

**Iarrobino, A.**

**Hilbert scheme of points: Overview of last ten years.** (English) [Zbl 0646.14002](#)

Algebraic geometry, Proc. Summer Res. Inst., Brunswick/Maine 1985, part 2, Proc. Symp. Pure Math. 46, 297-320 (1987).

[For the entire collection see [Zbl 0626.00011](#).]

This paper is an excellent survey, written mainly for non-experts, concerning the recent developments in the theory of Hilbert schemes of points. Four main themes are discussed, namely: (1) Punctual Hilbert scheme of a surface and of a curve lying on it, (2) The local punctual Hilbert scheme and the mapping germs, (3) The geometry of  $Hilb^n Y$  and foundations, (4) Extensions to modules, applications and vector bundles.

The author succeeded to give some feeling for this subject, illustrating the theory by many examples. The paper can also be considered as reflecting the actual state of affairs in the field. An extensive bibliography is included.

Reviewer: [L.Bădescu](#)

**MSC:**

[14C05](#) Parametrization (Chow and Hilbert schemes)

[14C25](#) Algebraic cycles

[14-03](#) History of algebraic geometry

[01A60](#) History of mathematics in the 20th century

Cited in **1** Review  
Cited in **16** Documents

**Keywords:**

Bibliography; zero cycles; symmetric products; Hilbert schemes