Informatik-Kolloquium

Rheinisch-Westfälische Technische Hochschule Aachen
Fachgruppe Informatik

RWTH

E I N L A D U N G

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Ort: Seminarraum 9222, Ahornstr. 55

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Thema: Jython and JyNI from developer's view

Jython, successor of JPython, is an implementation of the Python programming language written in Java. It achieves a rather seamless integration between Python and Java by compiling Python-code to Java bytecode (i.e. class-files) instead of CPython bytecode (i.e. pyc-files). This way, Jython-programs can import and use any Java class and even allow to define Python-classes that inherit from a Java-class. From its Java-roots, Jython inherits some mentionable differences to CPython. It has full multi-threading support and thus implements no GIL (global interpreter lock) like CPython does. It uses the Java garbage collector (mark and sweep algorithm) instead of CPython's variant (reference counting). For interfacing with C-libraries it can use JNI (Java native interface) while CPython defines its own C-API.

Thus one cannot use existing native CPython-extensions like NumPy and SciPy in Jython (unless one ports them to Java or JNI). Python frameworks depending on such extensions inherit this issue, which mainly affects scientific Python-code. JyNI aims to close this gap. It is a layer that enables Jython-users to load native CPython- extensions and access them from Jython the same way as they would do in CPython.

Es laden ein: Die Dozenten der Informatik