TAIWAN PROGRAM 2019
EXPRESSIONS OF INTEREST

CSIC SCIENTIFIC SUPERVISOR: Javier Segovia Aguas	
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INSTITUTE/CENTER NAME: Institut de Robòtica i Informàtica Industrial (IRI)	
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BRIEF DESCRITION OF THE RESEARCH GROUP: The "Perception and Manipulation" group does research in learning by demonstration, perception of rigid and flexible objects and planning for perception and manipulation.	
CENTER/RESEARCH GROUP'S WEBSITE: https://www.iri.upc.edu	
NUMBER OF STUDENTS WILLING TO WELCOME: 1	
BRIEF DESCRITION OF THE STUDENT ACADEMIC BACKGROUND: The candidate must have a computer science MSc or areas related to the research topic. The student must be proficient in programming skills (C++ and/or python), graph search, heuristics, and logic. It is a plus if the student has some background in classical planning, and program synthesis.	
BRIEF DESCRIPTION OF THE STUDENTS TASK: The community of program synthesis has been working for long time in a scalable framework for automated generation, testing and validation of programs. Over the last few years, they have contributed with an open competition, where different optimization techniques are compared for diverse problem specifications. In that setting, the student will be involved in the study of using classical planning techniques, such as heuristic search, to improve current state-of-the-art SMT solvers. Then, the student will work in the problems of the competition from a different perspective, coding a new kind of solver for the next run of the competition for 2020. In case of obtaining good results, this work can be submitted as a technical paper to the competition workshop, and/or related top-tier conferences from program synthesis or planning communities.	

€1000 FOR LIVING EXPENSES WILL BE THE FINANCIAL CONTRIBUTION FROM THE CSIC CENTER TO THE STUDENTS

Responsible Researcher: **Center Director:**   **ICU Manager:**