Brendan Harmon

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http://baharmon.github.io/

EDUCATION

NORTH CAROLINA STATE UNIVERSITY | PhD in Design
2013 - 2017
Raleigh, NC

Co-major: Forestry and Environmental Science

UNIVERSITY OF OXFORD | MPhil in Geography
2010 - 2012
Oxford, UK

Focus: Biodiversity, Conservation, and Management

HARVARD GRADUATE SCHOOL OF DESIGN | MLA
2005 - 2008
Cambridge, MA

SEWANEE: THE UNIVERSITY OF THE SOUTH | BA
2001 - 2005
Sewanee, TN

Major: Art History

TEACHING AND RESEARCH

LOUISIANA STATE UNIVERSITY | Assistant Professor
2017 - present
Baton Rouge, LA

ROBERT REICH SCHOOL OF LANDSCAPE ARCHITECTURE

NORTH CAROLINA STATE UNIVERSITY | Postdoctoral Fellow
2017
Raleigh, NC

CENTER FOR GEOSPATIAL ANALYTICS

NORTH CAROLINA STATE UNIVERSITY | Instructor
2013 - 2015
Raleigh, NC

DEPARTMENT OF LANDSCAPE ARCHITECTURE

HARVARD GRADUATE SCHOOL OF DESIGN | 3D Teaching Assistant
2007 - 2008
Cambridge, MA

FABRICATION LAB | Rapid Prototyping Group

PROFESSIONAL PRACTICE

EDAW|AECOM | Landscape Designer
2008 - 2009
Guangzhou

RESEARCH INTERESTS

GEOSPATIAL MODELING

erosion modeling • landscape evolution • computational ecology • lidar & drone analytics • geovisualization

DIGITAL DESIGN

generative design • digital fabrication • ecological robotics • human-computer interaction • tangible interfaces

SKILLS

PROGRAMMING

Python • HTML/CSS • LaTeX

GIS

GRASS GIS • ArcGIS • QGIS

REMOTE SENSING

lidar • UAS/drones

DIGITAL DESIGN

Rhino • Grasshopper • Thea Render • Lumion • CAD/CAM • Adobe CC • etc.

DIGITAL FABRICATION

CNC machining • 3D printing • robotics

GRANTS

Harmon, Brendan, Hye Yeon Nam, Marcio de Queiroz, Hunter Gilbert, Tracy Quirk. Robots in Nature: Human-Robot-Environment Interaction for Advanced Ecosystem Services. LSU Faculty Research Grant. Louisiana State University. 2019-2021. $72,500.

Berkowitz, Zak et al. Navigate, Fabricate, Simulate. LSU Student Technology Fee. Louisiana State University. 2019. $120,000.

Birch, Traci, Kris Palagi, and Brendan Harmon. Improving Quality of Life in the Amite River Watershed through Strategic Community-level Green Infrastructure Planning. Lamar Family Foundation. 2018-2019. $100,000.

Harmon, Brendan. Dynamic Landscape Evolution. LSU Council on Research Summer Stipend. Louisiana State University. 2018. $5,000.

Berkowitz, Zak et al. The Mixed Reality Garage: Labs for the Future of Art and Design. LSU Student Technology Fee. Louisiana State University. 2018. $116,559.

de Queiroz, Marcio, Hunter Gilbert, Jason Crow, Derick Ostrenko, Brendan Harmon, and Hye Yeon Nam. LSU Robotics = Engineering + Art + Design. LSU Student Technology Fee. Louisiana State University. 2018. $83,325.

Carney, Jeff et al. Inland from the Coast: A multi-scalar approach to regional climate change responses. Gulf Research Program. National Academy of Science and Robert Wood Johnson Foundation. 2017-2020. $2,936,000. Award: 2000008299. url: `https://css.lsu.edu/project/inland-from-the-coast/`

CREATIVE WORKS

Tangible Landscape I — 2013-present
Petrasova, Anna, Vaclav Petras, Payam Tabrizian, Brendan Harmon, and Helena Mitasova
North Carolina State University, Center for Geovisualization
Media: computer, 3D scanner, projector, and mixed media

Tangibly Smart: an Interactive Watershed in your Hands — 2017
Harmon, Brendan, Payam Tabrizian, Anna Petrasova, Vaclav Petras, and Helena Mitasova
The World Bank Group, Washington D.C.
Media: computer, 3D scanner, projector, and mixed media

Tangible Landscape II — 2019-present
Harmon, Brendan
Louisiana State University, Robert Reich School of Landscape Architecture
Media: computer, 3D scanner, projector, and mixed media

Shifting Datum I — 2019
Nam, Hye Yeon and Brendan Harmon
Media: 3D printed plaster, laser, linear actuator, and Arduino microcontroller

Shifting Datum II — 2019
Nam, Hye Yeon and Brendan Harmon
Media: 3D printed resin, acrylic, computer, and projector

Shifting Datum III — 2019
Nam, Hye Yeon and Brendan Harmon
Media: 3D printed resin and cast epoxy

EXHIBITIONS

Nam, Hye Yeon and Brendan Harmon. Shifting Datum. Baton Rouge Gallery. May 2019.
url: `https://www.batonrougegallery.org/nam-may2019`.

SELECT PUBLICATIONS

BOOKS

Petrasova, Anna, **Brendan A Harmon**, Vaclav Petras, Payam Tabrizian, and Helena Mitasova (2018). *Tangible Modeling with Open Source GIS*. 2nd ed. Springer International Publishing.

Petrasova, Anna, **Brendan A Harmon**, Vaclav Petras, and Helena Mitasova (2015). *Tangible Modeling with Open Source GIS*. 1st ed. Springer. isbn: 978-3-319-25775-4.

SELECT PAPERS

Harmon, Brendan A, Helena Mitasova, Anna Petrasova, and Vaclav Petras (2019). "r.sim.terrain 1.0: a landscape evolution model with dynamic hydrology". In: *Geoscientific Model Development* 12.7, pp. 2837–2854. url: `https://www.geosci-model-dev.net/12/2837/2019/`.

Harmon, Brendan A, Anna Petrasova, Vaclav Petras, Helena Mitasova, and Ross Meentemeyer (2018). "Tangible topographic modeling for landscape architects". In: *International Journal of Architectural Computing*.

Millar, Garrett C, Payam Tabrizian, Anna Petrasova, Vaclav Petras, **Brendan A Harmon**, and Ross K Meentemeyer (2018). "Tangible Landscape : A Hands-on Method for Teaching Terrain Analysis". In: *CHI '18 Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*.

Tabrizian, Payam, **Brendan A Harmon**, Anna Petrasova, Helena Mitasova, and Ross K Meentemeyer (2017). "Tangible Immersion for Ecological Design". In: *ACADIA 17: Proceedings of the 37th Annual Conference of the Association for Computer Aided Design in Architecture*. Cambridge, MA, pp. 600–609. isbn: 978-0-692-96506-1. url: `http://papers.cumincad.org/cgi-bin/works/Show&_id=caadria2010_044/Show?acadia17_600`.

Tonini, Francesco, Douglas Shoemaker, Anna Petrasova, **Brendan A Harmon**, Vaclav Petras, Richard Cobb, Helena Mitasova, and Ross Meentemeyer (2017). "Tangible geospatial modeling for collaborative solutions to invasive species management". In: *Environmental Modelling and Software* 92. issn: 13648152.

Tateosian, Laura, Helena Mitasova, **Brendan A Harmon**, Brent Fogleman, Katherine Weaver, and Russell S Harmon (2010). "TanGeoMS: tangible geospatial modeling system." In: *IEEE transactions on visualization and computer graphics* 16.6, pp. 1605–12. issn: 1077-2626. url: `http://dx.doi.org/10.1109/TVCG.2010.202`.

SELECT PRESENTATIONS

Harmon, Brendan A, Anna Petrasova, Payam Tabrizian, Vaclav Petras, and Helena Mitasova (2017). "Tangibly smart: an interactive watershed in your hands". World Bank Watershed Days. Washington, D.C. url: `https://ncsu-geoforall-lab.github.io/tangible-landscape-talk/worldbank2017.html`.

Harmon, Brendan A, Anna Petrasova, Vaclav Petras, Helena Mitasova, and Ross K Meentemeyer (2016a). "Tangible geographies". Royal Geographical Society Annual International Conference 2016. London. url: `https://baharmon.github.io/rgs-2016/`.

Harmon, Brendan A, Helena Mitasova, and Anna Petrasova (2014). "Tangible geospatial modeling for landscape architects". 2014 Geodesign Summit. Redlands, California. url: `http://video.esri.com/watch/3170/tangible-geospatial-modeling-for-landscape-architects`.