Collin Cappelle

Curriculum Vitae

PERSONAL DETAILS

Address	204 Farrell Hall University of Vermont, Burlington, VT 05405
Phone	(908)-797-1891
Website	ccappelle.github.io
Mail	collin.cappelle@gmail.com
Research	Google Scholar Profile

EDUCATION

Ph.D. Computer Science 2015-present

University of Vermont

Projected completion by May 2019. Thesis topic to focus on different forms of modularity in evolutionary robotics. Member of the Morphology, Evolution, and Cognition Laboratory (MEC-Lab) advised by Dr. Josh Bongard.

B.S. Mathematics and Computer Science – Double Major 2011-2015

University of Vermont

Achieved GPA of 3.6. Recipient of the Presidential Merit Scholarship.

POSITIONS

Research Assistant 2015-present

University of Vermont

Worked with Dr. Josh Bongard in the MEC-Lab at UVM. Explored the relationship between neurology, morphology, and environment of robots in an evolutionary context.

PUBLICATIONS

Journal Publications

1. C Cappelle, A Bernatskiy, K Livingston, N Livingston, J Bongard (2016)
   Morphological modularity can enable the evolution of robot behavior to scale linearly with the number of environmental features.
   Frontiers in Robotics and AI

Conference Proceedings

2. C Cappelle, J Bongard (2018)
   Embodied embeddings for Hyperneat.
   Conference on Artificial Life (ALIFE), Tokyo, JP.
   (Accepted, not yet published)

1. C Cappelle, A Bernatskiy, J Bongard (2017)
   Reducing training environments in evolutionary robotics through ecological modularity.
   Conference on Biomimetic and Biohybrid Systems pp95-106 (Living Machines), San Fransisco, CA.

Minimally Reviewed Articles

2. S Kriegman, C Cappelle, F Corucci, A Bernatskiy, N Cheney, J Bongard (2017)
   Simulating the evolution of soft and rigid-body robots.
   Proceedings of the Genetic and Evolutionary Computation Conference Companion (GECCO), Berlin, DE.

1. A Larson, A Bernatskiy, C Cappelle, K Livingston, N Livingston, J Long, J Schwarz, M Smith, J Bongard (2016)
   Recombination hotspots promote the evolvability of modular systems.
   Proceedings of the Genetic and Evolutionary Computation Conference Companion (GECCO), Denver, CO.

SELECTED PRESENTATIONS

- Using pyrosim for rapid prototyping of simulated robots (April, 2018)
  Student Complexity Research and Pizza Seminar, Burlington, VT.

- Rotoblox: Physics based platformer (December, 2017)
  UVM CS Fair, Burlington, VT.

- Modularity as a means to reduce computational cost in evolutionary robotics (September, 2017)
  UVM Graduate Research Day, Burlington, VT.

- Introduction to pyrosim (July 2017)
  Gecco conference, Berlin, DE.

- What it means to be modular (April 2017)
  Student Complexity Research and Pizza Seminar, Burlington, VT.

- Defining different forms of modularity in embodied agents (December 2016)
  MEC-Lab meeting, Burlington, VT.