

# FUNCTIONAL ANALYSIS AND OPERATOR THEORY WEBINAR

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## Entrywise positivity preservers in fixed dimension: II

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The second talk in this series will (after a quick introduction) focus on how to resolve the outstanding questions from the first talk, using additional tools from symmetric function theory and type A representation theory. These tools help extend prior results from entrywise polynomial preservers to finite and infinite sums of real powers, acting on positive matrices with positive entries. We conclude with a novel characterization of weak majorization of real tuples, via Schur polynomials and Vandermonde determinants, and use it to strengthen and extend the Cuttler–Greene–Skandera/Sra characterization of majorization to all real tuples.

(Based on two papers: with Alexander Belton, Dominique Guillot, and Mihai Putinar, *Adv. Math.* 2016; and with Terence Tao, *Amer. J. Math.*, in press.)

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25 Nov 2020 12:00 London time

You can join the event via this link:

<https://istaustria.zoom.us/j/97256950873?pwd=bWd6U1kyVXZFQk1wNl15ZTlXTE1ZQT09>

Meeting ID: 972 5695 0873

Passcode: 582736

More information about the webinar series can be found at the following homepages

<https://www.renyi.hu/~titkos/faot.html>

<https://researchseminars.org/seminar/FAOT>

The slides and video recordings of all previous talks are available in this google drive folder:

[https://drive.google.com/drive/folders/1Vo6musdFZwhsMmoD3OKuJQ35Q\\_IWSZwd](https://drive.google.com/drive/folders/1Vo6musdFZwhsMmoD3OKuJQ35Q_IWSZwd)