University at Buffalo
State University of New York

Department of Computer Science and Engineering

January 4, 2016

Postdoctoral Fellowship Committee
Computer Science Theory Lab
Stanford University
Re: applicant Michael Wehar

Dear Postdoctoral Fellowship Committee:

I am delighted to provide a reference for Mr. Michael Wehar. I first met him in May 2013 when he visited me prior to beginning graduate study with a TA fellowship plus Dean's supplement at Buffalo. I had earlier talked with him by phone and also with Rick Statman at CMU who originally conveyed his desire to apply.

Michael is an incredible self-starter and without much input from me has (co-)written three successful conference papers. The singly-authored one won the Best Student Paper Award of Track B at ICALP 2014. We've started our own joint project on time-space tradeoffs; it has been slowed on my end by 2015 being a horrible year for chess cheating right through two new cases cropping up late last month. He makes community contacts with no shyness; I've twice had the experience of meeting for the first time someone who's worked with him (one being his co-author Dmitry Chistikov when he and I were invited to a Bellairs workshop on Barbados) and now he's joined forces with Robert Lubarsky whom I knew 25+ years ago. On his own initiative he befriended the theory people at RIT 70 miles east, including Edith Hemaspaandra whom I've likewise known 25+ years, and arranged to teach undergrad theory from Sipser's text as a summer course *there* with good results. He also codes—not just technical command-line code but GUI and website creation. He is highly active both on StackExchange and in our local graduate community affairs.

He entered and graduated from CMU a year-plus young, and that was one of a few personal factors influencing his coming to Buffalo. Ordinarily I would wish him to stay through the end of his 4th year here; counting that he did an MS during his 4th year at CMU that would be a "normal" 5 years. However, he certainly can finish his PhD by summer or late spring, and a postdoc would give the same timeframe before applying for tenure-track jobs.

For the larger research picture I feel he has found an excellent vantage point focusing on problems involving finite automata and other formally constrained machines. The contribution he's made so far to my project on time-space tradeoffs for Turing machines sprang from his results on NFAs. It's a good foundation for a research career in theory and has extra "outs" because a lot of automata-based structures are applied in real systems. I could go into model-checking and some other things I've discussed with Mike, but the freshest example that impressed me actually came from Chistikov in long chats on Barbados: acyclic context-free grammars with singleton languages yield good compression schemes including

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incremental Lempel-Ziv and Sequitur.

Michael has been a great TA for my courses, especially relating to the students at both graduate and undergrad levels. His office hours are well frequented. He is conscientious in grading perhaps even to a fault—it took awhile to sink in how my grading scheme removes the need to care about fine distinctions in giving partial credits. He was highly efficient as a shared TA for mine and another course this past term. And he is simply a really nice and unassuming person to work with—up there with my best-ever student D. Sivakumar in many respects.

In sum I can give him my highest recommendation. Though I would miss him locally, an opportunity to interact at Stanford would be perfect for him at this time. I've given examples above of both the youthful energy and high maturity that augur well for success—and his having made three overseas trips including presenting at the 2015 China Theory Week in Shanghai says so all the more. I will be happy to answer any further questions you may have.

Yours sincerely

Dr. Kenneth W. Regan