New Classes of Finitely Separable Finitely Generated Commutative Rings

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My research aims to study the finite separability of finitely generated commutative rings. It is of interest because of its connection with the so-called algorithmic problem of entering a subring. The global solution to this problem is still unknown. My main result describes finitely separable prime quadratic extensions of monogenic rings of prime characteristic. This result is a significant advance in this topic in recent years and allows to obtain a wide class of rings in which the above problem is algorithmically solvable, and this is a non-trivial diophantine problem in the ring of polynomials with integer coefficients.

Awards Won: