

Synthesis of the curriculum.

It is an **Ph.D. program**. There are different applications are the result of conducting research in Intelligent Systems. One application consists of *an artificial hand attached to a person's arm*. This application integrates different systems such as sensors, motors, mechanical parts, electronic circuits and processors. These systems are related to the area of study; however, the core of the artificial hand is the system that analyzes received signals to identify patterns from incoming brain signals. These signals correspond to commands such as "take object", "take on lightweight object", "take heavy object", "push", etc. The interpretation of bio-medical signals requires the integration of mathematical models, artificial intelligence and algorithm implementation. Another intelligent system is a brain-computer interface to assist disable people, as a mind-controlled wheelchair.

The intelligent systems program comprises **three research areas** which are (1) **Multimedia Signal Processing**, (2) **Bio-inspired Systems**, and (2) **environments and intelligent agents**. The faculty, affiliated to this program, has **members in the national research system** (SNI) at different levels I, II, and III. All faculty professors participate in research activities through publications in indexed journals, research projects with external funding and interaction with other universities. Ph. D. researchers have access to the National Super-computer Laboratory based at UDLAP. This laboratory is part of a joint effort by a consortium of three research institutions, BUAP-UDLAP-INAOE.