# Term Schematizations and Their Applications
# CADE 13 Workshop
# —Position Statement—

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My past research on term schemas focused on unification of terms whose variables are restricted by set constraints [Uri92, Uri91]. The direct use of algorithms to manipulate set constraints [HJ91, Hei92] provided a decision procedure for sorted unification [SS89] under an extended class of sort signatures. These, in turn, are equivalent to a class of tree automata with equality constraints [CD94, BT92, GTT93].

The extended representation (a term schematization) allowed the finitary representation of what would normally be an infinitary unification problem. In effect, this collapses into a finite representation what would otherwise be an infinite set of related formulas in a theorem-proving procedure.

I believe that such use of term schemas is a valuable alternative method of integrating powerful representations and new decision procedures into more general automated deduction systems (for example, in a constraint-oriented framework [Fri91, Bür91]). My goal in attending the workshop is to obtain a fresh overview of the current research in this direction. Such procedures can be of use in my current area of research, formal verification [BBC+96].

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