



istanbul matematiksel bilimler merkezi
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THE PROBLEM OF RESOLUTION OF SINGULARITIES IN ARBITRARY CHARACTERISTIC AND GENERALIZED PUISEUX SERIES.

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Abstract

The subject of this talk is the problem of resolution of singularities in algebraic geometry, but it is intended for a more general audience than just specialists in birational geometry. In the first part of the talk we will give an introduction to the problem which should be understandable for a general mathematical public. In the second part of the talk we will give a self-contained treatment of valuation theory and its interpretation in birational geometry. We will define valuations from scratch, give examples (with special attention to valuations centered on algebraic surfaces), define the space of Zariski-Riemann and explain its connection to the problem of resolution of singularities and local uniformization. In the end of the talk we will discuss a more general notion of **universal** Puiseux series associated to R_ν (series which need not have well ordered support) as well as their possible applications to the problem of Local uniformization in arbitrary characteristic.

Date : Friday, May 16, 2014

Time: 11:00

Place: IMBM Seminar Room, Boğaziçi University South Campus