**2.** [**Emotional Agents: A Model And An Application**](http://www.zuj.edu.jo/portal/kholud-abu-maria/blog/2015/03/11/emotional-agents-a-model-and-an-application/)

**Khulood Abu Maria** and Raed Abu Zatir,"Emotional Agents: A Model And An

Application", International Journal of Information and Software Technology, An Elsevier Publishing Journal, Volume 49, Issue 6, June 2007.

# ABSTRACT

This paper proposes modeling of artificial emotions through agents based on symbolic approach. The symbolic approach utilizes symbolic emotional rule-based systems (rule base that generated emotions) with continuous interactions with environment and an internal “thinking” machinery that comes as a result of series of inferences, evaluation, evolution processes, adaptation, learning, and emotions. We build two models for agent based systems; one is supported with artificial emotions and the other one without emotions. We use both in solving a bench mark problem; “The Orphanage Care Problem”. The two systems are simulated and results are compared. Our study shows that systems with proper model of emotions can perform in many cases better than systems without emotions. We try to shed the light here on how artificial emotions can be modeled in a simple rule-based agent systems and if emotions as they exist in “real intelligence” can be helpful for “artificial intelligence”. Agent architectures are presented as a generic blueprint on which the design of agents can be based. Our focus is on the functional design, including flow of information and control. With this information provided, the generic blueprints of architectures should not be difficult to implement agents, thus putting these theoretical models into practice. We build the agents using this architecture, and many experiments and analysis are shown.