

June



SCMS Seminar

SEQUENCES PRESERVING TOPOLOGICAL NORMALITY

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Time: Sat, Jun 24, 16:00-17:00

Zoom link: <https://pwr->

[edu.zoom.us/j/93160027891?pwd=UEJxV1ZTQ0xLdHc0OEpbODk2YlBFUT09](https://pwr-edu.zoom.us/j/93160027891?pwd=UEJxV1ZTQ0xLdHc0OEpbODk2YlBFUT09)

Code: 5DDTUx

Abstract: A sequence $x=(x_n)_{n \in \mathbb{N}}$ over a finite alphabet $A=\{0, 1, 2, \dots, b-1\}$ is called topologically normal if all possible finite blocks appear in X . In other words, such a sequence is transitive in the full shift. We will answer the following question: which sequences $y=(y_n)$ over the alphabet A preserve topological normality, i.e., have the property that $x+y$ (coordinatewise addition modulo b) is topologically normal for every topologically normal x ?

The answer to an analogous question in the measure-theoretic setup is well known: sequences preserving normality are exactly the deterministic sequences. The answer in the topological setup is surprisingly different, that is why we find the topological problem quite interesting.