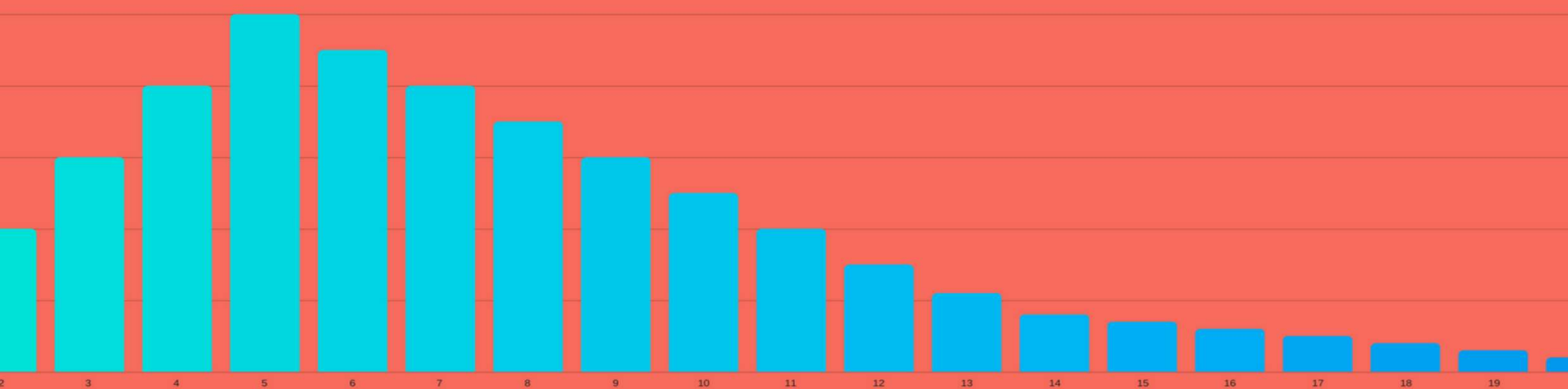Meeting organized by the
Joint Graduate Program in Statistics
UFSCar/USP - PIPGEs

VI Workshop on Probabilistic and Statistical Methods
PROGRAM

February 5, 6, 7, 2018 - UFSCar, São Carlos/SP - Brazil

6th Workshop on Probabilistic and Statistical Methods

February 05–07, 2018

UFSCar, São Carlos, SP, Brazil

PROGRAM

ICMC/USP - DEs/UFSCar

Special Session: Probability

Carolina Bueno - USP.
The fitness of the strongest individual in the subcritical GMS model.

Abstract: We deduce explicitly the strongest individual fitness distribution on a variation for GMS model, proposed by Guiol, Machado and Schinazi. We point out to the fact that this distribution relies on the Gauss hypergeometric function and when $p = 1/2$ on the hypergeometric function type I distribution. This is a joint work with Fábio Machado and Alejandro Roldán-Correa.

Cristian Coletti - UFABC.
Global survival of tree-like branching random walks.

Abstract: The reproduction speed of a continuous-time branching random walk is proportional to a positive parameter λ. There is a threshold for λ, which is called λ_w, that separates almost sure global extinction from global survival. Only for some classes of branching random walks it is known that the global critical parameter λ_w is the inverse of a certain function of the reproduction rates, which we denote by K_w. We provide here new sufficient conditions which guarantee that the global critical parameter of tree-like branching random walks equals $1/K_w$. This result is part of a joint work with Bertacchi, D. and Zucca, F. (ALEA, v. 14, p. 381-402, 2017).

Miguel Abadi - USP.
Decay of Correlations for renewal, touching Morse and Fibonacci.

Abstract: For a renewal process simulations a Morse code, we compute explicitly and exactly its decay of correlations. The technique is via solution of recursive linear sequence of second order. A general method is presented. The relation with the Perron Frobenius Operator appears at the end of the talk.

Mary Luz Rodiño - Universidad de Antioquia.
The connection between evolution algebras, random walks and graphs.

Abstract: Evolution algebras are a new type of non-associative algebras inspired from biological phenomena. A special class of such algebras, called Markov evolution algebras, is strongly related to the theory of discrete time Markov chains. The winning of this relation is that many results coming from Proba- bility Theory may be stated in the context of Abstract Algebra. In this work we explore the connec-tion between evolution algebras, random walks and graphs. More precisely, we study the relation-ship between the evolution algebra induced by a random walk on a graph and the one determined by the same graph. This is a joint work with Paula Cadavid and Pablo Rodríguez.