Results of my research.

- [1]. Isotropic immersions and parallel immersions of space forms into space forms; [3]. Isotropic immersions of complex space forms into real space forms and mean curvatures; [5]. Isotropic immersions of rank one symmetric spaces into real space forms and mean curvatures; [7]. Jitsukūkannkei kara jitsukūkannkei heno heikoumainyuu no tokuchou duke (Japanese); [8]. Characterization of parallel immersions of Cayley projective plane into a real space form.

  ——

  Using inequalities with respect to the mean curvatures, we obtain a sufficient condition for a isotropic immersion 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; [6]. Isotropic immersions with low codimension of space forms into space forms.

  ——

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

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

  ——

  This is an expository paper about isotropic immersions.

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

  ——

  We give an example of a disconnected real Lie group $(G, \cdot)$ with complex Lie algebra can not be a complex Lie group with respect to the same group operation "$\cdot$".

- [10]. A local structure of a symplectic homogeneous space and $\mathfrak{sl}(2, \mathbb{R})$.

  ——

  We introduce the notion of local symplectic homogeneous space, and classify the symplectic homogeneous space with the transformation group $SL(2, \mathbb{R})$ (resp. $SU(2)$).

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

  ——

  We classify all infinitesimal versions of symplectic homogeneous spaces with the transformation group compact semi-simple; moreover, we state a relation between compact symplectic homogeneous spaces and compact Kähler homogeneous spaces.