Third Joint Laureate
Research & Development

◈ Project title: **ERP design and implementation based on enterprise architecture and modeling and integrated modular PM design**

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Abstract:

BPR (Business Process Reengineering) is one of the most high risk and time consuming stage in any ERP implementation. This research introduces a new methodology named layering and modular enterprise architecture in which a new architecture modeling has been replaced with process engineering phase.

In this methodology, new atomic objects and architecture layers are established to model the aimed best practice. Using these elements, enterprise processes are automatically extracted and works created by different systems are flowed between electronic boxes (which are defined structurally in disciplines or attached to organizational positions). Therefore, new business processes are essentially synchronized with architecture model and processes' contradictions are minimized.

This methodology is successfully associated in Carane ERP system. This system, which aimed to integrate production planning, plant maintenance, quality control, and inventory management, has been implemented in a large scale steel company and the results indicated that the processes are improved considerably and are fully harmonized with all elements of the architecture. The introduced methodology can also be applied to service and commercial enterprises.