

**Pitts, Jon T.**

**Existence and regularity of minimal surfaces on Riemannian manifolds.** (English)

Zbl 0462.58003

Mathematical Notes, 27. Princeton, New Jersey: Princeton University Press; University of Tokyo Press. VII, 329 p. \$ 16.00 (1981).

For a scan of this review see the [web version](#).

**MSC:**

- 58-02 Research exposition (monographs, survey articles) pertaining to global analysis
- 58E12 Variational problems concerning minimal surfaces (problems in two independent variables)
- 53C42 Differential geometry of immersions (minimal, prescribed curvature, tight, etc.)
- 58E15 Variational problems concerning extremal problems in several variables; Yang-Mills functionals
- 53A10 Minimal surfaces in differential geometry, surfaces with prescribed mean curvature
- 58E10 Variational problems in applications to the theory of geodesics (problems in one independent variable)
- 49Q05 Minimal surfaces and optimization
- 58E05 Abstract critical point theory (Morse theory, Lyusternik-Shnirel'man theory, etc.) in infinite-dimensional spaces
- 49Q15 Geometric measure and integration theory, integral and normal currents in optimization
- 49Q20 Variational problems in a geometric measure-theoretic setting

Cited in **11** Reviews  
Cited in **60** Documents

**Keywords:**

existence and regularity of minimal surfaces on Riemannian manifolds; geodesics; minimal surfaces; second variation estimates of R. Schoen and L. Simon; locally uniquely mass minimizing  $k$  dimensional integral currents; varifold; spaces of surfaces;  $i$ -th homotopy group of the space of  $j$ -dimensional integral cycles on a  $k+1$  dimensional Riemannian manifold; stable hypersurfaces