# Bridger Hahn

## Education

2012–2016 **BS**, *Stony Brook*, Stony Brook, NY, *Computer Science*.
Honors Degree

## Awards

- Dean's List Fall 2012–Spring 2015
- Stony Brook Provost's Scholarship Fall 2012–Spring 2016

## Interests

Security Censorship, NetSec, and Encryption

Algorithms Cool and Fun Algorithms

Data Structures Write Optimized Data Structures and Quotient Filters

Puzzles DFA Puzzles, Logic Puzzles, Physics Puzzles, You Name It!

Other Above are interests that I am formally acquainted with. However, most Computer Science topics interest me.

## Experience

2015–Present **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.

## Publications

1. 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;

2. 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/1511.09116;

3. 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.

*5239 Lake Road West #405 – Saybrook – Ohio*
*+1 (440) 417 8328* • *bridgerhahn@gmail.com*
*github.com/bridgar*

## Press

1. **WIRED** – An App That Hides Secret Messages in Starcraft-Style Games 4/15/15
Fantastic 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
Great 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
Nice, short 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
Great 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 | bender@cs.stonybrook.edu |
| Phillipa Gill | Stony Brook | phillipa@cs.stonybrook.edu |
| Rob Johnson | Stony Brook | rob@cs.stonybrook.edu |

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