

Meeting: 1003, Atlanta, Georgia, AMS CP 1, AMS Contributed Paper Session

1003-60-1529 **Firas Rassoul-Agha*** (firas@math.ohio-state.edu), Mathematical Biosciences Institute, Ohio State University, Columbus, OH 43210, and **Timo Seppalainen**. *Almost sure invariance principles for random walk in random environment.*

We describe a martingale approach to quenched invariance principles (functional central limit theorems) for random walk in random environment. Quenched means that the result is valid for fixed realizations of the environment. At this point we have applied the strategy to certain walks with a strong drift in some spatial direction. For example, we solve completely the question of the existence of a functional central limit theorem for random walk in a space-time product random environment. (Received October 05, 2004)