

Lifting problem for universal quadratic forms

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Abstract: A quadratic form is universal if it represents all the positive integers; the most well-known example being the sum of four squares over the integers \mathbb{Z} . In my talk, I'll start with a brief overview of universal quadratic forms over number fields. Then I'll mostly focus on the lifting problem for universal forms, ie, on the question “when can a quadratic form with coefficients from a given number field be universal over a larger field?” (Based on joint works with Daejun Kim, Seok Hyeong Lee, and Pavlo Yatsyna.)