
A Ramsey type problem for linear recurrence sequences

Gábor Nyul

(joint work with Bettina Rauf and Csanád Bertók)

A well-known Ramsey type theorem of van der Waerden states that for any positive integers k and r , if we colour the positive integers with r colours, then there exists a strictly increasing monochromatic arithmetic progression of length k . In our talk, we investigate the similar problem for linear recurrence sequences.

H. Harborth and S. Maasberg studied this problem for sequences satisfying the Fibonacci recurrence. We extend their results for higher order linear recurrence sequences with positive integer coefficients, and we also study binary linear recurrences having coefficients of both signs.