

Seminario de Probabilidades de Chile

Orador: Pablo Ferrari (Universidad de Buenos Aires y CONICET)

Título: Poisson representation of Brownian bridge

Resumen: We consider Brownian motion $(B(t))$, for $t \in [0,1]$, and Brownian bridge $(BB(t))$, the Brownian motion conditioned to return to 0 at time 1 . The following identity is well known,

(1) $\text{law of } (BB(t))_{t \in [0,1]} = \text{law of } (B(t) - tB(1))_{t \in [0,1]}$.

A centered and rescaled Poisson point process $(B^\varepsilon(t))$ converges to Brownian motion, where ε is the scaling parameter going to 0 . For

each $\varepsilon > 0$, we construct a coupling $(B^\varepsilon(t), BB^\varepsilon(t))$ satisfying an almost sure version of (1). Taking $\varepsilon \rightarrow 0$ one shows (1).

El enlace para conectarse al seminario es:

Unirse a la reunión Zoom

<https://reuna.zoom.us/j/84521834914?pwd=OTZ6Y0NWM3pYTGtTbEt3c0luTG96UT09>

ID de reunión: 845 2183 4914

Código de acceso: 997973

Modalidad híbrida en la sala Maryam Mirzakhani, Torre Norte Piso 6, , Beauchef 851.
Martes 21 de Octubre 2025 a las 16:30 horas.

