

HYBRID SYSTEMS FOR SOFTWARE ENGINEERING

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The development of systems, in particular, software products, involves more and more factors and their complexity is becoming higher. Therefore, the engineering of these system is becoming a difficult task, due primarily to the great number of points that should be dealt with.

Software engineers have been concerned with these problems and have devised methods, techniques and tools to cope with them. However, there are still several stringent open questions, which demand new approaches.

In this scenario, the employment of Neural Networks and Fuzzy Techniques is promising, since they can deal with the complexity and a great number of variables at the same time.

Neural Network models became famous because they are fault-tolerant, flexible and easy to implement. If we incorporate Fuzzy Logic during the assessing process, we obtain, not only a boolean answer for the possible classes, but also the probability for each class.

These tools can help in software engineering tasks and would be useful to improve the quality of the final product, allowing to detect some problems, as well as to reduce the cost and time spent in the development of the software product.

This session aims to present novel ideas, real applications, critique of existing work, and practical studies and experiments, which demonstrate how Software Engineering tasks can be assisted by Neural Networks and Fuzzy Logic techniques. Position papers which point to current research in this context will be accepted.

TOPICS OF INTEREST

Topics of interest for the session include, but are not restricted to, the application of Neural Networks, Fuzzy Logic and Evolutionary Computation technologies to:

- Requirements Engineering
- System Analysis and Design
- Software Quality
- Software Verification, Validation and Testing
- Software Reuse
- Software Quality
- Software Maintenance
- Software Reengineering
- Agent-Based Software Engineering
- Component-Based Software Engineering
- Aspect-Oriented Software Engineering