

Mathematical Colloquium

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STATIONARY RANDOM ENTIRE FUNCTIONS AND RELATED QUESTIONS

LET T BE THE ACTION OF THE COMPLEX PLANE ON THE SPACE OF ENTIRE FUNCTIONS DEFINED BY TRANSLATIONS, I.E. T_w TAKES THE ENTIRE FUNCTION $f(z)$ TO THE ENTIRE FUNCTION $f(z+w)$. B.WEISS SHOWED IN 1997 THAT THERE EXISTS A PROBABILITY MEASURE DEFINED ON THE SPACE OF ENTIRE FUNCTIONS, WHICH IS INVARIANT UNDER THIS ACTION. IN THIS TALK I WILL PRESENT OPTIMAL BOUNDS ON THE MINIMAL POSSIBLE GROWTH OF FUNCTIONS IN THE SUPPORT OF SUCH MEASURES, AND DISCUSS OTHER GROWTH RELATED PROBLEMS INSPIRED BY THIS WORK. IN PARTICULAR, I WILL FOCUS ON THE QUESTION OF MINIMAL POSSIBLE GROWTH OF FREQUENTLY OSCILLATING SUBHARMONIC FUNCTIONS. (THE TALK IS PARTLY BASED ON A JOINT WORK WITH L. BUHOVSKY, A.LOGUNOV, AND M. SODIN.)

December 19, 2021 @ 15:00 – Room 424/8