

Jean-Louis Koszul · Yiming Zou

Introduction to Symplectic Geometry

This introductory book offers a unique and unified overview of symplectic geometry, highlighting the differential properties of symplectic manifolds. It consists of six chapters: Some Algebra Basics, Symplectic Manifolds, Cotangent Bundles, Symplectic G-spaces, Poisson Manifolds, and A Graded Case, concluding with a discussion of the differential properties of graded symplectic manifolds of dimensions $(0,n)$. It is a useful reference resource for students and researchers interested in geometry, group theory, analysis and differential equations.

Mathematics

ISBN 978-981-13-3986-8



► springer.com

Koszul · Zou



Introduction to Symplectic Geometry

Jean-Louis Koszul · Yiming Zou

Introduction to Symplectic Geometry

$$\mu : M \longrightarrow \mathfrak{g}^*$$

$$\mu(sx) = s\mu(x) = \text{Ad}^*(s)\mu(x) + \varphi_\mu(s), \quad \forall s \in G, x \in M.$$

$$c_\mu(a, b) = \{\langle \mu, a \rangle, \langle \mu, b \rangle\} - \langle \mu, [a, b] \rangle = \langle d\varphi_\mu(a), b \rangle, \quad \forall a, b \in \mathfrak{g}.$$

 Springer