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SEMINÁRIO
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Some extremal problems in de Branges spaces

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ABSTRACT:

Louis de Branges introduced a class of Hilbert spaces of entire functions which now bear his name. They are generalizations of the classical Paley–Wiener space of square integrable functions whose Fourier transform is compactly suppported. Evaluation functionals are continuous in these spaces, so they enjoy a reproducing kernel structure and there are corresponding interpolation formulas with nodes at zeros of certain auxiliary functions. We explore some extremal problems in these spaces and discuss their applications towards existence of zeros in families of L-functions, sign uncertainty principles for bandlimited functions, and sharp Poincaré inequalities.

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