**Lecture Title:**

**Application of Paraconsistent Annotated Logic Program EVALPSN   
 　　 to   
　　　　　　　　Intelligent Control/Safety Verification**

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**Abstract**

Nowadays a lot of data are treated automatically in various artificial intelligent systems by using computers though, those data include various kinds of contradiction and inconsistency and usual computer logics are not so good at dealing with contradiction in the same system.

Paraconsistent annotated logic is well known as a formal logic that can deal with contradiction in the framework of consistent logical systems. One of its logic programs called Extended Vector Annotated Logic Program with Strong Negation (EVALPSN) has been developed for dealing with non-monotonic reasoning such as defeasible reasoning, etc. by Kazumi Nakamatsu and applied to conflict resolving, various intelligent control systems such as traffic signal control, railway interlocking safety verification, etc. One of these applications of EVALPSN, traffic signal control at an intersection will be introduced with visual simulation.

Moreover, a special EVALPSN that can deal with a sort of temporal reasoning, before-after relations between processes (time intervals), which has been developed and named Bf(before-after)–EVALPSN by Kazumi Nakamatsu, and its application to real-time process order control will be introduced based on a small pipeline processing example if we have enough time.