

1st Workshop on Software Services: Frameworks and Platforms  
Timisoara, September 23-25, 2010



## **SORMSYS: TOWARDS TO A RESOURCE MANAGEMENT PLATFORM FOR SELF-ORGANIZING LARGE SCALE DISTRIBUTED SYSTEMS**

FLORIN POP  
COMPUTER SCIENCE DEPARTMENT,  
FACULTY OF AUTOMATIC CONTROL AND COMPUTERS,  
UNIVERSITY POLITEHNICA OF BUCHAREST, ROMANIA  
EMAIL: FLORIN.POP@CS.PUB.RO

**ABSTRACT.** The SORMSYS project's main goal is to optimize resource management in large scale distributed systems with the capability of self-organization. This paper will present the design of management architecture based on existing middleware solutions through the design of algorithms and methods inspired by natural models. The architecture is full decentralized and it will aim to optimize resource management in different types of distributed systems such as Grid, P2P, and Cloud. The important components considered for the architecture are: allocation of resources, task scheduling, resource discovery, monitoring resources and provide fault tolerance. The SORMSYS project aims to highlights the original obtained results in internationally scientific community. The paper also presents the expecting results and discusses the performance evaluation of proposed architecture.