Speaker: Hiroakira Ono

Title: A glance at extensions of bi-intuitionistic logic

Abstract: Bi-intuitionistic logic **BiInt** is intuitionistic logic with co-implication, a logical connective dual to usual implication. In the present talk, we will discuss basic properties of extensions of **BiInt**, in comparison with those of extensions of intuitionistic logic. expecting to see effects of introducing co-implication into intuitionistic world. First, we will see the matter from syntactical aspects, that include cut-free sequent formulation, (local) deduction theorems, and also negative translation. Then we will focus our attention on the symmetry features appearing in logics over **BiInt**, which is obviously peculiar to this class. It is pointed out that an interesting duality exists between a given logic and its *mirror image*, which preserves certain logical properties such as finite model property and Craig's interpolation property. These topics are discussed also from an algebraic viewpoint in terms of bi-Heyting algebras.