

# UNIVERSITY OF MINNESOTA

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November 7, 2004

Biocomplexity Faculty Search Committee,  
c / o Prof. Rob de Ruyter van Steveninck,  
Department of Physics,  
Indiana University,  
Swain Hall West 117,  
Bloomington IN,  
47405-7105

Dear Dr. de Ruyter van Steveninck:

I am writing this letter on behalf of CHRISTOPHER KLAUSMEIER who is applying for a position in your department. Chris is a theoretical ecologist who uses theoretical and empirical approaches to study ecological interactions.

I met Chris in the fall of 1996 when I came to Minnesota and taught a course on Spatial Ecology and a course in probability and stochastic processes in which he participated. I was his Ph.D. advisor. Chris graduated summer 2000. He spent a year as an NSF International Research Fellow at the EAWAG Limnology Research Center in Kastanienbaum, Switzerland, followed by a postdoctoral fellowship with Dr. Simon Levin at Princeton. He is now an assistant professor at the Georgia Institute of Technology, School of Biology.

Chris is broadly interested in community dynamics and patterns that emerge from species interactions. He has two main lines of research. The first line is exploring endogenously generated spatial heterogeneity in ecological communities using mathematical models. This was the main part of his thesis research. The common theme was exploring the role explicit space plays in generating spatial patterns that are due to species interactions. His thesis ranged from investigating the effects of habitat loss on communities structured by competition, to pattern formation in semiarid regions. His thesis resulted in a number of papers, two of which appeared while he was still a student (one paper in *Science*, the other in the *American Naturalist*), and four additional papers that have since appeared.

The other main line of his research, which he also started as a graduate student, is developing and testing models of the vertical distribution of phytoplankton and determining the causes of seasonal succession in plankton communities. Much of this work is now joint with Elena Litchman who is a limnologist and supplies an empirical aspect to his research.

Since graduating from Minnesota, he has expanded his research interests considerably, as you can see from his publication list, which includes recent papers on ecological stoichiometry.

Chris has an excellent grasp of population and community ecology combined with excellent mathematical skills, which makes him a truly outstanding young researcher. He was by far the brightest theoretical ecology student I have met over the last five years. He came to Minnesota with a solid background in undergraduate mathematics and has since expanded his knowledge considerably, in particular in differential equations (mostly ordinary but also partial ones) and in probability theory (he took an advanced undergraduate course in probability theory from me). He

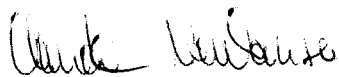
uses his mathematical skills creatively. His results are typically based on a combination of theory and numerical results.

I have observed Chris in talks on his research. He communicates ideas very effectively and should make a good and responsible teacher and colleague.

I enjoyed working with Chris very much. He chose his own research problems for his thesis and learned whatever techniques he needed to solve the problems. He needed very little advising and has since developed a very active research program. Though his research does not include an empirical component at this point, I am sure he will continue to seek out collaborations with empirical ecologists and maybe even establish his own empirical program. He is quite versatile and more than willing to branch out into other research directions. He is very bright, energetic, persistent, and creative. I expect Chris to become a leader in theoretical ecology. I also expect him to be a very responsible faculty member, someone you can trust to take on departmental leadership down the road.

I enthusiastically support Chris's application for a position in your department.

Sincerely,



Claudia Neuhauser  
Professor, Head, and  
Director of Graduate Studies  
Ecology, Evolution and Behavior