

## Mathias A. Gibbens, KØWBG

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PROFESSIONAL EXPERIENCE      **Sandia National Laboratories**, Albuquerque, New Mexico, USA  
*Software Engineer*      **January 2017 to Present**  
**University of Arizona Department of Computer Science**, Tucson, Arizona, USA  
*Graduate Research Assistant*      **January 2012 to December 2016**  
• Graduate research assistant for Dr. Chris Gniady and Dr. Beichuan Zhang  
*Graduate Student Council Co-Chair*      **August 2012 to July 2013**  
*Graduate Teaching Assistant*      **Fall 2011 & Fall 2016**  
• CSC352 *Unix and C Programming*  
• CSC345 *Analysis of Discrete Structures*  
**Bethel University Web Services**, Saint Paul, Minnesota USA  
*Lead Student Developer*      **August 2008 to July 2011**

EDUCATION      **The University of Arizona**, Tucson, Arizona USA  
M.S., Computer Science, December 2014  
• *Summa Cum Laude*  
• Recipient of the University of Arizona Graduate College Fellowship  
**Bethel University**, Saint Paul, Minnesota USA  
B.S., Computer Science, May 2011  
• *Cum Laude*  
• Strong minor in Mathematics  
• Participant in Bethel University's Honors Program  
• Recipient of Bethel President's and Tozer Foundation academic scholarships

PAPERS AND PRESENTATIONS      • Gibbens, M., Gniady, C., Ye, L., & Zhang, B. (2017). Hadoop on Named Data Networking: Experience and Results. In *Proc. ACM Meas. Anal. Comput. Syst.* ACM.  
• Gibbens, M., Gniady, C., & Zhang, B. (2015). Towards Eco-Friendly Home Networking. In *Sustainable Computing: Informatics and Systems*.  
• Gibbens, M., Gniady, C., & Zhang, B. (2014, November). Towards Eco-Friendly Home Networking. In *Green Computing Conference (IGCC), 2014 International*. IEEE.

SELECTED ACADEMIC PROJECTS      • Log-Based File System. Implemented a log-based file system, from the block level up to a POSIX-compliant interface via FUSE in the Linux kernel.  
• Content-Addressable File System. Implemented a file system where all fundamental addressing of data is based on a hash of the data itself.  
• Oberon Compiler. Created a compiler which implemented a selected subset of the Oberon programming language and generated optimized MIPS assembly code.  
• Network Router. A software-defined Ethernet router that handled packets from the data link through transport layers and could perform advanced functions, such as a firewall.

TECHNICAL  
CONSULTANT  
WORK

- Bailey Nurseries, Newport, Minnesota
- Bethel University Student Association, Saint Paul, Minnesota
- Hermitage No-Kill Cat Shelter, Tucson, Arizona
- Hope Christian Academy, Saint Paul Park, Minnesota
- Palace Apartments, Tucson, Arizona
- Sodexo Food Services - Bethel University, Saint Paul, Minnesota

SERVICE AND  
VOLUNTEER  
WORK

- Special Events Coordinator**, November 2017 to Present  
Amateur Radio Caravan Club
- Volunteer**, April 2017 to Present  
Albuquerque Pride
- Volunteer**, July 2017 to August 2018  
Albuquerque Animal Welfare Department
- President**, May 2015 to January 2017  
**Secretary/Treasurer**, September 2014 to April 2015  
K7UAZ Amateur Radio Club
- Volunteer**, May 2015 to December 2016  
Southern Arizona AIDS Foundation
- Volunteer**, July 2012 to January 2017  
Hermitage No-Kill Cat Shelter

PROFESSIONAL  
AND CLUB  
MEMBERSHIPS

- Amateur Radio Caravan Club
- American Radio Relay League
- Electronic Frontier Foundation
- High Desert Amateur Radio Club
- K7UAZ Amateur Radio Club
- Kirtland Area Club

SKILLS AND  
INTERESTS

- Amateur Radio operator
- Volunteer Examiner for the ARRL and Laurel VECs
- Linux system administration:
- Linux Containers (LXC, Docker, Kubernetes), Networking, Puppet, Kernel hardening (grsec), Backups, Custom packaging, Automation, Apache, BIND, Postfix, Hadoop
  - Embedded Linux Systems
- Programming Languages:
- Perl, Python, C/C++, Bash, Go, Java, *Mathematica*, SQL, and others
- Productivity Applications:
- $\text{T}_{\text{E}}\text{X}$  ( $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ ,  $\text{BIB}\text{T}_{\text{E}}\text{X}$ ), Emacs, LibreOffice/OpenOffice, Microsoft Office
- Free/Open Source Software enthusiast

*References Available Upon Request*