Now **Center for Kansas Studies.** Appointed Fellow to this group of Washburn faculty who convene regularly to promote and share interest in Kansas at Washburn and around the state.

2025 – Now **Libraries Committee.** CIS department representative.

Service to Washburn University CIS Department

2024 – Now **CIS Department Industry Liaison**. Serve as faculty contact for local and national employers supporting the CIS department and hiring students.

2024 – Now **Student Career Mentorship and Resume Review**. Meet regularly with CIS students outside of class to provide individualized guidance on resumes, cover letters, internship and job applications, mock interviews, and professional development.

2025 **Faculty Search Chair**. Led the CIS faculty search for a new assistant professor position, including applicant review, scheduling interviews, and hiring committee coordination.

2025 **CIS Advisory Committee Spring Meeting**. Facilitated the annual meeting of the CIS Industry Advisory Board, held April 14, 2025, at Washburn University.

2024 – 2025 **AI Certificate Development** – Collaborated with CIS faculty to design a new Certificate in Artificial Intelligence, including two new CIS courses and one Philosophy course. Authored draft syllabi and schedules for both of the new CIS courses. Worked with interdisciplinary faculty team to review the work.

2024 – 2025 **AI Minor** – Worked with an interdisciplinary faculty committee to define and propose a new undergraduate minor in Artificial Intelligence housed in CIS department.

2024 – 2025 **New Course Development** – *AI 108: AI Fundamental – Machines, Minds, and Society*. Co-developed syllabus, materials, schedule, and full course content as part of a three-member faculty team. One of my roles was to create the first drafts of course material and kickstart the project.

2024 – 2025 **New Course Development** – *AI 208: AI Methods – From Concepts to Applications*. Designed course structure, syllabus, and materials; contributed to content development as part of a three-member faculty team. One of my roles was to create the first drafts of course material.

2024 **Faculty Success Group**. Worked with team to update CIS majors/minors course lists.

Academic Service

2025 **Frontiers In Education Conference** – Reviewed papers submitted to the conference.

2019 **Peer Review** - for *Pecan America: Exploring a Cultural Icon*, John Gifford, University Press of Kansas.

2010-2014 **Advisory Board** - Electrical Engineering and Computer Science Department, University of Kansas. Lawrence.

2007 **Technical Review** - for *Extended STL Volume 1 - Collections and Iterators*, Matthew Wilson, 2007, Pearson Education, Inc.

1999-2001 **Editorial Advisory Board** - *Windows Development Journal*. Miller Freeman, Inc.

Side Projects

2009-Now

Founder | Tallgrass Labs, LLC | *Lawrence, KS* | *Privately Held*

Created popular consumer Android app (Android, iPhone, and Windows Phone) that reached the top 20 list in the Shopping category of Google Play, a Java Servlet-based geo-aware directory, and a custom mobile ad-server capable of hyper-local ad targeting and bilingual (English and Spanish) content delivery. Raised funding from KC Digital Sandbox (2013).

Skills: *Startups, Android* | *IOS* | *Windows Phone App Development, Java, Objective C, C#, VS Code, Eclipse, Xcode, MYSQL, AWS, Tomcat, Atom/RSS*.

Teaching Certificates

2024-2025 **Certificate of Teaching and Learning** – Washburn University.

2024-2025 **Certificate of Inclusive Teaching and Learning** – Washburn University.

Professional Memberships

Professional Member - Association for Computer Machinery.

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