

1030-37-25

Inger J. Håland Knutson* (inger.j.knutson@hia.no), Agder University College, Dept of mathematics, Service Box 422, 4604 Kristiansand, Norway. *Weak mixing implies weak mixing of higher orders along tempered functions.*

This is a joint work with V. Bergelson on extending the polynomial multiple recurrence theorems to much wider families of functions. Besides throwing new light on the question of "how much higher degree mixing is hidden in weak mixing", the obtained results also show the way to possible new extensions of the polynomial Szemerédi theorem. (Received June 19, 2007)