Speaker: **Park, Jongil**
Title: *A note on exotic smooth structures of 4-manifolds*
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Abstract: Due to an application of gauge theory to smooth 4-manifolds, it has been known that some topological 4-manifolds do not admit a smooth structure and some smooth 4-manifolds, for example elliptic surfaces, admit an exotic smooth structure.

In this talk we survey known results on exotic smooth structures of 4-manifolds. And then we conclude that most known simply connected, closed, irreducible, smooth 4-manifolds with b_2^+ large enough admit infinitely many distinct exotic smooth structures. Explicitly, for each known simply connected, closed, irreducible, smooth 4-manifold with b_2^+ large enough, we present a family of infinitely many, both symplectic and non-symplectic, 4-manifolds which are homeomorphic, but not diffeomorphic, to a given 4-manifold.