



# SCMS Seminar

## ***A CONDITIONED LOCAL LIMIT THEOREM VIA HEAT KERNEL APPROXIMATION***

**Speaker: Ion Grama**  
**Universite Bretagne-Sud**

**Time: Friday, November 14th; 11:00-12:00**

**Venue: Room 102, SCMS**

### **Abstract:**

We study a real-valued random walk with centered increments and a finite  $(2+\delta)$ -moment. Using a previously established approximation of the Gaussian heat kernel for persistence probabilities, we prove a new local limit theorem conditioned by the exit time from the half-line. This result unifies and generalizes existing theorems and provides uniform asymptotics with respect to both the starting and ending points.