

NARROWING AND RESOLUTION IN LOGIC-FUNCTIONAL

PROGRAMMING LANGUAGES

Elio Giovannetti

Dipartimento di Informatica
Università degli Studi di Torino
Corso Svizzera 185
10149 Torino, Italy

(Abstract)

The lecture will deal with the rôle of narrowing and/or resolution in the framework of integration between logic and functional programming. Narrowing and flattening plus resolution are basically equivalent methods for performing semantical unification. The conditions under which this equivalence holds are carefully explained, and various "relative completeness" properties for narrowing-based and resolution-based semantic unification algorithms are derived, along with their application to the design and implementation of the logic-functional programming language K-LEAF. In addition, a sketch of the latest development of the K-LEAF/IDEAL logic-functional integration will be traced, especially for as concerns the implementation and the semantics of the higher-order component.