Daniel D. McCracken Computational Sciences Seminar Series

Wednesday 3:00 p.m., May 19, 2004

Black Hall, Room 152

Professor Germano Resconi

Department of Mathematics and Physics
Catholic University, Brescia, Italy

The Logic of Uncertainty

Abstract: When we know the logic of uncertainty, we can use the formal logic calculus to make reasoning process to compose in any complex way elementary measures of uncertainty. With the meta-theory of uncertainty, we can extend the traditional probability calculus, fuzzy logic, Dempster-Shaffer and other theories. In the fuzzy set theory it is not well clarified the relation with the fuzzy set and the probability calculus. With the meta-theory of uncertainty, we can discover that the fuzzy set and the probability calculus are very near one to the other. With the meta-theory of uncertainty, it is possible also to discover the connection between the uncertainty in the quantum mechanics and the other uncertainties. Quantum logic becomes one of the logics included inside the meta- theory of uncertainty. The meta-theory of uncertainty with the modal logic opens the possibility to discover new types of uncertainties in such a way as to extend the computation force to the real human world.

Supported by: CWU Faculty Senate Development and Appropriations Committee
For more info. please contact: Prof. Glasby (963 2123), or Prof. Kovalerchuk (963 1438)