

DAEDVLUS 

**Validation of critical
software by static analysis
and abstract testing
Presentation of the final
achievements**

Free Seminar
September 27 2002
Saarland University,
Saarbrücken, Germany



IST RTD Project IST-1999-20527

The DAEDALUS Project

DAEDALUS is the shared-cost research and technology development (RTD) project IST-1999-20527 of the European IST Programme of the Fifth Framework Programme (FP5) on the « validation of software components embedded in future generation critical concurrent systems by exhaustive semantic-based static analysis and abstract testing methods based on abstract interpretation ».

Present software verification methods (such as testing, simulation, code review and formal methods including deductive methods or model checking) do not scale up for software of several hundred thousand lines, in particular for essential properties in embedded critical software such as absence of runtime errors, worst-case execution time, data races, precision of floating-point computations...

The DAEDALUS project has explored static analysis methods based on abstract interpretation. The approach has been shown to be effective on software provided by Airbus France.

Project participants

Coordinators :

AIRBUS France, EADS Airbus, Toulouse, France
ENS, École normale supérieure, Paris, France

Participants :

AbsInt, AbsInt Angewandte Informatik GmbH, Saarbrücken, Germany
CEA, CEA-LETI, Commissariat à l'Énergie Atomique, Saclay, France
CNRS-LIX, CNRS & École polytechnique, Palaiseau, France
DIKU, Datalogisk Institut, University of Copenhagen, Denmark
PolySpace, PolySpace Technologies, Grenoble, France
TAU, Tel-Aviv University, Computer Sciences Department, Tel-Aviv, Israel
USaar, Compiler Design Laboratory, Saarland University, Saarbrücken, Germany
UTrier, Compilers and Languages, Computer Science Department, Universität Trier, Germany

Schedule

10:00-10:15	F. Randimbivololona (Airbus France)	Welcome
10:15-10:45	P. Cousot (ENS)	Overview of the scientific achievements of DAEDALUS
10:45-11:30	A. Deutsch (PolySpace)	Static Verification of Runtime Errors in ADA & C Programs
11:30-11:45	Coffee break	
11:45-12:30	C. Ferdinand (AbsInt)	Analyzing for Worst Case Execution Times (WCET)
12:30-14:00	Lunch	
14:00-14:30	E. Goubault (CEA)	Static Analysis of Programs on Floating-point Numbers
14:30-15:00	H. Seidl (UTRIER)	Static Analysis of C + POSIX
15:00-15:15	Coffee break	
15:15-15:45	M. Sagiv (TAU)	Static Analysis for Memory Cleaness
15:45-16:15	F. Randimbivololona (Airbus France)	Exploitation plan
16:15-17:00	All participants	Conclusive discussion

Venue

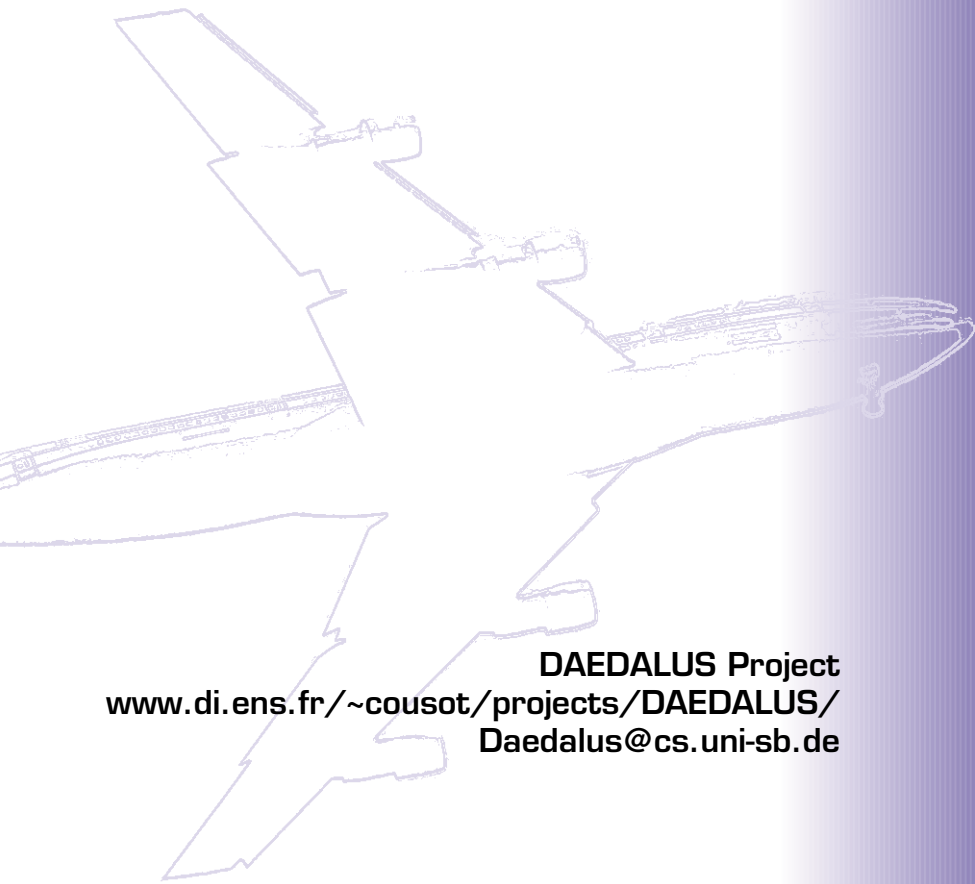
The seminar will take place at
Saarland University,
Building 45,
Saarbrücken,
Germany

For directions, please see :
<http://www.uni-saarland.de/Info/Anschrift.html>

Registration

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DAEDALUS



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