Adaptive Service-Oriented Application Architecture and System Engineering

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Service-oriented computing is making strides due to acceptance by government and major computer and software companies, however there are several issues that we need to address. SOA is related to a number of traditional professional areas such as business models, programming languages, model construction, verification, software architecture and design, software reusability, databases, ontology, autonomic computing, grid computing, and computer networks.

While most of these topics are covered in universities, they are often scattered and segmented into different colleges, we need a definitive and systemic approach for SOA research, development and education. There is a great need to develop "dynamic service-oriented system engineering" such as service-oriented requirement engineering, service-oriented design, service-oriented model and verification, dynamic service verification and validation, dynamic service maintenance and re-composition, dynamic service security analysis, dynamic service reliability analysis, and dynamic service profiling and collaboration.