

THE 24TH  
CERN  
SCHOOL  
OF  
COMPUTING

Santander, Spain  
16-29 September 2001

Final Programme



**IFCA**  
INSTITUTO DE FÍSICA DE CANTABRIA



**COMMITTEES****ADVISORY COMMITTEE**

W. Carena	CERN, Geneva, Switzerland	
S. Cittolin	CERN, Geneva, Switzerland	
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F. Gagliardi	CERN, Geneva, Switzerland	(School Director)
R. Jacobsen	University of California, Berkeley	
S. Jarp	CERN, Geneva, Switzerland	
A.S. Johnson	SLAC, Stanford, USA	
R. Jones	CERN, Geneva, Switzerland	
G. Kahn	INRIA, Le Chesnay, France	
P. Martucci	CERN, Geneva, Switzerland	(Technical Manager)
P. McBride	Fermilab, Batavia, USA	
Y. Robert	INRIA Rhône-Alpes, Montbonnot/UMR CNRS- ENS, Lyon, France	
C. Vandoni	CERN, Geneva, Switzerland	

**LOCAL ORGANISING COMMITTEE**

J. Marco de Lucas	University of Cantabria, Santander	(Chairman)
R. Marco de Lucas	University of Cantabria, Santander	
F. Matorros	University of Cantabria, Santander	
R. de la Vega	University of Cantabria, Santander	

	Sun. 23 Sep.	Mon. 24 Sep.	Tue. 25 Sep.	Wed. 26 Sep.	Thur. 27 Sep.	Fri. 28 Sep.	Sat. 29 Sep.
09.30 - 10.30	Excursion all day	<b>HTDC 3</b> Tools/1 R. Jacobsen	<b>HTDC 5</b> Distributed Computing for HENP exp./1 S. Wolbers	PDD EX 3 Object Oriented Databases Exercises/3 D. Duellmann	PDD 8 The Grid and Distributed Databases/2 D. Malon	PDD EX 5 GRID Exercise/1 D. Malon	Departure
10.30 - 11.30	visit to "Picos de Europa"  or  visit of San Vicente & Comillas	PDD6 Object-oriented Distributed Databases/3 D. Duellmann	PDD7 The Grid and Distributed Databases/1 D. Malon	PDD1 EX 4 Object Oriented Databases Exercises/4 D. Duellmann	<b>HTDC 9</b> Distributed Computing for HENP exp./2 H. Schellmann	PDD EX 6 GRID Exercise/2 D. Malon	
11.30 - 12.00		Coffee	Coffee	Coffee	Coffee	Coffee	
12.00 - 13.00		<b>HTDC 4</b> Tools/2 R. Jacobsen	<b>HTDC 6</b> Distributed Computing for HENP exp./2 H. Schellmann	<b>HTDC EX 4</b> - Wired/JAS /EX2 A. Johnson M. Dönszelmann	PDD 9 The Grid and Distributed Databases/3 D. Malon	PDD EX 7 GRID Exercise/3 D. Malon	
13.30 - 15.00		Lunch	Lunch	Lunch	Lunch	Lunch	
15.00 - 16.00		<b>HTDC EX 1</b> Tools Exercises/1 R.G. Jacobsen	<b>HTDC 7</b> Distributed Data Analysis/1 A. Johnson M. Dönszelmann	Free time	<b>HTDC EX 5</b> Distributed Computing for HENP exp./Ex 1 H. Schellman/S. Wolbers	<b>HTDC EX 9</b> - Wired/JAS /EX5 A. Johnson M. Dönszelmann	
16.00 - 17.00		<b>HTDC EX 2</b> Tools Exercises/2 Bob Jacobsen	<b>HTDC 8</b> Distributed Data Analysis/2 A. Johnson M. Dönszelmann		<b>HTDC EX 6</b> Distributed Computing for HENP exp./Ex 1 H. Schellman/S. Wolbers	<b>HTDC EX 10</b> Wired/JAS /EX6 A. Johnson M. Dönszelmann	
17.00 - 17.30		Coffee	Coffee		Coffee	Coffee	
17.30 - 18.30		PDD Video conferencing A. Comacho	<b>HTDC EX 3</b> Wired/JAS /EX1 A. Johnson M. Dönszelmann		<b>HTDC EX 7</b> Wired/JAS /EX3 A. Johnson M. Dönszelmann	<b>HTDC/PDD</b> Wrap up	
18.30 - 19.30					<b>HTDC EX 8</b> Wired/JAS /EX4 A. Johnson M. Dönszelmann		
19.30 - 20.00						Closure	
20.00 - 21.00		Dinner (at hotel)	Dinner (at hotel)		Banquet	Dinner (at hotel)	
21.00 - 22.00			Evening Lecture Altamira within a wider context: An Introduction to Palaeolithic Rock Art in S.W. Europe P. Arias	Evening lecture: Ubiquitous Computing - Overview and Outlook P. Janson/IBM	Dinner (at hotel)		

Sun. 16 Sep.	Mon. 17 Sep.	Tue. 18 Sep.	Wed. 19 Sep.	Thur. 20 Sep.	Fri. 21 Sep.	Sat. 22 Sep.	
<b>Registration All Day</b>  <b>Hotel Palacio del Mar</b>	09.30 - 10.30	Opening Ceremony	<b>DRTS 2</b> Event Selection & Data Acquisition in Modern HEP Experiments: the Real-Time Side/2 L. Mapelli	<b>DRTS</b> Event Selection & Data Acquisition in Modern HEP Experiments: the Real-Time Side/3 L. Mapelli	PDD 3 Fundamentals of Distributed Databases/3 E. Schikuta	PDD 4 Object Oriented Distributed Databases/1 D. Duellmann	
	10.30 - 11.30	<b>CASH 1</b> User Level Architecture S. Jarp	<b>DRTS 3</b> SCADA Distributed Control Systems 1 W. Salter	<b>DRTS 4</b> SCADA Distributed Control Systems 2 W. Salter	<b>DRTS 5</b> SCADA Distributed Control Systems 3 P. Burkimsher	<b>HTDC 1</b> What is High Throughput Computing? L. Robertson	PDD 5 Object Oriented Distributed Databases/2 D. Duellmann
	11.30	<i>Coffee</i>	<i>Coffee</i>	<i>Coffee</i>	<i>Coffee</i>	<i>Coffee</i>	<i>Coffee</i>
	12.00 - 13.00	<b>CASH 2</b> System Level Architecture D. Mosberger	<b>CASH 4</b> Hardware Independent Kernel Software/1 J. Sorensen	<b>CASH 6</b> "Farm" Architectures S. Jarp	<b>CASH wrap-up</b> S. Jarp, D. Mosberger J. Sorensen	<b>DRTS</b> Distributed Control Systems - Wrap Up P. Burkimsher L. Mapelli W. Salter	<b>HTDC 2</b> What is High Throughput Computing? L. Robertson
	13.30	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>
	15.00 - 16.00	<b>DRTS 1</b> Event Selection & Data Acquisition in Modern HEP Experiments: the Real-Time Side/1 L. Mapelli	<b>CASH 5</b> Application Enabling Software J. Sorensen	EXCURSION   <i>Boat Trip and Tapas Dinner</i>	<b>DRTS - SCADA ex 1</b> P. Burkimsher W. Salter		
	16.00 - 17.00	<b>PDD1</b> Fundamentals of Distributed Databases/1 - E. Schikuta	<b>CASH demo</b> Practical demonstration of the instruction set architecture		<b>DRTS - SCADA ex 2</b> P. Burkimsher W. Salter	PDD EX 1 Object Oriented Databases Exercises/1 D. Duellmann	
	17.00	<i>Coffee</i>	<i>Coffee</i>		<i>Coffee</i>	<i>Coffee</i>	
	17.30 - 18.30	<b>CASH 3</b> Hardware Dependent Kernel Software D. Mosberger	<b>PDD2</b> Fundamentals of Distributed Databases/2 E. Schikuta		<b>DRTS - SCADA ex 3</b> P. Burkimsher W. Salter	PDD EX 2 Object Oriented Databases Exercises/2 D. Duellmann	
	18.30						
	<i>Dinner (at hotel)</i>	<i>Welcome Cocktail (at Hotel)</i>	<i>Dinner (at hotel)</i>		<i>Dinner (at hotel)</i>	<i>Dinner (at hotel)</i>	<i>Dinner (at hotel)</i>
	20.00 - 21.00	<i>Dinner (at hotel)</i>	Evening lecture: Open Source J. Sorensen		Evening lecture: EU speaker Distributed Applications M. Griera I Fisa	Evening lecture: Algorithmic Challenges R.G. Jacobsen	
	21.00 - 22.00						