



Program

6th International Conference on Reliable Software Technologies
Ada-Europe'2001



Leuven, Belgium May 14-18, 2001



<http://www.ada-europe.org/conference2001.html>

KATHOLIEKE UNIVERSITEIT
LEUVEN



Program

In 2001, the 6th International Conference on Reliable Software Technologies takes place in Leuven, Belgium, from May 14th to May 18th. The conference offers a technical program and exhibition, plus a series of tutorials and a workshop.

The conference provides an international forum for researchers, developers and users of reliable software technologies. Presentations and discussions cover applied and theoretical work currently conducted to support the development and maintenance of software systems.

The technical program includes keynote addresses, session papers by the international community with refereed contributions from many countries. The proceedings of the conference are published in the Lecture Notes in Computer Science (LNCS) Series by Springer. An exhibition concurrent to the

conference offers an opportunity to explore the latest developments by the commercial marketplace. The tutorials on Monday and Friday offer an excellent opportunity to obtain in-depth knowledge in important technologies in the field.

Leuven is one of Europe's ancient university towns with many old beautiful buildings. The town hall, the famous Beguinage (Begijnhof), the churches, cloisters and colleges stand silent witness to the rich history of Leuven and make it the interesting place it is. Leuven is only 25 km (15 miles) away from Brussels, the capital of Belgium and the seat of the European Union. This year, K.U.Leuven university celebrates its 575th anniversary. The Conference takes place in the unique setting of the classicist buildings of Maria-Theresia College, situated in the historical centre of Leuven.

Tutorial timetable

Monday May 14th

02.15	02.13	02.07	room
T1	T2	T3	
Non-standard techniques in Ada	Practical experiences of safety-critical Ada technologies	Early reliability measurement and improvement	09:00
break	break	break	10:30
<i>Art Duncan</i>	<i>Peter Amey, Rod Chapman</i>	<i>Jeff Tian</i>	11:00
lunch	lunch	lunch	12:30
		T4	
Non-standard techniques in Ada	Practical experiences of safety-critical Ada technologies	An introduction to XML	14:00
break	break	break	15:30
<i>Art Duncan</i>	<i>Peter Amey, Rod Chapman</i>	<i>Gregory Neven, Maarten Coene, Roel Adriaenssens</i>	16:00

Friday May 18th

02.13	02.07	02.15
T5	T6	T7
From full concurrency to safe concurrency	Building distributed systems with Ada	Implementing design patterns in Ada: sequential programming idioms
break	break	break
<i>John Harbaugh</i>	<i>Samuel Tardieu, Laurent Pautet, Thomas Quinot</i>	<i>Matthew Heaney</i>
lunch	lunch	lunch
		T8
From full concurrency to safe concurrency	Building distributed systems with Ada	Architecture centered development and evolution of reliable real-time systems
break	break	break
<i>John Harbaugh</i>	<i>Samuel Tardieu, Laurent Pautet, Thomas Quinot</i>	<i>Bruce Lewis, Ed Colbert</i>

Monday's workshop takes place in room 01.15 and starts at 09:00

Refreshments will be served in the breaks. Lunch is included for those following all-day programs or two half day tutorials on the same day. *Additional lunch tickets are on sale throughout the conference.* Tutorials end at 17:30. Monday evening there is a welcome reception starting at 19:00.

Exhibition

The exhibition opens in the mid morning break on Tuesday and runs until after the Thursday afternoon break.

The nine exhibitors are: ACT, Aonix, DDC-I, Greenhills, Irvine Compiler, Praxis Critical Systems, Rational Software, TNI-Europe and Top Graph'X.

Each exhibitor has at least one half hour presentation slot during the vendor track.

The mid morning and mid afternoon breaks are one hour to give attendees ample opportunity to visit the exhibition.

Also present in the exhibition room is a bookshop.



Tuesday May 15th

09:00	Opening		09:00
09:10	Invited speech. <i>chair Dirk Craeynest</i> Building formal requirements models for reliable software <i>Axel van Lamsweerde, UCL, Belgium</i>		09:10
10:10	break - exhibition opens		10:10
11:00	Program Analysis Grote Aula - session chair <i>Peter Amey</i> Parameter-induced aliasing in Ada <i>Wolfgang Gellerich</i> <i>IBM Deutschland Entwicklung GmbH, Germany</i> <i>Erhard Ploedereder</i> <i>University of Stuttgart, Germany</i>	Software Process & Productivity Kleine Aula - session chair <i>Jeff Tian</i> Why we have problems producing quality software: When the product and process become confused <i>David A. Cook & Les Dupaix</i> <i>STSC, USA</i>	11:00
11:30	Slicing tagged objects in Ada <i>Z. Chen, Southeast University, China</i> <i>B. Xu, Wuhan University, China</i> <i>H. Yang, De Montfort University, UK</i>		11:45
12:00	OASIS - an ASIS secondary library for analyzing object-oriented Ada code <i>Alexei Kuchumov & Sergey Rybin</i> <i>Moscow State University, Russia</i> <i>Alfred Strohmeier</i> <i>Swiss Federal Institute of Technology in Lausanne.</i>	The contribution of the Ada language to system development <i>Rod Chapman, Ada Language UK</i>	
12:30	lunch & exhibition		12:30
14:00	Distributed Systems Grote Aula - session chair <i>Tullio Vardanega</i> Building modern distributed systems <i>Laurent Pautet, Thomas Quinot & Samuel Tardieu</i> <i>Ecole Nationale Supérieure des Télécommunications, France</i>	Vendor presentations Kleine Aula - session chair <i>Andrew Hatley</i> Aonix ACT Europe ACT Europe Products/Services offering for 2001 <i>Franco Gasperoni</i>	14:00
14:30	Reliable communication in distributed computer- controlled systems <i>Luis Miguel Pinho, Polytechnic Institute of Porto, Portugal</i> <i>Francisco Vasques, University of Porto, Portugal</i>		14:30
15:00	Building robust applications by reusing non-proprietary software <i>F. Guerra, J. Miranda & J. Calero</i> <i>University of Las Palmas de Gran Canaria, Spain.</i>	Praxis Critical Systems	15:00
15:30	break & exhibition		15:30
16:30	Invited speech. <i>chair Ed Schonberg</i> Using Ada in interactive digital television systems <i>Pascal Héraud, CANAL+ Technologies, France</i>		16:30
17:30	Ada-Europe General Assembly		17:30
18:15			18:15
18:30	Guided tour of historic town hall followed by civic reception		18:30

All sessions are in the Grote Aula if not indicated otherwise.



Wednesday May 16th

09:00	<i>chair Alfred Strohmeier</i> A Report on the Software Engineering Body of Knowledge project <i>James W. Moore, The MITRE Corporation, USA</i>		09:00
10:00	break & exhibition		10:00
11:00	Real - Time Systems Grote Aula - session chair Michael González Harbour New developments in Ada runtime profile definition and language refinements Joyce L Tokar, DDCI, USA	Language and Patterns Kleine Aula - session chair Art Duncan Expression templates in Ada Alexandre Duret-Lutz, EPITA R&D Lab, France	11:00
11:30	Complex Task Implementation in Ada Alfons Crespo, Patricia Balbastre & Silvia Terrasa Universidad Politécnica de Valencia, Spain	A design pattern for state machines and concurrent activities Bo Sandén, Colorado Technical University, USA	11:30
12:00	Implementing a flexible scheduler in Ada Guillem Bernat & Alan Burns University of York, UK	Component libraries and language features Ehud Lamm, The Open University of Israel	12:00
12:30	lunch & exhibition		12:30
14:00	Dependable Systems Grote Aula - session chair Juan A. de la Puente Experience report: using the SPARK toolset for showing the absence of run-time errors in safety-critical software Darren Foulger, BAE Systems, UK Steve King, University of York, UK	Vendor presentations Kleine Aula - session chair Bruce Lewis TNI Europe HOOD - The Real-time embedded approach for legacy systems Tony Elliston	14:00
14:30	Scenario-based system assessment Silke Kuball, University of Bristol, UK	ACT Europe The GNU Visual Debugger (GVD) Franco Gasperoni	14:30
15:00	Test suite reduction and fault detection effectiveness: an empirical evaluation T.Y. Chen & M.F. Lau Swinburne University of Technology, Australia	Aonix	15:00
15:30	break & exhibition		15:30
16:30	APIs and Components Grote Aula - session chair John Harbaugh JEWL: a GUI library for educational use John English University of Brighton, UK	Vendor presentations Kleine Aula - session chair Yvan Barbaix DDC-I The DDC-I approach regarding safety-critical development Poul H. Munch	16:30
17:00	Object-oriented stable storage based on mirroring Xavier Caron, Jörg Kienzle & Alfred Strohmeier, Swiss Federal Institute of Technology in Lausanne.	Rational	17:00
17:30	Transaction support for Ada Jörg Kienzle Swiss Federal Institute of Technology in Lausanne. Ricardo Jiménez Peris Universidad Politécnica de Madrid, Spain Alexander Romanovsky, University of Newcastle, UK M. Patiño Martínez Universidad Politécnica de Madrid, Spain	Green Hills	17:30
18:00			18:00
18:30	Guided historic walk		18:30
19:15	Conference Banquet at Faculty Club in Groot Begijnhof		19:15



Thursday May 17th

09:00	Invited speech. <i>chair John Barnes</i>		09:00
	Logic versus Magic in critical systems		
	<i>Peter Amey, Praxis Critical Systems, UK</i>		
10:00	break & exhibition		10:00
11:00	Real - Time Kernels Grote Aula - session chair <i>Rod Chapman</i> MaRTE OS: an Ada kernel for real-time embedded applications <i>Mario Aldea Rivas & Michael González Harbour</i> <i>Universidad de Cantabria, Spain</i>	Standard Formats: UML & XML Kleine Aula - session chair <i>Ben Brosgol</i> Modelling communication interfaces with ComiX <i>Frank Oppenheimer & Dongming Zhang</i> <i>University of Oldenburg, Germany</i> <i>Wolfgang Nebel</i> <i>OFFIS, Germany</i>	11:00
11:30	Implementing Ada.Real_Time.Clock and absolute delays in real-time kernels <i>Juan Zamorano, Jose F. Ruiz & Juan A. de la Puente</i> <i>Universidad Politécnica de Madrid, Spain</i>	Safe web forms and XML processing with Ada <i>Mário Amado Alves</i> <i>Universidade Nova de Lisboa, Portugal</i>	11:30
12:00	Defining new non-preemptive dispatching and locking policies for Ada <i>Alan Burns, University of York, UK</i>	Mapping UML to Ada <i>Bill Taylor, Rational Software, UK</i> <i>Einar Karlsen, Rational Software, Germany</i>	12:00
12:30	lunch & exhibition		12:30
14:00	System Evolution Grote Aula - session chair <i>Erhard Ploedereder</i> Ship System 2000, a stable architecture under continuous evolution <i>Björn Källberg, Rei Strähle</i> <i>SaabTech Systems AB, Sweden</i>	Vendor presentations Kleine Aula - session chair <i>Currie Colket</i> Top Graph'X	14:00
14:30	Migrating large applications from Ada83 to Ada95 <i>Philippe Waroquiers, et al.</i> <i>Eurocontrol, Belgium</i>	Irvine Compiler ICC 83/95 Ada for TI-DSP C6XXX family of processors <i>Joe Kohli</i>	14:30
15:00	An application case for Ravenscar technology: porting OBOSS to GNAT/ORK <i>Tullio Vardanega</i> <i>European Space Research and Technology Centre,</i> <i>Netherlands</i> <i>Rodrigo García & Juan Antonio de la Puente</i> <i>Universidad Politécnica de Madrid, Spain</i>	Praxis Critical Systems	15:00
15:30	break - exhibition final session		15:30
16:30	Invited speech. <i>chair John Barnes</i>		16:30
	Can Java meet its real-time deadlines?		
	<i>Brian Dobbing, Praxis Critical Systems, UK</i> <i>co author Ben Brosgol, ACT, USA</i>		
17:30	Closing Session		17:30
	<i>Awards: best paper & best presentation</i>		
18:00			18:00
20:00	Visit to Stella Artois brewery		20:00

A Guide to the Social Program

Monday evening : Welcome reception

An opportunity to meet your fellow conference attendees in an informal setting. You are welcome to attend between 19:00 and 22:00. This reception is sponsored by Interbrew and BarcoView.

Location

The university restaurant (*Alma*) in the *Pauscollege*, on the *Hogeschoolplein*, next to the conference location (*Maria-Theresia College*) (see area map in Final Program).

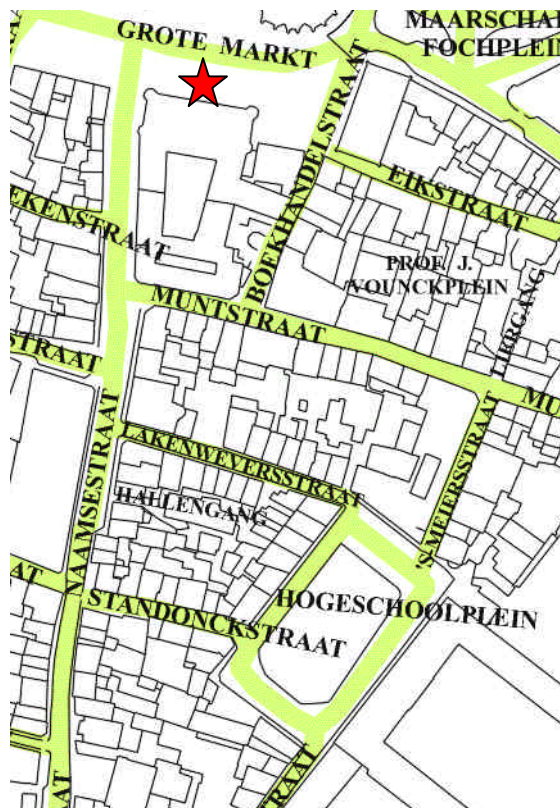
Tuesday evening: Civic reception

Today's presentations end at 18:15. At 18:30, you are invited to a guided tour of the Town Hall. As described in the program brochure, the Town Hall is a master piece of Flamboyant Gothic. It's construction started in 1439.

The tour will take about one hour. It will be followed by a reception in the Town Hall hosted by the City of Leuven, between 19:30 and 20:30.

Location

The Town Hall is located on the Grand Market (*Grote Markt*). Follow the *Lakenweversstraat*, left of the *Salons Georges*-restaurant, on to the *Naamsestraat*. Go to the right. This will take you past the University Hall (on your left). Follow until you get to the Grand Market. Assemble in front of the Town Hall.



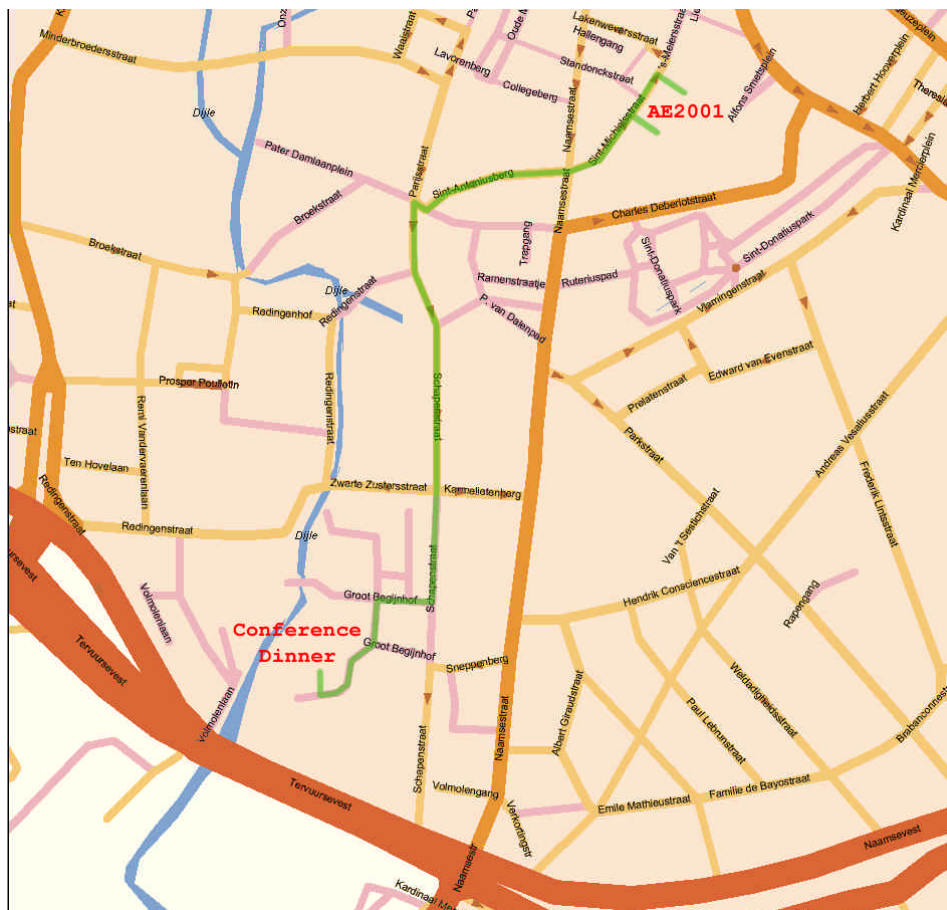
Wednesday evening: Conference Dinner

At 18:30, you have the opportunity to take an optional short guided walk. Guides of the City of Leuven will take us from the *Maria-Theresia College* to the Great Beguinage (*Groot Begijnhof*). In 1998, UNESCO added this site to the World Cultural Heritage. The conference dinner will take place in the former Infirmary of the *Begijnhof*, which has been converted into the *Faculty Club*.

If you do not take the guided walk, you should join the group at 19:15 at the Faculty Club. To start the evening, Ed Schonberg and Maarten Boasson will enjoy us with some light chamber music. After the concert, ACT Europe will offer an aperitif

Location

If you don't take the guided walk, here are directions starting at the conference site (the directions are also shown on the map below). From the *Hogeschoolplein*, take the *Sint-Michielsstraat* to the *Naamsestraat*. Cross it, and go down the *Sint-Antoniusberg*. On the *Pater Damiaan-plein*, go left and follow the *Schapenstraat* for some time. After about 500m, you will see the *Beguinage* on your right, surrounded by walls. Enter it about 100m further through the gate, go left and follow until you see the signs of the *Faculty Club*.



Thursday evening: Brewery visit

The closing session of the conference ends at 18:00. You then have a chance to eat something. At 19:45, you will be taken by bus to the famous Stella Artois brewery. Stella Artois, and its owner Interbrew can trace its origins back to 1366 to a brewery called Den Hoorn. After rapid expansion in the nineties, Interbrew is now the second largest brewer in the world by volume. Through acquisitions and joint ventures, its strong beer portfolio is now available in over 110 countries. At the end of the visit, you will have a chance to taste some of Interbrew's famous beers. At 22:30, you will be taken back to the Hogeschoolplein by bus.

Location

We will gather on the *Hogeschoolplein* at 19:45. The bus will take you to the Stella Artois brewery just outside Leuven, and will return you at about 22:30.



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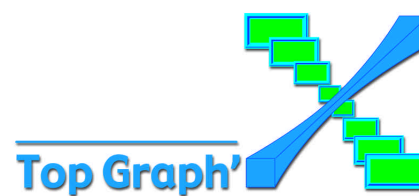


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The organizers thank the exhibitors



Praxis
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and the supporters of the conference



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