

University of Illinois at Urbana-Champaign
Computer Science Department
Urbana, IL 61801

April 19, 2012

Recommendation letter for Tsvi Achler

Dear Recruiting Committee Chair

I am writing to give a strong support for the application of Tsvi Achler, MD, Ph.D for a faculty position in Computational Neuroscience in your department of Neuroscience at Brown University. Tsvi has worked with me as a Postdoctoral Researcher at the Computer Science department in the University of Illinois at Urbana-Champaign (UIUC) from September 2006 to September 2009. In that time he has shown research excellence and innovation, pursuing an interdisciplinary research direction, and exhibiting independence and leadership.

Tsvi has worked with me in a direction that he has developed around the application of neuroscience to artificial intelligence. His work develops a new model for artificial neural networks which helps address computational problems and better explain biological phenomena. Specifically, a model that he has developed is capable of computationally learning to recognize different patterns, and then applies successfully to recognition of combinations of those patterns. This direction is promising from an Artificial Intelligence standpoint because it enables training on separate elements and then applying the trained models to combinations of patterns without retraining. From a neurological perspective, his research explains feedback patterns among brain cells as a fixed-point computation aimed at recognition rather than at learning.

Tsvi's research and interests are interdisciplinary and his work inspiring and fresh. He has already presented talks in numerous conferences and seminars on the subject to computer scientists, cognitive scientists, and neurobiologists. His expertise and direction are unique and challenging known approaches.

Tsvi also advises and teaches others effectively. He mentored two undergraduate students while a postdoc in my lab, one of which is now a PhD student at MIT's CBCL. He also initiated and taught a class for one semester on neurobiological cognitive theories. He is clearly committed to educating others and cares about their success.

Otherwise, Tsvi works independently naturally, and is very motivated and vigorous. He has driven our joint research, and his current research results are promising theoretically and experimentally for many more results. He is a smart researcher who also learns fast. He is very driven, as can be seen by the numerous connections and discussions that he has made with many research areas.

Overall, I think that Tsvi has great potential. He is promising to be a great researcher and faculty member, and I am glad to have had the opportunity to work with him. I give him my full support

in his application for a position in your department.

Sincerely,

Eyal Amir

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