Michael L. Rivera

Carnegie Mellon University
Human-Computer Interaction Institute
5000 Forbes Ave, Pittsburgh, PA 15213

Website: http://mikeriv.com
Email: mlrivera@cs.cmu.edu
Github: mriveralee

EDUCATION

Carnegie Mellon University, *School of Computer Science* — Sep 2015 - Present
Third year Ph.D. in Human-Computer Interaction
Advisor: Scott E. Hudson

University of Pennsylvania, *School of Engineering & Applied Science* — May 2014
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

AWARDS AND HONORS

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

Society for Technology in Anesthesia, Engineering Challenge 2014, Orlando, FL   Jan 2014
Tracheal Aire: Patient-specific 3D Printable Williams Airway Intubators

University of Maryland, Baltimore County, McNair Scholars Conference, Baltimore, MD   Sept 2013
Project PAALM: Phalangeal Angle Approximation through the Leap Motion Controller

University of Pennsylvania, Big Think Innovation Conference, Philadelphia, PA   Mar 2013
Hacking New Frontiers: 3D Gesture Recognition

EMPLOYMENT EXPERIENCE

Carnegie Mellon University, Graduate Student Researcher, Pittsburgh, PA   Aug 2014 - Present
Human-Computer Interaction Institute. Exploring novel fabrication methods for rapid prototyping, sensor development and interaction techniques.

HP Labs, Research Intern, Palo Alto, CA   May 2017 - Aug 2017
Immersive Experiences Lab. Research 3D printing with piezoresistive materials to create application-specific sensors.

Facebook, Software Engineer, New York, NY   Jul 2014 - Aug 2015
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.

Facebook, Software Engineer Intern, Menlo Park, CA   May 2013 - Aug 2013
Android Engineer on the Facebook Home Team. Built a scalable viewpager with spring animations for the application launcher of Facebook Home for Android.

LinkedIn, Software Engineer Intern, Mountain View, CA   May 2012 - Aug 2012
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.

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)   Fall 2013, Spring 2014
Introduction to Java Programming (CIS-110)   Fall 2013
Software Design and Engineering (CIS-350)   Spring 2013

Invited Guest Lectures
3D Modeling for 3D Printing, Building User-Focused Sensing Systems   Spring 2017
Carnegie Mellon University

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, Computer Science & Engineering, University of Washington
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