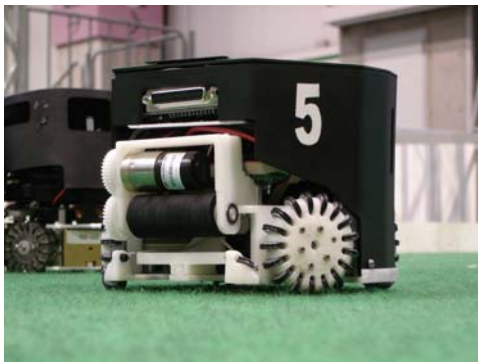


ROBOTICS LABORATORY – ITAM “EAGLE KNIGHTS” – ROBOCUP SOCCER

The Robotics Laboratory at ITAM was founded more than 10 ago to complement academic activities related to robotics at ITAM’s Engineering Division. Initial developments included line follower robots developed by students as class projects participating in national competitions. With time more experienced students continued in the laboratory designing more advanced robots such as maze solvers participating in national and international competitions. Since 2002 Dr. Alfredo Weitzenfeld has been directing the Robotics Laboratory having as main goal the design of more advanced robots to participate in world soccer robotic RoboCup events (equivalent to “FIFA”). This event attracts the best teams in the world serving as platform to evaluate advances in diverse robotics areas. ITAM’s robotic soccer team “Eagle Knights” participates since 2003 in “Small Size” and “Four Legged” RoboCup leagues having obtained important results throughout the years.



“Small Size” RoboCup league robots



“Four Legged” RoboCup league robots

The Eagle Knights team has obtained the following results in the Small-Size category: **3rd Place** in US Open 2003 in Pittsburgh, USA; **2nd Place** in US Open 2004, New Orleans, USA; **1st Place** in IEEE Latin American Robotics Contest 2004, Mexico City; and **1st Place** in Latin American Open 2005, Sao Luis Maranhao, Brasil. The team has also participated in two world cups: Osaka, Japan 2005, and Bremen, Germany 2006, where Eagle Knights was the only Latin American participant in the Small-Size league. In the Four-Legged league Eagle Knights has competed in the following international tournaments: US Open 2004, New Orleans, USA; and Latin American Open 2005, Sao Luis Maranhao, Brasil. The team has also participated in two world cups: Osaka, Japan 2005, and Bremen, Germany 2006, where Eagle Knights was the only Mexican participant in the Four-Legged league and one of two Latin American teams. In 2006 ITAM also participated in the new RoboCup@Home league at RoboCup 2006 in collaboration with ISC-Lyon in France obtaining fourth place.

During these last years more than 20 students have participated in the development of the RoboCup project participating and attending diverse Latin-American, American and



world competitions. These participations and the results obtained have motivated new students to collaborate in these projects, achieving extensive presence, recognition and spread in diverse communication media such as TV, radio and newspapers in Mexico and other countries. To achieve these goals many obstacles had to be overcome including limitations in resources, human and financial. Yet, thanks to continuous efforts the group has maintained and advanced developments in an incremental fashion. Future projects in the laboratory include participation in new leagues such as humanoids and the integration of robots and algorithms developed into research projects sponsored by CONACYT as part of collaboration programs with international institutions.

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