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Large covers and sharp resonances of hyperbolic surfaces

After a short survey of results about distribution of resonances for hyperbolic surfaces, I will discuss recent joint work with Frederic Naud and Louis Soares, where we study behaviour of resonances for large degree covers. Using techniques of thermodynamic formalism and representation theory, we prove new existence results of "sharp non-trivial resonances" in the large degree limit, for abelian covers and infinite index congruence subgroups.