Mark Grebe **Curriculum Vitae**
10309 N Shelby Ave, Kansas City, MO (816) 674-8071
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Experience

Part Time PhD Student Aug. 2014 – Current
University of Kansas Lawrence, KS

- Maintained productivity throughout studies and research for on time completion while working full time.

Technical Lead Software Engineer Oct. 2016 – Current
Garmin Olathe, KS

- Lead software engineer on touchscreen aviation display, and architect for next generation capabilities.

Principle Technologist Dec. 1999 – Jul. 2016
Wind River Systems Gilbert, AZ/Kansas City, MO

- Architected and developed systems based on the VxWorks, Wind River Hypervisor and Linux operating systems, many for high impact projects at leading edge technology customers.
- Was the leader of the Wind River Services Software Technical Leadership Committee, participating in process development, mentoring, and leadership of technical staff.
- Taught numerous standard and custom training classes on Wind River's operating systems and tools.

Senior Software Architect Jun. 1985 – Dec. 1999
Motorola Chandler, AZ/Scottsdale, AZ

- Systems and Software Lead Engineer for the ground systems of Celestri/Teledesic, a next generation internet-in-the-sky system.
- Lead Software Engineer for leading edge spacecraft systems including the International Space Station Communications System and the Iridium satellite communications processors.

Education

Ph.D. in Computer Science Expected May 2018
University of Kansas Lawrence, KS

- Thesis: Domain Specific Languages for Small Embedded Systems
- Advisor: Andrew Gill

ME in Computer Science May 2013
University of Colorado Boulder, CO

BS in Electrical Engineering May 1985
University of Nebraska Lincoln, NE

Research Interests

Functional languages, operating systems, compilers, embedded systems, communication systems, and computer science education at all levels.

Teaching Experience

At the University of Kansas, I taught undergraduate and graduate classes on several occasions for my advisor when he was attending conferences. During my employment with Wind River Systems, I taught both standard and custom courses to engineers at customer sites.

EECS, University of Kansas

- EECS 368 Programming Language Paradigms (F16)
- EECS 776 Functional Programming & Domain Specific Languages (F15, F16)

Wind River Systems

- Standard 3-5 day VxWorks and Linux courses.
- Development and delivery of custom VxWorks and Wind River Hypervisor courses.

Awards and Recognition

- 2016 - University of Kansas Comprehensive Oral Exam for Doctorate was awarded a honors designation.
- 1997 – Awarded membership in the Motorola Scientific and Technical Society for technical contributions.

Professional Activities

- Session Presider, University of Kansas Undergraduate Research Symposium 2016, April 23rd, 2016.
- Session Chair, Practical Aspects of Declarative Languages 2016, Session - Functional Programming II, January 19, 2016.
- Paper reviewer for Trends in Functional Programming 2015.
- Member of Software Systems Technical Committee, American Institute of Aeronautics and Astronautics, 1990-1993.

Presentations

[1] "Rewriting a Shallow DSL using a GHC Compiler Extension", The 16th ACM SIGPLAN International Conference on Generative Programming: Concepts and Experiences, Vancouver, British Columbia, October 2017.

[2] "Rewriting a Shallow DSL using a GHC Compiler Extension", Lightning Talk, 2017 Haskell Implementors Workshop, Oxford, United Kingdom, September 2017.

[3] "Threading the Arduino with Haskell", The 17th Symposium on Trends in Functional Programming. College Park, Maryland, June 2016.

[4] "Haskino: A Remote Monad for Programming the Arduino", Eighteenth International Symposium on Practical Aspects of Declarative Languages, St. Petersburg, Florida. January 2016.

Publications

[1] J. Dawson, M. Grebe, and A. Gill, "Composable network stacks and remote monads," in *Proceedings of the 10th ACM SIGPLAN International Symposium on Haskell*, ser. Haskell 2017. New York, NY, USA: ACM, 2017, pp. 86–97.

[2] M. Grebe, D. Young, and A. Gill, “Rewriting a shallow dsl using a ghc compiler extension,” in *Proceedings of the 16th ACM SIGPLAN International Conference on Generative Programming: Concepts and Experiences*, ser. GPCE 2017, New York, NY, USA: ACM, 2017, pp. 246–258.

[3] M. Grebe and A. Gill, “Threading the Arduino with Haskell,” in *Post-Proceedings of Trends in Functional Programming,* 2017, inpress.

[4] M. Grebe and A. Gill, “Haskino: A remote monad for programming the Arduino,” in *Practical Aspects of Declarative Languages*, ser. Lecture Notes in Computer Science, Springer, 2016, pp.153-168.

[5] A. Gill, N. Sculthorpe, J. Dawson, A. Eskilson, A. Farmer, M. Grebe, J. Rosenbluth, R. Scott, and J. Stanton, “The remote monad design pattern,” in *Proceedings of the 8th ACM SIGPLAN Symposium on Haskell*. New York, NY, USA: ACM, 2015, pp. 59–70.

Patents

US Patent 5,973,616, “Pager Supported Traffic Signal Controller,” (with Tom Fox), October 1999.

References

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