Mark Santolucito

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Research Interests

Programming by Example, Language Design, Program Synthesis, Computer Music

Education

Yale University **New Haven, CT**
Computer Science PhD *2019 (Expected)*
Advisors: Ruzica Piskac, Paul Hudak†

Yale University **New Haven, CT**
Computer Science M.S. *2015*
Advisors: Ruzica Piskac, Paul Hudak†

Amherst College **Amherst, MA**
Computer Science B.A. & Music B.A., Cum Laude *2009–2013*
Advisors: Scott Kaplan, Jason Robinson

Awards and Honors

Travel Funding
Various *2015*
Travel Grants for attending the summer schools SSFT15, OPLSS2015, SAT/SMT2015; and conferences VMW@CAV2015, ICFP2015.

Carle Fellow
Yale University *2014-2015*
Graduate School funding support provided by the Robert Willets Carle Scholarship Fund at Yale.

Best Undergraduate Thesis
Amherst College *May 2013*
Awarded to the student who, in the eyes of the Computer Science Department, has written the best Computer Science thesis of the graduating class.

Dean of Faculty Funding
Amherst College *June 2012*
Grant for undergraduate thesis research in Media Technology.

REU at Washington University at St. Louis
NSF *Summer 2011*
Worked with Prof. Caitlin Kelleher on building the web platfom for the educational programming language Looking Glass.

Lerner Piano Prize
Amherst College *May 2013*
Awarded to the student who has achieved an exceptional level of ability and expresivity in the musical arts.

Copeland Commission
Amherst College *March 2013*
Collaborating with Professor of Music Stephanie Robinson, to create a motion tracking sound-art installation for "Art in the Place of Art"

Pease Research Fellowship
Amherst College *Fall 2012*
In recognition and support of research in Representations of Media and Media Technology

Talks

Montly Music Hackathon
Spotify *Jan 2015*
Workshop at Monthly Music hackathon at Spotify on Algorithmic Composition with Euterepa

Publications

Mark Santolucito, Donya Quick, and Paul Hudak. Media Modules: Intermedia Systems in a Pure Functional Paradigm. In *Proceedings of International Computer Music Conference*, 2015.

Paul Hudak, Donya Quick, Mark Santolucito, and Daniel Winograd-Cort. Real-time interactive music in haskell. In *Fucntional Art and Music at ICFP*, 2015.

Mark Santolucito and Maria Hwang. Communalizing the interfaces of single player games. In *Proceedings of DiGRA*, 2014.

Mark Santolucito and Scott Payne. Simquabbin project: Game-based environmental science education in a virtual world, 2015. Poster at Games Learning and Society 9.

Kyle J. Harms, Jordana H. Kerr, Michelle Ichinco, Mark Santolucito, Alexis Chuck, Terian Koscik, Mary Chou, and Caitlin L. Kelleher. Designing a community to support long-term interest in programming for middle school children. In *Proceedings of the 11th International Conference on Interaction Design and Children*, IDC '12, pages 304–307, New York, NY, USA, 2012. ACM.

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Geumgang University

To the board members,

I am excited by the opportunity to work with Geumgang University to develop and teach a new computer science curriculum to help students enter into the 21st century workforce. As a graduate of Amherst College, I also know the importance of integrating computer science into a well-rounded, liberal arts style education. I hope to offer courses in introductory and interdisciplinary programming. At a more advanced level, I can offer courses on theory of programming languages, program verification, and program synthesis.

My research has focused on programming language design to make computer science a more accesible topic to students from all backgrounds. My current work focuses on programming-by-example, a system whereby a user may specify input-output examples, and code will automatically be generated. Additionally, I have worked in many computer music projects that combine the power of computation and the compassion of the humanities. This works has been presented at conferences and concerts in California, Wisconsin, Massachusetts, and New York.

Similar to my reserach, I have worked extensively in education programs. I designed curriculum, taught, and led other teachers at computer science camps for Chinese college and high school students. Having been a teaching fellow at both the undergraduate, and graduate level for six semesters at Amherst and three semesters at Yale, I would like to bring the American college expereince to Korea. I am also intersted to see what new presepectives these Korean students can bring to my teaching style as well.

Thank you and I look forward to our future conversations,

Mark Santolucito