

O Programa de Pós-Graduação em Estatística convida para:

## WEBINAR

### **Asymptotics for Empirical Processes associated to a Regenerative Sequence**

**Palestrante:**

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DATA: 15/10/2020 (quinta-feira)

HORÁRIO: 14:00h (horário local de Brasília)

O seminário é público e poderá ser assistido pelo Link

<https://teams.microsoft.com/l/meetup-join/19.>

#### **Resumo**

In this webinar, we will present some results about the asymptotic behavior of the partial sums of a regenerative sequence  $\{X_n\}_{n \geq 0}$ . We will prove that  $S_n = \sum_{j=1}^n \varphi(X_j)$ , with  $\varphi$  a measurable function, converges in Mallows distance to a Gaussian random variable. As a direct application, we will establish the weak convergence of a special type of partial sum, the empirical process, as well as its inverse process, the empirical quantile process. And, as by product of this weak convergence, we will obtain the asymptotic null distribution for a regenerative sample of the statistics such as Kolmogorov-Smirnov, Cramer-von Mises and some statistics based on the 2nd-order Mallows distance.

