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Gabriele Mancini* (gabriele.mancini@uniroma1.it), Sapienza University of Rome, Piazzale Aldo Moro 5, Building CU036, Office 12, 00185 Rome, Italy. *Extremal functions for fractional Moser-Trudinger inequalities in dimension 1.*

In this talk I will give a short overview on Adams-Moser-Trudinger inequalities on fractional-order Sobolev spaces. Then I will focus on the one-dimensional setting and I will present some recent results obtained in a joint work with Luca Martinazzi concerning the existence of extremal functions for these inequalities on an interval and on the whole real line. In both cases, we use blow-up analysis for solutions to the corresponding Euler-Lagrange equation and for their harmonic extensions to the upper half plane. In this fractional setting, due to the non-local nature of the problem, local convergence of scaled solutions is not enough to describe the blow-up profile. New sharp global estimates obtained via the commutator techniques are necessary. (Received January 18, 2021)