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April 26th, 2012

Re: Recommendation for Jeff Clune for Faculty Position

It is my pleasure to write this recommendation letter for Dr. Jeff Clune for a faculty position in the University Department of Neuroscience at Brown University. I have mentored approximately twenty PhD students and about a dozen postdocs during my tenure here at Cornell, and Jeff is a truly outstanding among them. I have no doubt that he will reach far in his academic career, as he possesses a rare combination of all the necessary traits – a sharp and creative mind, a broad set of technical skills, a hardworking and persistent attitude, a superbly pleasant personality, and excellent communication and management skills.

Jeff has been working in my research group for just over a year as an NSF postdoctoral fellow, since August 2010. He has been focusing on understanding and creating computational models of evolutionary development, with applications ranging from machine learning to design automation.

Since joining my group a little over a year ago, Jeff has worked hard on two projects that have yielded multiple publications. One project describes a theoretical result concerning the origin of modularity in evolution. The work demonstrates a new explanation for the emergence of modular structures, a long standing question that has implications from biology to engineering. This paper is currently in review in *Science*. The second work uses models of developmental biology to evolve geometric shapes and robotic structures. This work, some of which can be seen at EndlessForms.com, has already had tremendous impact and is currently being developed further using a team led by Jeff, with another key paper in preparation. I am sure that Jeff has described these works in detail in his application, so I will not delve into more details in this letter. I will only say however that I am very pleased with

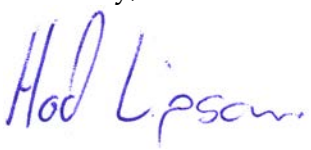
both the quality and the speed with which this work has been conducted, and I have no doubt that these works will have broad impact.

Jeff is unique in his pursuit of fundamental questions in machine learning design, and evolutionary biology using relatively new computational techniques. Jeff's training at the Lenski's and Ofria's groups in Michigan State University allowed him to learn from some of the leading research laboratories where these digital methods are being developed and applied, in parallel with experimental biological work. This dual perspective – computational and experimental (wet) make him especially suitable for tackling some of the hard questions which he addresses in his research program, and allowed him to achieve ne results in areas where many others have failed before.

Jeff has tremendous potential as an academic faculty. In addition to the points above, he is a superbly pleasant person to work with. He is a brilliant communicator and an inspiring speaker, and has been working well with a team of students that he is guiding in one of his project. He always asks good questions in group meetings. He has worked on writing proposals under deadlines, and persisted through the ups-and-downs of research. He is both technically skilled and has good people skills.

While I would love to see him stay here, Jeff is exactly the sort of person that we should keep (and encourage) into an academic position.

Sincerely,



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