

Michael L. Rivera

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EDUCATION

Carnegie Mellon University, *School of Computer Science*
Third year Ph.D. in Human-Computer Interaction
Advisor: Scott E. Hudson

Sep 2015 - Present

University of Pennsylvania, *School of Engineering & Applied Science*
M.S.E. in Computer Graphics and Game Technology, *GPA: 3.94 / 4.00*
Thesis: From Image to Device – A Case Study on 3D Printing for Patient-Specific Care
B.S.E. in Digital Media Design, *GPA: 3.54 / 4.00, cum laude*
Advisor: Norman Badler

May 2014

AWARDS AND HONORS

Adobe Research Fellowship , <i>Honorable Mention</i> (\$2000)	2017
Xerox Technical Minority Scholarship , <i>Recipient</i> (\$1000)	2017
Carnegie Mellon University Sansom Endowed Presidential Fellowship , <i>Recipient</i> (\$60,000)	2017
DreamIt Health Open Canvas Accelerator , <i>Finalist</i>	2014
Society for Technology in Anesthesia 2014 Engineering Challenge , <i>1st Place</i>	2014
Penn Interdisciplinary Talks , <i>Finalist</i>	2014
PennHacks Hardware Hackathon , <i>3rd Place (of 40 teams)</i>	2013
LinkedIn Company Hackday , <i>1st Place</i>	2012
University College London , <i>Affiliate Computer Science Student</i>	2012
PennApps Hackathon 2012 , <i>Best Use of the Tumblr API sponsored by Tumblr</i>	2012

PEER-REVIEWED PUBLICATIONS

- [2] **Rivera, M.L.**, Moukperian, M., Ashbrook, D., Mankoff, J., Hudson, S.E. 2017. Stretching the Bounds of 3D Printing with Embedded Textiles. In *Proceedings of the 35th Annual SIGCHI Conference on Human Factors in Computing Systems* (Denver, Colorado, USA, May 6 - 11, 2017). CHI '17. ACM, New York, NY. 497-508.
- [1] Galvez, J.A., Simpao, A.F., Dori, Y., Gralewski, K., McGill, N.H., **Rivera M.L.**, Delsco, N., Khan, H., Rehman, M.A., Fiadjoe, J.E. 2016. Not Just a Pretty Face: Three-Dimensional Printed Custom Airway Management Devices. *3D Printing and Additive Manufacturing*. September 2016, 3(3): 160-165.

POSTERS AND DEMONSTRATIONS

- [2] **Rivera, M.L.**, Moukperian, M., Ashbrook, D., Mankoff, J., Hudson, S.E. 2017. Stretching the Bounds of 3D Printing with Embedded Textiles. Carnegie Mellon University's 3D Printing Summit. Pittsburgh, PA.
- [1] **Rivera, M.L.**, Moukperian, M., Ashbrook, D., Mankoff, J., Hudson, S.E. 2016. Stretching the Bounds of 3D Printing with Embedded Textiles. Carnegie Mellon University's DIY Assistive Technology Summit. Pittsburgh, PA.

INVITED TALKS

University of Pennsylvania , Penn-Interdisciplinary Talks, Philadelphia, PA <i>Tracheal Aire – a step towards patient-specific medical instruments</i>	Apr 2014
Society for Technology in Anesthesia , Engineering Challenge 2014, Orlando, FL <i>Tracheal Aire: Patient-specific 3D Printable Williams Airway Intubators</i>	Jan 2014
University of Maryland, Baltimore County , McNair Scholars Conference, Baltimore, MD <i>Project PAALM: Phalangeal Angle Approximation through the Leap Motion Controller</i>	Sept 2013
University of Pennsylvania , Big Think Innovation Conference, Philadelphia, PA <i>Hacking New Frontiers: 3D Gesture Recognition</i>	Mar 2013

EMPLOYMENT EXPERIENCE

Carnegie Mellon University , Graduate Student Researcher, Pittsburgh, PA Human-Computer Interaction Institute. Exploring novel fabrication methods for rapid prototyping, sensor development and interaction techniques.	Aug 2014 - Present
HP Labs , Research Intern, Palo Alto, CA Immersive Experiences Lab. Research 3D printing with piezoresistive materials to create application-specific sensors.	May 2017 - Aug 2017
Facebook , Software Engineer, New York, NY iOS and Android Product Engineer on the Places Team. Implemented modular result cards for Nearby Places on Facebook for iOS. Single handedly built the redesigned Nearby Places for Facebook for Android. Developed an edit flow for Places Home Creation on Facebook for iOS.	Jul 2014 - Aug 2015
Facebook , Software Engineer Intern, Menlo Park, CA Android Engineer on the Facebook Home Team. Built a scalable viewpager with spring animations for the application launcher of Facebook Home for Android.	May 2013 - Aug 2013
LinkedIn , Software Engineer Intern, Mountain View, CA iOS and Mobile Web Engineer for the Mobile Team. Developed event bubble display items and a internal settings module for an iOS calendar widget library. Implemented the 'Send Congrats' feature for the LinkedIn mobile web application.	May 2012 - Aug 2012

TEACHING EXPERIENCE

Teaching Assistant , Carnegie Mellon University, Pittsburgh, PA Software Systems for User Interfaces (05-631)	Fall 2016
Teaching Assistant , University of Pennsylvania, Philadelphia, PA Digital Media Design Capstone Project Course (CIS-497) Introduction to Java Programming (CIS-110) Software Design and Engineering (CIS-350)	Fall 2013, Spring 2014 Fall 2013 Spring 2013

Invited Guest Lectures

3D Modeling for 3D Printing, Building User-Focused Sensing Systems
Carnegie Mellon University

Spring 2017

SERVICE

Department Ombudsman , HCII, Carnegie Mellon University	May 2016 - Sept 2017
PhD Open House Organizer , HCII, Carnegie Mellon University	April 2017
Student Volunteer , ACM Human Factors in Computing Systems (CHI)	May 2017
Student Volunteer , 3D Printing Summit, Carnegie Mellon University	Jan 2017
Student Volunteer , DIY Assistive Tech. Summit, Carnegie Mellon University	April 2016

SELECTED PRESS COVERAGE

3Ders , "Carnegie Mellon research project combines 3D printing with embedded textiles"	July 2017
3D Printing Industry , "Research embeds textiles in 3D printing for functional, flexible parts"	July 2017
3DPrinting.com , "Researchers 3D Print Flexible Textiles For Development of Functional Objects"	July 2017
3D Shoes , "3D Printing Combined with Textile Manufacturing"	June 2017
IEEE Spectrum , "Mechanical Metamaterials and Other 3D Printing Tech from CHI 2017"	May 2017
MedCity News , "Pediatric hospital physicians form 3D printing 'think tank'"	Feb 2014
MAKE Magazine , "Hacking on the Frontier of Gestural Input"	Feb 2012

TECHNICAL SKILLS

Programming Languages Java, Javascript, Python, Objective-C, C++, C
Software Development Android, iOS, Arduino, Node.js, Flask, Django, JQuery, OpenGL, WebGL
Hardware Development PCB Design, Hardware I/O
Fabrication 3D Modeling, 3D Printing (FDM), Laser Cutting

REFERENCES

Scott E. Hudson, Professor, Human-Computer Interaction Institute, Carnegie Mellon University
Jennifer Mankoff, Professor, Human-Computer Interaction Institute, Carnegie Mellon University
Rafael 'Tico' Ballagas, Senior Manager, Immersive Experiences Lab, HP Labs
Norman I. Badler, Professor, Computer Science and Information Science, University of Pennsylvania
Justin Moore, Engineering Manager, Facebook