# Curriculum Vitae
# Harley D. Eades III

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|-------------------|------------------------|
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## Education and Professional History

### Higher Education

Doctor of Philosophy in Computer Science, University of Iowa, IA, August 2014.

Masters of Science in Computer Science, University of Iowa, IA, May 2013.

Bachelor of Science in Applied Mathematics and Computer Science, Millikin University, IL, May 2009.

### Additional Education

JAIST Spring School: Formal Reasoning: Theory and Application, JAIST, Kanazawa, Japan, March 2012.

Oregon Programming Languages Summer School, University of Oregon, Eugene, OR., July 2011.

### Academic Positions

Assistant Professor of Computer Science, August 2014 - Present, Augusta University.

### Honors

The Graduate College Summer Fellowship, University of Iowa, 2013.

The Strategic Initiative Funds Fellowship, University of Iowa, 2011.

Mathematics and Computer Science Award, Millikin University, 2009.

Mathematics and Computer Science Award, Millikin University, 2008.

Mathematics and Computer Science Award, Millikin University, 2007.

# Memberships

ACM Special Interest Group on Logic and Computation, member.

ACM Special Interest Group on Programming Languages, member.

Eurpoean Association of Theoretical Computer Science, member.

# Teaching

## Teaching Assignments at Augusta University (2014 - Present)

| SEMESTER | COURSE TAUGHT | |
|---|---|---|
| | **Course Number and Title** | **Students Enrolled** |
| Fall 2016 | CSCI:3030 "Mathematical Structures in Computer Science" | 12 |
| | CSCI:3300 "Programming Languages" | 10 |
| | CSCI:3500 "Theory of Computation" | 7 |
| Spring 2016 | CSCI:3030 "Mathematical Structures in Computer Science" | 5 |
| | CSCI:3500 "Theory of Computation" | 21 |
| Fall 2015 | CSCI:3030 "Mathematical Structures in Computer Science" | 18 |
| | CSCI:3300 "Programming Languages" | 13 |
| | CSCI:3500 "Theory of Computation" | 12 |
| Spring 2015 | CSCI:3030 "Mathematical Structures in Computer Science" | 22 |
| | CSCI:3500 "Theory of Computation" | 17 |
| Fall 2014 | CSCI:3300 "Programming Languages" | 20 |
| | CSCI:3500 "Theory of Computation" | 6 |

# Scholarship

**Print-Journal Publications**

1. **Equational Reasoning about Programs with General Recursion and Call-by-value Semantics**. Garrin Kimmell, Aaron Stump, Harley D. Eades III, Peng Fu, Tim Sheard, Stephanie Weirich, Chris Casinghino, Vilhelm Sjoberg, Nathan Collins and Ki Yung Ahn. Special Issue on Advanced Programming Techniques for Construction of Robust, General and Evolutionary Programs. Progress in Informatics, pages 19-46, March 2013, journal version of PLPV12 paper.

**Electronic-Journal Publications**

1. **Dualized Simple Type Theory.** Harley Eades III, Aaron Stump, Ryan McCleeary. Logical Methods in Computer Science, 15 August 2016. Volume 12, Issue 3. DOI: 10.2168/LMCS-12(3:2)2016

2. **Hereditary Substitution for the $\lambda\Delta$-Calculus**. Harley D. Eades III and Aaron Stump. In Ugo de'Liguoro and Alexis Saurin, editors, Proceedings First Workshop on Control Operators and their Semantics, Eindhoven, The Netherlands, June 24-25, 2013 , volume 127 of Electronic Proceedings in Theoretical Computer Science, pages 45-65. Open Publishing Association, 2013.

**Symposium Publications**

1. **Multiple Conclusion Linear Logic: Cut Elimination and More**. Harley Eades III and Valeria de Paiva. In Sergei Artemov and Anil Nerode, editors, Proceedings of the Symposium of Logical Foundations of Computer Science (LFCS), Deerfield Beach, Florida, United States, Jan. 4-7, volume

9537 of Lecture Notes in Computer Science, pages 90-105. Springer International Publishing, 2016. DOI: 10.1007/978-3-319-27683-0_7. Acceptance rate: 57%.

## Workshop Publications

1. **Extended Abstract: Reconsidering Intuitionistic Duality**. Aaron Stump, Harley Eades III, and Ryan McCleeary. Workshop on Control Operators and their Semantics (COS). Affiliated with Rewriting, Deduction, and Programming (RDP). June 2013.

2. **LFSC for SMT Proofs: Work in Progress**. Aaron Stump, Andrew Reynolds, Cesare Tinelli, Austin Laugesen, Harley D. Eades III, Corey Oliver and Ruoyu Zhang. Proof Exchange For Theorem Proving (PxTP). 2012.

3. **Irrelevance, heterogeneous equality, and call-by-value dependent type systems**. Vilhelm Sjoberg, Chris Casinghino, Ki Yung Ahn, Nathan Collins, Harley D. Eades III, Peng Fu, Garrin Kimmell, Tim Sheard, Aaron Stump, and Stephaine Weirich. In J. Chapman and P. B. Levy, editors, Proceedings Fourth Workshop on Mathematically Structured Functional Programming, Tallinn, Estonia, 25 March 2012, volume 76 of Electronic Proceedings in Theoretical Computer Science, pages 112-162. Open Publishing Association, 2012.

4. **Equational Reasoning about Programs with General Recursion and Call-by-value Semantics**. Garrin Kimmell, Aaron Stump, Harley D. Eades III, Peng Fu, Tim Sheard, Stephanie Weirich, Chris Casinghino, Vilhelm Sjoberg, Nathan Collins and Ki Yung Ahn. The Sixth ACM SIGPLAN Workshop Programming Languages meets Program Verification (PLPV), pages 15-26, 2012.

5. **Hereditary Substitution for Stratified System F**. Harley D. Eades III and Aaron Stump. International Workshop on Proof-Search in Type Theories (PSTT), 2010. Affiliated with the Federated Logic Conference (FLoC).

## Posters

1. **Full Intuitionistic Linear Logic (FILL).** Harley Eades III and Valeria de Paiva. Entry in Encyclopedia of Proof Systems. Presented as a Poster at the 25th jubilee edition of the International Conference on Automated Deduction (CADE). `http://proofsystem.github.io/Encyclopedia/`. 2015.

## Workshop Talks

1. **Dualized Type Theory.** Harley D. Eades III. Fifth International Workshop on Classical Logic and Computation (CL&C). July 2014. Affiliated with CSL-LICS 2014. Length: 20min.

2. **On the Categorical Structure of Bi-Intuitionistic Logics**. Harley D. Eades III. The University of Iowa Mini-Symposium. October 2013. Length: 30min.

3. **The Categorical Structure of Semi-Bilinear Intuitionistic Logic**. Harley D. Eades III. Midwest Verification Day. September 2013. Length: 20min.

4. **Hereditary Substitution for the $\lambda\Delta$-Calculus**. Harley D. Eades III. Workshop on Control Operators and their Semantics (COS). Affiliated with Rewriting, Deduction, and Programming (RDP). June 2013. Length: 20min.

5. **Hereditary Substitution for the $\lambda\Delta$-Calculus**. Harley D. Eades III. Midwest Verification Day. September 2012. Length: 20min.

6. **Hereditary Substitution for the $\lambda\Delta$-Calculus**. Harley D. Eades III. Fourth International Workshop on Classical Logic and Computation (CL&C). July 2012. Affiliated with ICALP 2012. Length: 20min.

7. **Separation of Proof from Program**. Harley D. Eades III. Midwest Verification Day. September 2011. Length: 20min.

8. **Exploring the Reach of Hereditary Substitution**. Harley D. Eades III. Types for Proofs and Programs (TYPES). 2011. Length: 30min.

9. **Hereditary Substitution for Stratified System F**. Harley D. Eades III. International Workshop on Proof-Search in Type Theories (PSTT). July 2010. Length: 20min.

**Invited Speaker**

1. **The Three Perspectives of Computation.** Harley D. Eades III. Department of Mathematical Sciences Colloquium Speaker. October 2016. Length: 55min.

2. **A New Foundation of Attack Trees in Monoidal Categories**. Harley D. Eades III. Computer Science Department Colloquium Speaker. The University of Iowa. September 2016. Length: 60min.

**Undergraduate Research Publications**

1. **Zero-Divisors and Their Graph Languages**. Harley D. Eades III. Rose-Hulman Undergraduate Mathematics Journal. Vol. 10, Issue 2, 2009.

**Other Work**

1. **Lambek Calculus.** Harley Eades III and Valeria de Paiva. Entry in Encyclopedia of Proof Systems. `http://proofsystem.github.io/Encyclopedia/`. 2016.

2. **Two-sided Linear Sequent Calculus.** Elaine Pimentel and Harley Eades III. Entry in Encyclopedia of Proof Systems. `http://proofsystem.github.io/Encyclopedia/`. 2015.

3. **Constructive Modal Logic S4 (CS4).** Harley Eades III and Valeria de Paiva. Entry in Encyclopedia of Proof Systems. `http://proofsystem.github.io/Encyclopedia/`. 2015.

4. **Full Intuitionistic Logic.** Harley Eades III and Valeria de Paiva. Entry in Encyclopedia of Proof Systems. `http://proofsystem.github.io/Encyclopedia/`. 2015.

**Funding (Awarded Grants)**

Currently active grants are underlined.

1. <u>**NSF CCF: 1565557, CRII:SHF: A New Foundation for Attack Trees Based on Monoidal Categories.**</u>
Start date March 1, 2016. 2 year grant, $70,221.

# Service

**Program Committees**

2013. The Seventh ACM SIGPLAN Workshop on Programming Languages meets Program Verification (PLPV).

**Reviewing**

Sixteenth International Workshop on Logic and Computational Complexity (LCC). 2016. Reviewed: 1 paper

Advances in Modal Logic (AiML). 2016. Reviewed: 1 paper.

The Thirty-First Annual ACM/IEEE Symposium on Logic in Computer Science (LICS). 2016. Reviewed: 1 paper.

Logica Universalis. 2015. Reviewed: 1 paper.

The 13th International Conference on Typed Lambda Calculi and Applications (TLCA). 2015. Reviewed: 1 paper.

Logical Methods in Computer Science. 2015. Reviewed: 1 paper.

The 7th International Joint Conference on Automated Reasoning (IJCAR). 2014. Reviewed: 1 paper.

Joint Meeting of the Twenty-Third EACSL Annual Conference on Computer Science Logic (CSL) and the Twenty-Ninth Annual ACM/IEEE Symposium on Logic in Computer Science (LICS). 2014. Reviewed: 1 paper

Logical Methods in Computer Science. 2013. Reviewed: 1 paper.

The 11th International Conference on Typed Lambda Calculi and Applications (TLCA). 2013. Reviewed: 1 paper.

The 19th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS). 2013. Reviewed: 1 paper.

The 23rd International Conference on Rewriting Techniques and Applications (RTA). 2013. Reviewed: 1 paper.

The 6th International Joint Conference on Automated Reasoning (IJCAR). 2012. Reviewed: 2 papers.

**University Service**

IT Advisory Committee: Research Advisory Subcommittee, August University, 2016 - Present.

Curriculum and Academic Policies, Augusta University, 2016 - Present.

Internal Advisory Committee for the Cyber Institute, Augusta University, 2014 - Present.

**College Service**

Faculty Affairs Committee, Augusta University, 2016 - Present.

The ABET Assessment Committee, Augusta University, 2015 - Present.

The Computer Science Curriculum Committee, Augusta University, 2015 - Present.

The Undergraduate Curriculum Committee, Augusta University, Fall 2015.