

# Anthony J. Carno

Email: anthony@carno.me

<b>Education</b>	M.S. in Computer Engineering, Virginia Tech, Blacksburg, VA Cum. GPA: 3.71/4.00	<i>December 2018</i>
	B.S. in Computer Engineering, Bucknell University, Lewisburg, PA Cum. GPA: 3.69/4.00	May 2015
<b>Research</b>	<b>Graduate Research Assistant</b> Systems Software Research Group, Virginia Tech	Jun. 2015 - present
	<ul style="list-style-type: none"><li>• Scheduling across different ISAs in replicated-kernel OS<ul style="list-style-type: none"><li>– Designed userspace scheduling framework in C and Python, leveraging distributed shared memory to reduce messaging complexity</li><li>– Implemented and testing multiple policies for migrating applications between x86-64, ARMv8 processors to improve throughput, reduce energy consumption</li></ul></li><li>• Profiling applications to determine optimal migration strategy<ul style="list-style-type: none"><li>– Leveraged LLVM and custom runtime library to extract features from NASA Parallel, PARSEC benchmark suites</li><li>– Built machine learners in Python to predict benchmark performance on different ISAs (ARMv8, x86-64, Power8) at function-granularity</li></ul></li></ul>	
	<b>Undergraduate Research Assistant</b> Department of Electrical and Computer Engineering, Bucknell University	May - Aug. 2014
	<ul style="list-style-type: none"><li>• Developed loop unrolling and deepening passes in C/C++ for custom dynamic binary translation system</li><li>• Work published at HPCA 2016</li></ul>	
<b>Work Experience</b>	<b>Student Technician</b> Library & IT, Bucknell University	Aug. 2012 - Apr. 2015
	<ul style="list-style-type: none"><li>• Performed hardware and software reconstruction of university-approved laptops and other computers</li><li>• Trained other students to repair hardware and software on Dell, Lenovo, and Apple products</li></ul>	
<b>Publications</b>	<b>Breaking the boundaries in heterogeneous-ISA datacenters</b> , A. Barbalace, R. Lyerly, C. Jelesnianski, <b>A. Carno</b> , H. Chuang, and B. Ravindran. The 22nd ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS XXII), April 2017, Xi'an, China.	
	<b>Software transparent dynamic binary translation for coarse-grain reconfigurable architectures</b> , M. Watkins, T. Nowatzki, and <b>A. Carno</b> . 22nd IEEE Symposium on High Performance Computer Architecture (HPCA), Barcelona, Spain, March 12-16, 2016, session 2B.	
	<b>Seamless thread migration in heterogeneous-ISA platforms</b> , C. Jelesnianski, <b>A. Carno</b> , R. Lyerly, A. Barbalace, and B. Ravindran. Poster presented at the 25th ACM Symposium on Operating Systems Principles (SOSP), Monterey, California, USA, October 4-7, 2015.	

**Leadership  
Activities**

**Delegate**

Jan. 2016 - Aug. 2018

Graduate Student Assembly, Virginia Tech

- Represented ECE department (Aug. 2017-18)
- Served on University Library Committee (Aug. 2016-18)
- Served on Commission on Graduate Studies and Policies (Jan. - May 2015)

**Co-Program Chair**

Aug. 2015 - May 2016

Graduate Student Assembly, Virginia Tech

- Served as co-chair of VT GSA Annual Research Symposium & Exposition
- Planned and executed annual research symposium featuring over 100 participants from 50 different disciplines at VT
- Duties included finding sponsors, refereeing over 200 submissions, recruiting a keynote speaker, handling event logistics

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**Academic  
Honors**

Bradley Graduate Fellow, Aug. 2015 - May 2018

- Competitive fellowship providing research funding and stipend for 3 years