İSTANBUL ANALYSIS SEMINARS

AN INTRODUCTION TO POTENTIAL THEORY ON CALIBRATED MANIFOLDS

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Abstract: Plurisubharmonic functions in calibrated geometry are introduced by Harvey and Lawson. These functions are just the generalizations of the classical plurisubharmonic functions in complex geometry to calibrated manifolds, and share lots of similar properties. Moreover, by the help of these functions, a notion of pseudo-convexity is defined in the context of calibrated manifolds, similar to the one in complex analysis.

In this talk, I will try to explain these new concepts and results as well as showing their counterparts in complex analysis and geometry. In addition to these, I will talk about geometric constructions, known as ϕ-free submanifolds to give examples of pseudo-convex domains in calibrated manifolds.

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