

 **informatik-Kolloquium**

Der Fachbereich Informatik der Johannes Kepler Universität Linz¹ lädt in Zusammenarbeit mit der Österreichischen Gesellschaft für Informatik (ÖGI) zu folgendem Vortrag ein:

Prof. Dr. John Gough

Oracle Labs, Brisbane, Australia

Professor emeritus, Queensland University of Technology

Reconceptualising Bottom-Up Tree Rewriting

*Wednesday, July 17, 16:00,
Computer Science Building, room S3 218*

Bottom-up tree rewriting is a widely used method for code selection in programming language compilers. The use of dynamic programming allows such rewriters to emit code sequences that are optimal with respect to some prescribed cost metric, at least for tree-structured computations. The semantics of rewriting are specified by the production rules of a tree grammar.

In this talk, I show that a suitable reinterpretation of the meaning of the non-terminal symbols of such grammars provides a significant increase in the expressivity of the rewriting system. In particular, the generation of instructions for flow of control may be subsumed into the rewriter. Likewise, transformation rules normally associated with peephole optimization are also conveniently expressible.

Short Biography:

John Gough is a professor emeritus at Queensland University of Technology in Brisbane and a researcher at Oracle Labs, Brisbane. His research interests include programming languages, compilers and virtual machines. He is also the author of several books on these topics.

Einladender: Prof. Dr. Hanspeter Mössenböck, Institut für Systemsoftware

¹ Der Fachbereich (<http://informatik.jku.at>) besteht aus folgenden Instituten:
Anwendungsorientierte Wissensverarbeitung (FAW), Bioinformatik, Computational Perception, Computer-Architektur, Computergrafik, Formale Modelle und Verifikation, Informationsverarbeitung und Mikroprozessortechnik (FIM), Integrierte Schaltungen, Pervasive Computing, Systems Engineering and Automation, Systemsoftware, Telekooperation