

# Bridger Hahn

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## Education

- 2012–2016 **BS**, *Stony Brook*, Stony Brook, NY, *Computer Science*.  
Honors Degree
- 2016–Current **MS**, *Princeton*, Princeton, NJ, *Computer Science*.

## Awards

- Stony Brook Provost's Scholarship Fall 2012–Spring 2016

## Interests

- Security Censorship Circumvention, Network Privacy, Intrusion Detection
- Networking Software Defined Networking, Internet of Things

## Experience

- 2015–2016 **Student Intern**, *Sandia National Laboratories*, Livermore, CA.  
Detailed achievements:
- Researched practical applications of Shamir secret sharing and Write-Optimized Data Structures applied to network event tracking.
  - Designed and implemented a write-optimized database for storing network events.
  - Resulted in two publications.

## Current Work

**Network Level Privacy:** I am currently working on implementing an SDN protocol to be run at border routers of an ISP. This protocol would provide anonymity for users within the ISP and not interfere with ordinary packet routing.

## Publications

- B Hahn, R Nithyanand, P Gill, and R Johnson, “**Games Without Frontiers: Investigating Video Games as a Covert Channel**,” in 1st IEEE European Symposium on Security and Privacy (EuroS&P), 2016  
<http://arxiv.org/abs/1503.05904>;
- D Zage, H Xu, T Kroeger, B Hahn, N Donoghue, and T Benson, “**Secure Membership Tests via Secret Sharing**,” in International Workshop on Computing, Networking and Communications (CNC at ICNC), 2016  
<http://arxiv.org/abs/1512.00102>;
- N Donoghue, B Hahn, H Xu, T Kroeger, D Zage, and R Johnson, “**Tracking Network Events with Write Optimized Data Structures**,” in 4th International Workshop on Building Analysis Datasets and Gathering Experience Returns for Security (BADGERS at RAID), 2015

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[github.com/bridgar](https://github.com/bridgar)

<http://arxiv.org/abs/1511.09116>;

## Press

1. **WIRED** – [An App That Hides Secret Messages in Starcraft-Style Games](#) 4/15/15  
Article by Andy Greenberg, highlighting my project, Castle. He makes the work significant and accessible to a broader audience.
2. **CNN** – [Great Firewall rising: How China wages its war on the Internet](#) 10/25/15  
Piece by James Griffiths, covering the Great Firewall of China. When discussing anti-censorship efforts to circumvent the wall, he presents my project, Castle, as a favorable alternative to VPNs.
3. **South China Morning Post** – [Anti-censorship technology uses online video games to bypass Chinese internet restrictions](#) 4/27/15  
Piece by James Griffiths, spotlighting my project, Castle. His goal, as he said in our interview, is to spread awareness of the project within China. We have since been contacted by several Chinese citizens asking to use our system.
4. **Statesman** – [Researchers develop a way to send secret messages through video games](#) 7/1/15  
Article from Sarah Elsesser, a fellow Stony Brook student, spreading interest in my project, Castle, to Stony Brook students, faculty, and staff.

## References

Professor	University	Contact
Michael Bender	Stony Brook	<a href="mailto:bender@cs.stonybrook.edu">bender@cs.stonybrook.edu</a>
Phillipa Gill	Stony Brook	<a href="mailto:phillipa@cs.stonybrook.edu">phillipa@cs.stonybrook.edu</a>
Rob Johnson	Stony Brook	<a href="mailto:rob@cs.stonybrook.edu">rob@cs.stonybrook.edu</a>
Nick Feamster	Princeton	<a href="mailto:feamster@cs.princeton.edu">feamster@cs.princeton.edu</a>