**Intelligent e-Learning Systems**

**Abdel-Badeeh M. Salem**

Computer Science Department

Head of Artificial Intelligence and Knowledge Engineering Research Labs,

Faculty of Computer & Information Sciences

Ain Shams University, Abbassia, Cairo, Egypt

***E-mail:*** [*absalem@cis.asu.edu.eg*](mailto:absalem@cis.asu.edu.eg)[*abmsalem@yahoo.com*](mailto:abmsalem@yahoo.com)

Intelligent e-Learning Systems (IeLSs) are knowledge-based systems that imitates the human mind. The developing of these systems is based on many disciplines, e.g., knowledge engineering, artificial intelligence (AI), virtual reality, cybernetics, cognitive science, neurosciences, computer science, psychology, mathematics, biology, linguistics and engineering. The main characteristics of IelSs are; the ability of inference, reasoning, perception, learning, and knowledge-based. On the other side, computational intelligence and machine learning techniques are the backbone in the developing of these systems .Such intelligent approaches give the e-learning systems added computing capability, allowing them to exhibit more intelligent behavior. To a limited degree, AI concepts and theories permits IeLS to accept knowledge from human input, then use that knowledge through simulated thought and reasoning processes to solve problems. Many types of IeLSs are in existence today and are applies to different domains and tasks, e.g., biological sciences, medical sciences, health care, commerce, and education. This talk introduces some of the intelligent methodologies and techniques from the literature and the research results of the author and his colleagues that have been carried out in recent years on developing intelligent e-Learning systems in medical domain as an example.