

Postdoctoral / Research Associate Position in Control of Critical Dynamics

The Physics Department at Virginia Tech invites applications for a postdoctoral or research associate position in statistical physics focusing on theoretical and computational investigations of the *control of critical dynamics in complex systems*. This position is funded through a US Army Research Office award. The objective is to build on a powerful and highly successful theory for non-linear stochastic dynamics of cooperative multi-component systems, namely critical dynamics, and develop novel efficient protocols for (1) steering multi-critical complex interacting dynamical systems toward certain desired universal scaling behavior; (2) externally controlling the strength of stochastic fluctuations and intrinsic noise in systems that are driven far from thermal equilibrium and display generic scale invariance; (3) selectively targeting and stabilizing specific self-generated spatio-temporal patterns in strongly fluctuating reaction-diffusion systems and epidemic models.

This research will be conducted with PIs Uwe C. Täuber and Michel Pleimling and their graduate students at Virginia Tech, and in collaboration with co-PI P.S. Krishnaprasad at the University of Maryland. Cooperation and interaction with other faculty members, postdocs, and students in the Condensed Matter Theory group and our *Center for Soft Matter and Biological Physics* (www.phys.vt.edu/CSMBP) would be strongly encouraged. A Ph.D. in statistical physics, condensed matter theory, or a closely related field is required with a preference for a strong background in critical phenomena, stochastic dynamics, and/or control theory. We seek candidates with proven versatility in analytic calculations as well as numerical analysis and/or computer simulations, and excellent scientific writing and oral communication skills.

Questions regarding the position can be directed to Profs. Uwe C. Täuber or Michel Pleimling, Physics Department and Center for Soft Matter and Biological Physics, Robeson Hall, 850 West Campus Drive, Virginia Tech, Blacksburg, VA 24061, Tel: (540) 231 8998 / 2675, email: tauber@vt.edu, pleim@vt.edu.

Applications must be submitted online at <https://listings.jobs.vt.edu/postings/75569>.

The application package should include a Cover Letter, Curriculum Vitae with list of publications and presentations, and a Research Statement. Applicants should please arrange for three (or more) letters of recommendation to be submitted directly to both email addresses above. Review of applications will begin on September 1, 2017.

Virginia Tech is an EO / AA institution, and offers a wide range of networking and development opportunities to women and minorities in science and engineering. Virginia Tech is a recipient of the National Science Foundation ADVANCE Institutional Transformation Award to increase the participation of women in academic science and engineering careers (www.advance.vt.edu). Individuals with disabilities desiring accommodations in the application process should please notify Ms. Jacqueline Woodyard, Department of Physics, (540) 231-7566, or call TTY 1-800-828-1120 prior to the application deadline.