

Certification of Memory Usage

Martin Hofmann

Institut für Informatik
Ludwig-Maximilians-Universität München
Oettingenstrasse 67
D-80538 München, Germany

Abstract. We describe a type-based approach for inferring heap space usage of certain functional programs and a mechanism for generating certificates as to the thus inferred memory consumption in the form of proofs in a VDM-style program logic for Java bytecode (Java bytecode being the target of compilation). This gives a current snapshot of our work in the EU-funded project ‘Mobile Resource Guarantees’ <http://www.dcs.ed.ac.uk/home/mrg/> between LMU-Munich and LFCS Edinburgh.