

Introduction to the distortion method on the covering systems

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邀请人：吴瑞军

摘要： In this talk, we will introduce the distortion method for the minimum modulus problem on covering systems. The minimum modulus problem was posed by Erdős in 1950, who asked whether the minimum modulus of a covering system with distinct moduli is uniformly bounded. In 2007, Filaseta, Ford, Konyagin, Pomerance and Yu affirmed it if the reciprocal sum of the moduli of a covering system is bounded. Later in 2015, Hough resolved this problem by showing that the minimum modulus is at most 10^{16} . In 2022, Balister, Bollobas, Morris, Sahasrabudhe and Tiba reduced this bound to 616,000 by developing a versatile method called the distortion method. Recently, Klein, Koukoulopoulos and Lemieux generalized Hough's result by using this method. Following Klein et al.'s work, we provide a solution to Erdős' minimum modulus problem in number fields. This is a joint work with Huixi Li and Shaoyun Yi. In this talk, we mainly introduce Balister et al.'s distortion method.

个人简介： 王标，中科院数学所博士后，2011年四川大学数学学院本科毕业，2014年中科院数学所硕士毕业，2021年纽约州立大学布法罗分校数学系博士毕业。主要研究方向为解析数论，研究成果发表于J. Number Theory、Finite Fields Appl.、Int. J. Number Theory、Ramanujan J.等国际数学期刊。

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