

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 the *The Last Wild Places of Kansas: Journeys into Hidden Landscapes*. His research focuses on electronic design automation, SystemC, early stage software startups, 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-Now
Assistant Professor of Computer Information Science - Washburn University |
Topeka, KS
Courses Taught: **Operating Systems, Software Engineering, Contemporary
Programming Techniques, Networked Systems**

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**

In 3+ years at Netopia I was engineering lead for the Windows version of Replica, a portable document exchange product that predated Adobe Acrobat. I also was involved in the engineering of Netopia Virtual Office, an early web-based social media platform for communicating and collaborating with colleagues on the Internet. Originally called Farallon, the company became Netopia during my tenure and went public, before later being acquired by Motorola Mobility, Google, and finally Arris International.

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

Books

2016 *The Last Wild Places of Kansas: Journeys Into Hidden Landscapes.*
University Press of Kansas.

Conference Papers

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.* Kansas City, Missouri.

1992 **George Frazier.** "Temporal Quadrees." in *ACM International Conference on Information and Knowledge Management.* Baltimore, Maryland.

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.

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 Khullar Bhatnagar, Qizhang Chao, George Franklin Frazier

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

Andrew Robert Wilmot, Rohan Kangralkar, George Franklin Frazier, Neeti Khullar Bhatnagar

- 2020** **US 10802852** - *Method for interactive embedded software debugging through the control of simulation tracing components.*
Andrew R. Wilmot, Neeti Khullar Bhatnagar, Qizhang Chao, George Franklin Frazier, Yevgen Ryazanov
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- 2019** **US 10176276** - *Determining an optimal global quantum for an event-driven simulation.*
Qizhang Chao, Neeti K Bhatnagar, George F Frazier, Tuay-Ling Kathy Lang, Andrew Wilmot
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- 2014** **US 8838430** - *Detection of Memory Access Violation in Simulations.*
Tuay-Ling Kathy Lang, Neeti K Bhatnagar, Jai Bharat Patel Gulabeela, George F Frazier, Qizhang Chao
-
- 2014** **US 8903696** - *System and Method for Controlling Granularity of Transaction Recording in Discrete Event Simulation.*
Vincent Motel, Neeti Bhatnagar, George F Frazier, William W Larue
-
- 2012** **US 8296119** - *Saving and restarting discrete event simulations.*
William W Larue, Neeti K Bhatnagar, George F Frazier, Andrew R Wilmot
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- 2010** **US 7720665** - *Method and system for realizing reset in discrete event simulation.*
George Franklin Frazier, Qizhang Chao, Tuay-Ling Kathy Lang, Neeti Khullar Bhatnagar, Andrew Robert Wilmot
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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.
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Invited Plenary Presentations

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

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- 2024** **Public Lecture** - MidAmerica Nazarene University. Talk on *The Last Wild Places of Kansas*. January 27, 2024. Olathe.
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- 2018** **Public Lecture** - Johnson County Public Library. Talk on *The Last Wild Places of Kansas*. January 24, 2020. Leawood.
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- 2018** **Public Lecture** - Topeka Public Library. Talk on *The Last Wild Places of Kansas*. October 18, 2018. Topeka.
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- 2018** **Museum After Hours** - Kansas Historical Society Museum. Talk on *The Last Wild Places of Kansas*. September 14, 2018. Topeka.
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- 2018** **Public Lecture** - Topeka Chapter of the Sierra Club. Talk on *The Last Wild Places of Kansas*. September 10, 2018. Topeka.
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- 2018** **Kansas Day Lecture** - Washburn University. January 29, 2018. Topeka.
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- 2018** **Annual Meeting Lecture** - Center for Great Plains Studies. Emporia State University. April 27, 2018. Emporia.
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- 2018** **Public Lecture** - Bonner Springs Public Library. Talk on *The Last Wild Places of Kansas*. March 15, 2018. Bonner Springs.
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- 2018** **Public Lecture** - Clinton Historical Society. Talk on *The Last Wild Places of Kansas*. February 24, 2018. Clinton.
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- 2017** **Annual Fundraising Dinner Lecture** - Friends of the Garnett Public Library. November 9, 2017. Garnett.
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- 2017** **Public Lecture** - Haysville Public Library. Talk on *The Last Wild Places of Kansas*. September 30, 2017. Haysville.
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- 2017** **Public Lecture** - Lawrence Public Library. Talk on *The Last Wild Places of Kansas*. September 19, 2017. Lawrence.
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- 2017** **Public Lecture** - Hays Public Library. Talk on *The Last Wild Places of Kansas*. August 19, 2017. Hays.
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- 2017** **Public Lecture** - Smoky Hill Museum. Talk on *The Last Wild Places of Kansas*. September 7, 2017. Salina.
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- 2017** **Prairie Day Lecture** - Mine Creek Battle Field. June 10, 2017.
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- 2017** **Public Lecture** - Ellen Plumb Bookstore. Talk on *The Last Wild Places of Kansas*. April 29, 2017. Emporia.
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- 2017** **Public Lecture** - Great Plains Nature Center. Talk on *The Last Wild Places of Kansas*. March 29, 2017. Wichita.
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- 2017** **Public Lecture** - Wichita Public Library. Talk on *The Last Wild Places of Kansas*. March 25, 2017. Lenexa.
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- 2017** **Public Lecture** - Flint Hills Discovery Center. Talk on *The Last Wild Places of Kansas*. February 18, 2017. Manhattan.
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- 2017** **Kansas Day Lecture** - Johnson County Community College Institute for Kansas Studies. January 30, 2017. Lenexa.
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- 2017** **Public Lecture** - Pittsburg Public Library. Talk on *The Last Wild Places of Kansas*. January 29, 2017. Pittsburg.
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- 2017** **Public Lecture** - Bluebird Bookstore. Talk on *The Last Wild Places of Kansas*. January 28, 2017. Hutchison.
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- 2016** **Public Lecture** - Jayhawk Audubon Society. Talk on *The Last Wild Places of Kansas*. November 28, 2016. Lawrence.
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- 2016** **Public Lecture** - Watermark Books. Talk on *The Last Wild Places of Kansas*. September 8, 2016. Wichita.
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- 2016** **Kansas Book Festival** - Talk on *The Last Wild Places of Kansas*. September 10, 2016. Topeka.
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- 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.
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Reviewing & Editorial Services

- 2019** **Peer Review** - for *Pecan America: Exploring a Cultural Icon*, John Gifford, University Press of Kansas
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- 2007** **Technical Review** - for *Extended STL Volume 1 - Collections and Iterators*, Matthew Wilson, 2007, Pearson Education, Inc.
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- 1999-2001** **Editorial Advisory Board** - *Windows Development Journal*. Miller Freeman, Inc.
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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.*

Media Appearances

2019	<i>Sunflower Journeys</i> KTWU Public Television. Interview about Wild Places in Kansas. Season 32, Episode 3209. Topeka
2019	<i>Central Standard</i> KCUR 89.3 NPR Public Radio. Panel discussion on travel in the Kansas and Missouri area. June 2, 2019. Kansas City
2017	<i>Positively Kansas!</i> KPTS TV, Wichita. Interview about Kansas wild places. May 24, 2017. Wichita
2017	<i>Radio Interview</i> KSAL, Salina. Interview about <i>The Last Wild Places of Kansas</i> . February 20, 2017. Salina.
2017	<i>Timeline Radio</i> KLWN Radio, Lawrence. Interview about <i>The Last Wild Places of Kansas</i> . February 20, 2017. Lawrence
2016	<i>Eco Radio</i> KKFI Community Radio. Interview about <i>The Last Wild Places of Kansas</i> . June 6, 2016. Kansas City
2016	<i>Central Standard</i> KCUR 89.3 NPR Public Radio. Interview about <i>The Last Wild Places of Kansas</i> . May 19, 2016. Kansas City

Teaching & Course Development

Fall 2024	<i>CM 245 - Contemporary Programming Methods</i> Intermediate-level undergraduate course. 26 students. Upgraded labs for VS Code/Java support to encourage use of modern IDEs and debuggers.
Fall 2024	<i>CM 261 - Networked Systems</i> Intermediate-level undergraduate course. 27 students.
Fall 2024	<i>CM 322 - Operating Systems</i> Upper-level undergraduate course. 21 students.
Fall 2024	<i>CM 333 - Software Engineering</i> 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.

Service to Washburn University & CIS Department

We've only just begun!

Other Academic Service

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

Professional Memberships

Professional Member Association for Computer Machinery.
