

Daniel T. Fokum

Curriculum Vitæ

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Interests

- Research Sensor networks, wireless networking, concurrency control in databases, and information security.
- Teaching Introduction to Computer Networks, Network Architecture, Routing in the Internet, Introduction to Database Management Systems, Probability, Introduction to Programming, and Introduction to Digital Logic Design.

Education

- 2006–2010 **Ph.D. in Computer Science**, *University of Kansas, Department of Electrical Engineering & Computer Science*, Lawrence, KS.
Dissertation: “Optimal Communications Systems and Network Design for Cargo Monitoring.”
Advisor: Prof. Victor S. Frost
Defended: Dec. 3 2010.
- 2002–2005 **M.S. in Computer Science**, *University of Missouri-Kansas City, Department of Computer Science & Electrical Engineering*, Kansas City, MO.
Emphasis in Networking and a secondary concentration in Telecommunications.
Thesis: “The Effects of MAC Layer Parameters on Quality of Service Provided by 802.11e.”
Advisor: Dr. Cory C. Beard
- 1998–2000 **B.A. in Computer Science**, *Park University*, Parkville, MO.
Graduated Magna Cum Laude with a minor in Mathematics.

Experience

- 2011–Present **Lecturer**, *Department of Computing*, University of the West Indies - Mona, Kingston, Jamaica.

Research

- 2006–2010 **Graduate Research Assistant**, *Information & Telecommunication Technology Center*, University of Kansas, Lawrence, KS.
Performing research on systems associated with sensor networks.

Courses taught

- Lecturer **University of the West Indies - Mona**, Kingston, Jamaica.
- COMP2190 (Net Centric Computing)
 - COMP3191 (Principles of Computer Networking)
 - COMP3150 (Computer Networking & Communications)
 - COMP6770 (Advanced Computer Networks)

- COMP6771 (Wireless Networks)
- COMP6550 (Web Programming & Design)
- COMP3160 (Database Management Systems)
- COMP6720 (Advanced Database Management Systems)

Fall 2010 **Graduate Teaching Assistant**, *University of Kansas*, Lawrence, KS.

Teaching two laboratory sections of EECS 140/141, an introductory course in digital logic circuits.

Teaching reviews: 4.50/5 and 4.31/5

Spring 2010 **Graduate Teaching Assistant**, *University of Kansas*, Lawrence, KS.

Teaching two laboratory sections of EECS 140/141, an introductory course in digital logic circuits.

Teaching reviews: 4.73/5 and 4.18/5

Fall 2008 **Graduate Teaching Assistant**, *University of Kansas*, Lawrence, KS.

Teaching one laboratory section of EECS 888, a graduate class on routing in IP networks.

Teaching review: 4.90/5

Vocational

Feb. – Aug. 2006 **I.T. Principal Specialist**, *Truman Medical Centers*, Kansas City, MO.

Wrote queries against STAR, the patient accounts and registration database, and taught someone how to write queries against STAR. Served as a project manager on several projects, served as a consultant on other projects.

2003–2006 **I.T. Senior Specialist**, *Truman Medical Centers*, Kansas City, MO.

Wrote queries against STAR, served as a project manager on several projects. Served as a consultant on other projects.

2001–2003 **I.T. Specialist**, *Truman Medical Centers*, Kansas City, MO.

Wrote queries against STAR and served as a resource on several projects.

Fall 2000 **Intern**, *Truman Medical Centers*, Kansas City, MO.

Familiarized myself with KB-SQL, the language used to run queries against STAR.

1998–2000 **Lab Monitor**, *Park University*, Parkville, MO.

Assisted students with problems in the computer labs; ensured that the printers and computers were in proper working order.

1998–2000 **Student Assistant**, *Park University*, Parkville, MO.

Maintained the Office of International Student Services' database and performed clerical functions.

Publications

Journals

- [1] D. T. Fokum, V. S. Frost, D. DePardo, M. Kuehnhausen, A. N. Oguna, L. S. Searl, E. Komp, M. Zeets, D. Deavours, J. B. Evans, and G. J. Minden, "An Open System Transportation Security Sensor Network: Field Trial Experiences," *Transactions on Vehicular Technology, IEEE*, vol. 59, no. 8, pp. 3942–3955, Oct. 2010, Impact factor: 2.64; Citations: 4.
- [2] D. T. Fokum and V. S. Frost, "A Survey on Methods for Broadband Internet Access on Trains," *Communications Surveys & Tutorials, IEEE*, vol. 12, no. 2, pp. 171–185, Quarter 2 2010, Impact factor: 6.49; Citations: 59.

Conferences

- [3] D. T. Fokum, D. N. Coore, and Y. E. Lewis-Fokum, "The Performance of Female Computer Science Students Across Three Caribbean Islands," in *Proc. 47th ACM Technical Symposium on Computing Science Education*, ser. SIGCSE '16. New York, NY, USA: ACM, Mar. 2016, pp. 419–424. [Online]. Available: <http://doi.acm.org/10.1145/2839509.2844566>
- [4] A. O. Drummonds and D. T. Fokum, "Towards analysing the effects of node mobility on the accuracy of Wi-Fi triangulation," in *Proc. SoutheastCon*, Ft. Lauderdale, FL, USA, Apr. 2015, pp. 1–7.
- [5] V. F. Taylor and D. T. Fokum, "Mitigating Black Hole Attacks in Wireless Sensor Networks using Node-resident Expert Systems," in *Wireless Telecommunications Symposium (WTS)*, Washington, DC, USA, Apr. 2014, pp. 1–7.
- [6] R. Bedward and D. T. Fokum, "A Cloud Computing Adoption Approach for Jamaican Institutions," in *Proc. IEEE SoutheastCon*. Lexington, KY, USA: IEEE, Mar. 2014, pp. 1–6, Citations: 1.
- [7] V. F. Taylor and D. T. Fokum, "Securing Wireless Sensor Networks from Denial-of-Service Attacks using Artificial Intelligence and the CLIPS Expert System Tool," in *Proc. IEEE SoutheastCon*. Jacksonville, FL, USA: IEEE, Apr. 2013, pp. 1–6, Citations: 2.
- [8] D. T. Fokum, V. S. Frost, D. DePardo, M. Kuehnhausen, A. N. Oguna, L. S. Searl, E. Komp, M. Zeets, D. Deavours, J. B. Evans, and G. J. Minden, "Experiences from a Transportation Security Sensor Network Field Trial," in *Proc. 3rd IEEE Workshop Enabling the Future Service-Oriented Internet: Towards Socially-Aware Networks (EFSOI 2009)*. Honolulu, HI, USA: IEEE, Nov. 2009, pp. 1–6, Citations: 16.
- [9] B. Quanz, H. Fei, J. Huan, J. Evans, V. Frost, G. Minden, D. Deavours, L. Searl, D. DePardo, M. Kuehnhausen, D. Fokum, M. Zeets, and A. Oguna, "Anomaly Detection with Sensor Data for Distributed Security," in *Proc. 18th Int'l Conf. Computer Communications and Networks, (ICCCN 2009)*. San Francisco, CA, USA: IEEE, Aug. 2009, pp. 1–6, Citations: 3.
- [10] D. T. Fokum, "Optimal Communications Systems and Network Design for Cargo Monitoring," Presented at the 10th Workshop Mobile Computing Systems and Applications (HOTMOBILE 2009). Santa Cruz, CA: ACM, Feb. 2009.
- [11] D. T. Fokum and G. J. Minden, "A Secure Routing Protocol for SensorNet," in *Proc. 7th IASTED Int'l Conf. Wireless and Optical Communications (WOC '07)*. Montreal, QC, Canada: IASTED/ACTA Press, May 2007.
- [12] D. Fokum and C. C. Beard, "A Scheme for Improved Delay and Frame Drop Probabilities in 802.11e Networks," in *Proc. 6th IASTED Int'l Conf. Wireless and Optical Communications (WOC '06)*, A. O. Fapojuwo and B. Kaminska, Eds. Banff, AB, Canada: IASTED/ACTA Press, Jul. 2006, Citations: 1.

Selected Technical Reports

- [13] D. D. Deavours, J. B. Evans, V. S. Frost, G. J. Minden, D. W. Petr, D. DePardo, E. Komp, L. Searl, S. Aroor, D. T. Fokum, M. Kuehnhausen, P. Mani, S. Muralidharan, A. N. Oguna, M. Zeets, M. Gatewood, S. Hill, L. Sackman, J. Spector, J. Strand, T. Terrell, and J. Walther, “Final Report: Advancing SensorNet Technologies to Monitor Trusted Corridors,” University of Kansas, Lawrence, KS, USA, Tech. Rep. ITTC-FY2010-TR-41420-26, Jun. 2010.
- [14] D. T. Fokum and V. S. Frost, “Modeling for Analysis and Design of Communications Systems and Networks for Monitoring Cargo in Motion Along Trusted Corridors,” University of Kansas, Lawrence, KS, Tech. Rep. ITTC-FY2008-TR-41420-25, May 2010.
- [15] D. T. Fokum, V. S. Frost, D. DePardo, M. Kuehnhausen, A. N. Oguna, L. S. Searl, E. Komp, M. Zeets, D. Deavours, J. B. Evans, and G. J. Minden, “An Open System Transportation Security Sensor Network: Field Trial Experiences,” University of Kansas, Lawrence, KS, USA, Tech. Rep. ITTC-FY2010-TR-41420-21, Mar. 2010.
- [16] D. T. Fokum, V. S. Frost, D. DePardo, M. Kuehnhausen, A. N. Oguna, L. S. Searl, E. Komp, M. Zeets, J. B. Evans, and G. J. Minden, “Experiences from a Transportation Security Sensor Network Field Trial,” University of Kansas, Lawrence, KS, Tech. Rep. ITTC-FY2009-TR-41420-11, Jun. 2009.
- [17] D. T. Fokum and V. S. Frost, “A Survey on Methods for Broadband Internet Access on Trains,” University of Kansas, Lawrence, KS, Tech. Rep. ITTC-FY2008-TR-41420-09, Aug. 2008.
- [18] D. T. Fokum, V. S. Frost, P. Mani, G. J. Minden, J. B. Evans, and S. Muralidharan, “A Taxonomy of Sensor Network Architectures,” University of Kansas, Lawrence, KS, Tech. Rep. ITTC-FY2008-TR-41420-08, Jan. 2008.
- [19] G. Minden, V. Frost, D. Petr, D. Niehaus, E. Komp, D. Fokum, P. Mani, A. Boie, S. Muralidharan, and J. Stevens, “Phase One Report: A Unified Architecture for SensorNet with Multiple Owners,” University of Kansas, Lawrence, KS, USA, Tech. Rep. ITTC-FY2008-TR-41420-06, Dec. 2007.
- [20] D. T. Fokum, V. S. Frost, and G. J. Minden, “An Evaluation of Sensing Platforms Used for Sensor Network Research,” University of Kansas, Lawrence, KS, USA, Tech. Rep. ITTC-FY2008-TR-41420-04, Dec. 2007.

Non-refereed Publications

- [21] D. Câmara, D. T. Fokum, E. Anderson, H. Ghasemzadeh, and Y. Liu, “Report from HotMobile 2009,” *Pervasive Computing, IEEE*, vol. 8, no. 3, pp. 94–96, Jul.–Sep. 2009.

Graduate Students Supervised

Master’s Students

- Claude Peters
- Raemur Bedward

- Stacy-Ann Reid
- Frantz Veillard
- Frantz Cadet
- Orane Edwards
- Vaun-Pierre Wynter

Service

- Reviewer: IEEE Transactions on Vehicular Technology, IEEE Communications Letters, IEEE Communications Magazine.
- Conference paper reviewer: IEEE SoutheastCon (2016, 2015, 2014), IEEE Vehicular Technology Conference, Spring 2012, IEEE International Symp. on Personal, Indoor and Mobile Radio Communications (PIMRC 2011), Australasian Telecommunication Networks and Applications Conference (ATNAC 2007).

Awards

- SIGCOMM 2015 travel grant. Award = \$2000.
- Invited participant in the 3rd Heidelberg Laureate Forum.
- SIGCSE 2015 travel grant. Award = \$500 + registration fee.
- First place poster in the 2010 ITTC Industry Advisory Board poster competition.
- Selected to attend the 2010 Google Graduate Researchers in Academia of Diverse backgrounds (GRAD) CS Forum.
- Departmental Scholarship, University of Kansas, Department of Electrical Engineering & Computer Science, Fall 2006.
- Park University Department of Computer Science, Departmental Honors in Computer Science, 2000.
- Park College Student Senate, Outstanding Junior, 1998–1999.
- Dean's list: Fall 2000, Spring 2000, Fall 1999, Spring 1999, and Fall 1998.

Memberships

- Institute of Electrical & Electronics Engineers (IEEE).
- IEEE Communications Society.
- IEEE Computer Society.
- Association for Computing Machinery (ACM).
- SIGCOMM
- SIGCSE

Community Service

- Proctor for IEEEExtreme Programming Competition (2012–2015).
- Coach for ACM Intercollegiate Programming Competition (2013–2015).
- Served on the leadership team of InterVarsity Graduate Christian Fellowship at KU from 2007–2010.

- Taught Sunday school to 3rd through 5th graders from 2001–2005 at Hope Fellowship Church.
- Sat on the Advisory Board of Hope Fellowship Church as a board member-at-large from 2002–2003.

Computer skills

Languages	MATLAB, AMPL, Java, SQL, Python, C++, C, Pascal, Perl	Packages	R, MATLAB, Maple, ns-2, CSim
Operating Systems	Linux, Windows	Protocols	RIP, OSPF, BGP
Tools	MS Office Suite, MS Project, MS Visio, LaTeX		

Languages

English	Fluent
French	Fluent

Personal

- Citizenship: Cameroon.
- Married

References

- Available upon request.

UPDATED

February 18, 2016