

You are cordially invited to attend the Science Tuesday on **15 December, 2020** at **12 p.m.** when professor Jakša Cvitanić will present the paper

## Large Tournament Games

Please join the workshop and ZOOM webinar using the link below:

<https://us02web.zoom.us/j/86945528515>

Meeting ID: 869 4552 8515

Working language of the workshop and webinar is English.

### Summary:

We consider a tournament game in which each player is rewarded based on her rank in terms of the time of reaching a goal. We prove existence, uniqueness and stability of the game with infinitely many players, existence of an approximate equilibrium with finitely many players, and find an explicit characterization when players are homogeneous. In our setup we find that: (i) the welfare may be increasing in cost of effort; (ii) when the total pie is small, the aggregate effort may be increasing in prize inequality, unlike in Fang et al.(2018); (iii) the welfare may go up with a higher percentage of unskilled workers, as do the completion rates of the skilled and unskilled subpopulations. Our results lend support to government subsidies for R&D, assuming the profits to be made are substantial.

### About the author:

Jakša Cvitanić works in the fields of mathematical finance, financial engineering, and financial economics. He received a PhD in Statistics from Columbia University in 1992. He was an Assistant and Associate Professor of Statistics at Columbia University until 1999. From 1999 to 2005 he was a Professor of Mathematics and Economics at the University of Southern California, where he was also the Associate Chair. He is currently Richard N. Merkin Professor of Mathematical Finance at the California Institute of Technology, the director of the Linde Institute of Economic and Management Sciences, and the vice-president of the Bachelier Finance Society. He received the American Statistical Association Scholastic Excellence Award (1992). He has been a co-editor of "Finance and Stochastics" and of "Mathematical Finance", and has served on the editorial boards of several other journals. He has co-authored two books, "Introduction to the Economics and Mathematics of Financial Markets" and "Contract Theory in Continuous Time Models", and more than fifty scientific articles.

**We look forward to your attendance!**