Uniform mean scalar gradient in grid turbulence: Asymptotic probability distribution of a passive scalar

XIAODAN CAI, United Technologies Research Center — Honoring Ted O’Brien. Dr. Edward E. O’Brien was my Ph.D advisor in mechanical engineering at Stony Brook University. It was he who introduced me to study flow turbulence in the United States after we met at a Fluid Dynamics conference in Beijing. He was an extremely humble, patient and optimistic person, and was an inspiration to all. Dr. O’Brien stressed the importance of understanding the fundamentals and was rigorous in applying them to solve important problems. I am one of Professor O’Brien’s students who has benifited immensely from his approaches and values. I will now present our work on asymptotic behaviors of probability distribution function for a passive scale in grid turbulence, which highlights Professor O’Brien’s legacy.