

# Mathias A. Gibbens

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PROFESSIONAL EXPERIENCE **Sandia National Laboratories**, Albuquerque, New Mexico, USA

*Senior Software Engineer* **February 2021 to Present**

- Developed drivers and algorithms for real-time embedded systems
- Updated high-bandwidth, real-time multicast data transfer architecture

*Software Engineer* **January 2017 to January 2021**

- Assisted with the development of a next-generation remote sensing ground station
- Modernized and improved essential high-bandwidth archival and indexing system
- *ScrumMaster* for 10-person development team

**Debian Contributor** **January 2021 to Present**

- Debian QA page
- Packages pending inclusion in Debian

**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
- Explored applicability of Named Data Networking in environments from embedded devices to data centers

*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**

PROFESSIONAL CERTIFICATIONS

- FAA certificated Private Pilot
- FCC licensed Amateur Radio operator (KØWBG)
- Accredited Volunteer Examiner for the ARRL and Laurel VECs
- Scrum Alliance Certified *ScrumMaster*

EDUCATION **The University of Arizona**, Tucson, Arizona USA

M.S., Computer Science, December 2014

- *Summa Cum Laude*
- Research focused on novel network technologies and applications
- 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

SERVICE AND  
VOLUNTEER  
WORK

**Election Board Official**

- *Exceptions Judge*, Bernalillo County, New Mexico 2020 General Election
- *Clerk*, Pima County, Arizona 2016 Primary & General Elections

**Treasurer**, February 2019 to Present  
Duke City Hamfest

**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

SKILLS AND  
INTERESTS

Cloud technologies:

- Amazon AWS
- Automation (Jenkins, Puppet, custom frameworks)
- Containers (Docker, Helm, Kubernetes, LXC, Minikube)
- Micro-services, MapReduce (Hadoop), OpenMPI, Xen

Linux system administration:

- Automation & Backups (cron, offline-storage, Puppet, rsync, snapshots, systemd, ZFS/TrueNAS)
- Email (Dovecot, Postfix, SPF/DKIM/DMARC/DANE)
- Networking (TCP/UDP, VLANs, pfSense, Ubiquiti)
- Services (Apache, BIND, LXD, MySQL, PostgreSQL)
- Software management (CVS, git, hg, SVN)
- Software packaging (conan, dpkg, RPM)
- System hardening (custom-maintained kernel trees, grsec, SELinux, AppArmor, FIPS 140-2)

Embedded Systems:

- Arduino, COTS network routers, Green Hills Software INTEGRITY, RaspberryPi

Programming Languages:

- Bash, C/C++, Go, Java, Perl, Python, SQL, and others

Productivity Applications:

- $\text{\LaTeX}$  ( $\text{\L\AA T\TeX}$ ,  $\text{\BIB\TeX}$ ), Emacs, LibreOffice/OpenOffice, Microsoft Office

Free/Open Source Software enthusiast

*References Available Upon Request*