

**Dr. Heba Khalil: “Large Language Models: From Theory to Applications”**  
**Topic abstract**

Large Language Models (LLMs) are powerful computer programs that can understand and produce human language. They are trained on huge amounts of text, like books and websites, so they can answer questions, write stories, translate languages, and even help with coding. These models are built using advanced math and computer science, but today they are used in everyday apps like virtual assistants, chatbots, and language tools—making technology easier and more natural to use.