Results of my research.

- [1]. Isotropic immersions and parallel immersions of space forms into space forms; [4]. Isotropic immersions of rank one symmetric spaces into real space forms and mean curvatures; [6]. Isotropic immersions of complex space forms into real space forms and mean curvatures; [7]. Isotropic immersions and parallel immersions of Cayley projective plane into a real space form; [8]. Characterization of parallel immersions of real space forms into real space forms (in Japanese).

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  Using inequalities with respect to the mean curvature, we provide a sufficient condition for isotropic immersions of compact Riemannian symmetric spaces of rank one into a real space form to be parallel.

- [2]. Isotropic immersions with low codimension of complex space forms into real space forms; [10]. Isotropic immersions with low codimension of space forms into space forms.

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  Using an inequality with respect to the codimension, we provide a sufficient condition for isotropic immersions of space forms into a real space form to be parallel.

- [3]. Study of isotropic immersions (with Sadahiro Maeda).

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  This is an expository paper about isotropic immersions.

- [5]. Remarks on real Lie groups with a complex Lie algebra.

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  Let G be a real Lie group, let "$\cdot$" denote the group operator on G, and let $\mathfrak{g}$ be the Lie algebra of G. Suppose that $\mathfrak{g}$ admits a complex structure. Then, it is known that G is a complex Lie group with respect to the same operation "$\cdot$" when G is connected. However, there exists an example that G can not be a complex Lie group with respect to the same operation "$\cdot$" when G is disconnected. In this paper, we give such an example.

- [9]. Symplectic homogeneous spaces and adjoint orbits (in Japanese).

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  We explain a relationship between symplectic homogeneous spaces (G, H, Ω) with G semisimple and the adjoint orbits. By virtue of the relationship, we clarify a structure of (G, H, Ω) with G noncompact simple and H compact, and classify their infinitesimal versions.

- [11]. Local symplectic homogeneous spaces and compact semi-simple Lie groups.

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  We classify all infinitesimal versions of symplectic homogeneous spaces G/H whose transformation group G are compact semi-simple; moreover, we prove that these spaces G/H are Kählerian homogeneous spaces.

- [12]. Certain geometrical properties of semisimple orbits.

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  We characterize Armand Borel & Harish-Chandra theorem from geometrical point of view; moreover, we explain a relationship between semisimple orbits and affine symmetric spaces.

- [13]. Centralizers of elliptic elements in real semisimple Lie algebras, and determination of the H-elements in pseudo-Hermitian symmetric Lie algebras.

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  In this paper, we give a method of determining the centralizers of elliptic elements in real semisimple Lie algebras, and we determine the H-elements in all simple irreducible pseudo-Hermitian symmetric Lie algebras.