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Algebraic Coding Theory
Special Session B28

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This special session will focus on the interactions between algebraic coding theory and finite geometry and algebraic geometry. These research areas developed together, each of them playing a crucial role in the advancement of the other. Renowned examples are given by the non-existence of the projective plane of order 10, proved via the study of certain error-correcting codes, the celebrated MDS conjecture. Geometric tools have been used to solve the known cases, and the use of algebraic varieties in positive characteristic to define codes which are asymptotically good.

Concretely, speakers of this special session will present recent developments on algebraic and geometric methods used in coding theory, the study of special linear codes together with their dual geometric counterparts, and the problem of designing error-correcting codes with certain incidence and geometric structures and algebraic curves or, more generally, varieties in positive characteristic.

The aim of this session is to bring together leading experts in the fields of coding theory, finite geometry and algebraic geometry in positive characteristic in order to present contemporary research directions on these topics. All levels of seniority are represented, from early-stage to more experienced researchers.

For more information visit `https://matteobonini11.wixsite.com/actumiams2024`.

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