

# Ramanujan graphs

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In the first lecture, I shall discuss how the spectral approach to the problem of constructing infinite families of expanding graphs, leads to the definition of Ramanujan graphs, which are "best possible" expanders from the spectral point of view. In the second lecture I will give the construction of Ramanujan graphs due to Lubotzky-Phillips-Sarnak and Margulis, and explain briefly how the desired bound on eigenvalues follows from the Ramanujan conjecture (established by Eichler) on coefficient of modular forms.