



## ***Learning Hierarchical Task Networks with Purpose: for plan satisfaction, for plan quality, and for non-deterministic environments***

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### resumen:

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We describe three case studies for learning hierarchical planning knowledge in the form of decomposition methods for Hierarchical Task Networks (HTNs). The three case studies have a common input: the initial states and plan traces generated from those states, as well as a set of semantically-annotated tasks to be accomplished. From this information, the algorithms extract HTNs with three different purposes: to generate plans that achieve some goals (satisfaction), to generate plans that can be executed in non-deterministic domains, and to generate plans with some measure of quality.

### sobre Héctor Muñoz-Ávila:

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Dr. Héctor Muñoz-Ávila is an associate professor at the Department of Computer Science and Engineering at Lehigh University. Dr. Muñoz-Avila has done extensive research on case-based reasoning, planning, and machine learning. He is also interested in advancing game AI with AI techniques. Dr. Muñoz-Avila is recipient of a National Science Foundation (NSF) CAREER award and two papers awards. He currently holds a Lehigh Class of 1961 Professorship. He has been chair for various international scientific meetings including the Sixth International Conference on Case-Based Reasoning (ICCBR-05). Dr. Muñoz-Avila is currently funded by the National Science Foundation (NSF) and the Air Force Research Laboratory (AFRL). He has been funded in the past by the Defense Advanced Research Projects Agency (DARPA), the Office of Naval Research (ONR), and the Naval Research Laboratory (NRL).