

# Preface

Euro-Par is an international conference dedicated to the promotion and advancement of all aspects of parallel computing. The major themes can be divided into the broad categories of hardware, software, algorithms and applications for parallel computing. The objective of Euro-Par is to provide a forum within which to promote the development of parallel computing both as an industrial technique and an academic discipline, extending the frontier of both the state of the art and the state of the practice. This is particularly important at a time when parallel computing is undergoing strong and sustained development and experiencing real industrial take-up. The main audience for and participants in Euro-Par are seen as researchers in academic departments, government laboratories and industrial organisations. Euro-Par's objective is to become the primary choice of such professionals for the presentation of new results in their specific areas. Euro-Par is also interested in applications which demonstrate the effectiveness of the main Euro-Par themes.

There is now a permanent Web site for the series <http://brahms.fmi.uni-passau.de/cl/europar> where the history of the conference is described. Euro-Par is now sponsored by the Association of Computer Machinery and the International Federation of Information Processing.

## Euro-Par'99

The format of Euro-Par'99 follows that of the past four conferences and consists of a number of topics each individually monitored by a committee of four. There were originally 23 topics for this year's conference. The call for papers attracted 343 submissions of which 188 were accepted. Of the papers accepted, 4 were judged as distinguished, 111 as regular and 73 as short papers. Distinguished papers are allowed 12 pages in the proceedings and 30 minutes for presentation, regular papers are allowed 8 pages and 30 minutes for presentation, short papers are allowed 4 pages and 15 minutes for presentation. Distinguished papers are indicated in the table of contents with a superscribed asterisk after the title. Four extra pages could be purchased for distinguished papers, two for regular papers and one for short papers. There were on average 3.5 reviews per paper. Submissions were received from 44 countries, 34 of which are represented at the conference. The principal contributors by country are France with 39 papers, the U.S.A. with 22, Germany with 19, and the U.K., Italy and Spain with 13 papers each. This year's conference, Euro-Par'99, features new topics such as fault avoidance and fault removal in real-time systems, instruction-level parallelism and uniprocessor architecture, and global environment modelling.

The Web site for the conference is <http://www.enseeiht.fr/europar99/>.

## Acknowledgments

Knowing the quality of the past Euro-Par conferences makes the task of organising one daunting indeed and we have many people to thank. Ron Perrott, Christian Lengauer, Luc Bougé, Jeff Reeve and David Pritchard have given us the benefit of their experience and helped us generously throughout the past 18 months. The topic structure of the conference means that we must depend on the goodwill and enthusiasm of all the 90 programme committee members listed below. Their professionalism makes this the most academically rigorous conference in the field worldwide. The programme committee meeting at Toulouse in April was well attended and, thanks to sound preparation by everyone and Ron Perrott's guidance, resulted in a coherent, well-structured conference. The smooth running of the organisation of the conference can be attributed to a few individuals. Firstly the software for the submission and refereeing of papers that we inherited from Lyon via Passau was significantly enhanced by Daniel Ruiz. This attracted many compliments from those who benefited. Valérie Frayssé and Luc Giraud spent copious hours checking, printing and correcting papers. Finally, Brigitte Yzel, secretary to the conference and the CERFACS Parallel Algorithms Project, has been invaluable in monitoring the conference organisation and seeing to the myriad of tasks that invariably arise.

June 1999

Patrick Amestoy  
Philippe Berger  
Michel Daydé  
Iain Duff  
Valérie Frayssé  
Luc Giraud  
Daniel Ruiz

## Euro-Par Steering Committee

### Chair

Ron Perrott Queen's University Belfast, UK

### Vice Chair

Christian Lengauer University of Passau, Germany

### Committee

Makoto Amamiya	Kyushu University, Japan
Luc Bougé	ENS Lyon, France
Helmar Burkhart	University of Basel, Switzerland
Pierrick Fillon-Ashida	European Commission, Belgium
Paul Feautrier	University of Versailles, France
Ian Foster	Argonne National Laboratory, USA
Jeff Reeve	University of Southampton, UK
Henk Sips	Technical University Delft, The Netherlands
Paul Spirakis	CTI, Greece
Marian Vajtersic	Slovak Academy, Slovakia
Marco Vanneschi	University of Pisa, Italy
Jens Volkert	Johannes Kepler University Linz, Austria
Emilio Zapata	University of Malaga, Spain

## Euro-Par'99 Local Organisation

The conference has been jointly organised by CERFACS (Centre Européen de Recherche et de Formation Avancée en Calcul Scientifique) and ENSEEIHT-IRIT (Ecole Nationale Supérieure d'Electronique, d'Electrotechnique, d'Informatique et d'Hydraulique de Toulouse - Institut de Recherche en Informatique de Toulouse).

### General Chair

Iain Duff CERFACS and RAL

### Vice Chair

Michel Daydé ENSEEIHT-IRIT

### Committee

Patrick Amestoy	ENSEEIHT-IRIT
Philippe Berger	ENSEEIHT-IRIT
Valérie Frayssé	CERFACS
Luc Giraud	CERFACS

### Informatics Chair

Daniel Ruiz ENSEEIHT-IRIT

### Secretary

Brigitte Yzel CERFACS

## Euro-Par'99 Programme Committee

### Topic 01: Support Tools and Environments

#### Global Chair

Ian Foster Argonne Nat. Lab., USA

#### Local Chair

Frédéric Desprez LIP-INRIA, Lyon, France

#### Vice Chairs

Jean-Marie Garcia LAAS, Toulouse, France

Thomas Ludwig TU Munich, Germany

### Topic 02: Performance Evaluation and Prediction

#### Global Chair

Aad van der Steen Utrecht Univ., The Netherlands

#### Local Chair

Jean-Marc Vincent IMAG, Grenoble, France

#### Vice Chairs

Erich Strohmaier Univ. of Tennessee at Knoxville, USA

Jerzy Wasniewski Uni-C, Denmark

### Topic 03: Scheduling and Load Balancing

#### Global Chair

Jean-Marc Geib LIFL, Lille, France

#### Local Chair

Jean Roman LaBRI, Bordeaux, France

#### Vice Chairs

Bruce Hendrickson SNL, Albuquerque, USA

Pierre Manneback PIP, Mons, Belgium

### Topic 04: Compilers for High Performance Systems

#### Global Chair

Barbara Chapman University of Southampton, UK

#### Local Chair

François Bodin INRIA-IRISA, Rennes, France

#### Vice Chairs

Louis Féraud IRIT, Toulouse, France

Chris Lengauer FMI, University of Passau, Germany

**Topic 05: Parallel and Distributed Databases****Global Chair**

Burkhard Freitag                      University of Passau, Germany

**Local Chair**

Kader Hameurlain                      IRIT, Toulouse, France

**Vice Chairs**

Lászlo Böszörményi                      University of Klagenfurt, Austria

Waqar Hasan                      DB WIZARD, CA, USA

**Topics 06 + 20: Fault Avoidance and Fault Removal in Real-Time Systems****Global Chairs**

Ravi Iyer                      Univ. of Illinois, USA

Tomasz Szmuc                      St. Staszic TU, Krakow, Poland

**Local Chairs**

Gilles Motet                      INSA, Toulouse, France

David Powell                      LAAS-CNRS, Toulouse, France

**Vice Chairs**

Wolfgang Halang                      FernUniversität, Hagen, Germany

Andras Pataricza                      TU Budapest, Hungary

Joao Gabriel Silva                      University of Coimbra, Portugal

Janusz Zalewski                      Univ. of Central Florida, Orlando, USA

**Topic 07: Theory and Models for Parallel Computation****Global Chair**

Michel Cosnard                      LORIA-INRIA, Nancy, France

**Local Chair**

Afonso Ferreira                      CNRS-I3S-INRIA, Sophia Antipolis, France

**Vice Chairs**

Sajal Das                      University of North Texas, USA

Frank Dehne                      Carleton University, Canada

**Topic 08: High-Performance Computing and Applications****Global Chair**

Horst Simon                      NERSC, L. Berkeley Lab., CA, USA

**Local Chair**

Michael Rudyard                      Oxford Univ. and CERFACS, England

**Vice Chairs**

Wolfgang Gentzsch                      GENIAS Software, Germany

Jesus Labarta                      CEPBA, Spain

## Topic 09: Parallel Computer Architecture

### Global Chair

Chris Jesshope Massey University, New Zealand

### Local Chair

Daniel Litaize Université Paul Sabatier, France

### Vice Chairs

Karl Dieter Reinartz University of Erlangen, Germany

Per Stenstrom Chalmers University, Sweden

## Topic 10: Distributed Systems and Algorithms

### Global Chair

André Schiper EPFL, Lausanne, Switzerland

### Local Chair

Gérard Padiou ENSEEIHT-IRIT, Toulouse, France

### Vice Chairs

Roberto Baldoni University of Rome, Italy

Jerzy Brzezinski Fac. of Electrical Eng., Poznan, Poland

Friedemann Mattern TU-Darmstadt, Germany

Luis Rodrigues Faculty of Sciences, Univ. of Lisbon, Portugal

## Topic 11: Parallel Programming: Models, Methods and Languages

### Global Chair

Luc Bougé ENSL, Lyon, France

### Local Chair

Mamoun Filali IRIT, Toulouse, France

### Vice Chairs

Bill McColl Oxford Univ. Computing Lab., UK

Henk J. Sips TU Delft, The Netherlands

## Topic 12: Architectures and Algorithms for Vision and other Senses

### Global Chair

Virginio Cantoni University of Pavia, Italy

### Local Chair

Alain Ayache ENSEEIHT-IRIT, Toulouse, France

### Vice Chairs

Concettina Guerra Purdue Univ., USA, and Padoa Univ., Italy

Pieter Jonke TU Delft, The Netherlands

## Topics 13+19: Numerical Algorithms for Linear and Nonlinear Algebra

### Global Chairs

Jack Dongarra	Univ. of Tennessee and ORNL, USA
Bernard Philippe	INRIA-IRISA, Rennes, France

### Local Chairs

Patrick Amestoy	ENSEEIH-IRIT, Toulouse, France
Valérie Frayssé	CERFACS, Toulouse, France

### Vice Chairs

Françoise Chaitin-Chatelin	Univ. Toulouse I and CERFACS, France
Donato Trigiante	University of Florence, Italy
Marian Vajtersic	Slovak Academy, Bratislava
Henk van der Vorst	Utrecht University, The Netherlands

## Topic 14: Emerging Topics in Advanced Computing in Europe

### Global Chair

Renato Campo	European Commission, DG XIII, Belgium
--------------	---------------------------------------

### Local Chair

Luc Giraud	CERFACS, Toulouse, France
------------	---------------------------

### Vice Chair

Pierrick Fillon-Ashida	European Commission, DG XIII, Belgium
Rizos Sakellariou	CRPC, Rice University, Houston, USA

## Topic 15: Routing and Communication in Interconnection Networks

### Global Chair

Ernst W. Mayr	TU Munich, Germany
---------------	--------------------

### Local Chair

Pierre Fraigniaud	LRI, Orsay, France
-------------------	--------------------

### Vice Chairs

Bruce Maggs	Carnegie Mellon Univ., Pittsburg, USA
Jop Sibeyn	MPI, Saarbrücken, Germany

## Topic 16: Instruction-Level Parallelism and Uniprocessor Architecture

### Global Chair

Mateo Valero	CEPBA, Polytech. Univ. of Catalunya, Spain
--------------	--

### Local Chair

Pascal Sainrat	IRIT, Toulouse, France
----------------	------------------------

### Vice Chairs

D. K. Arvind	Edinburgh Univ., Computer Science Dept., UK
Stamatis Vassiliadis	TU Delft, The Netherlands

## **Topic 17: Concurrent and Distributed Programming with Objects**

### **Global Chair**

Akinori Yonezawa                      University of Tokyo, Japan

### **Local Chair**

Patrick Sallé                              ENSEEIHT-IRIT, Toulouse, France

### **Vice Chairs**

Joe Armstrong                          Ericsson, Sweden

Vasco T. Vasconcelos                  University of Lisbon, Portugal

Marc Pantel                               ENSEEIHT-IRIT, Toulouse, France

## **Topic 18: Global Environment Modelling**

### **Global Chair**

David Burridge                          ECMWF, Reading, UK

### **Local Chair**

Michel Déqué                            Météo-France, Toulouse, France

### **Vice Chairs**

Daniel Cariolle                          Météo-France, Toulouse, France

Jean-Pascal van Ypersele              Louvain la Neuve Inst. of Astrophysics,  
Belgium

## **Topic 22: High-Performance Data Mining and Knowledge Discovery**

### **Global Chair**

David Skillicorn                        Queens University, Kingston, Canada

### **Local Chair**

Domenico Talia                         ISI-CNR, Rende, Italy

### **Vice Chairs**

Vipin Kumar                              Univ. of Minnesota, USA

Hannu Toivonen                         RNI, University of Helsinki, Finland

## **Topic 23: Symbolic Computation**

### **Global Chair**

John Fitch                                University of Bath, UK

### **Local Chair**

Mike Dewar                               NAG Ltd, Oxford, UK

### **Vice Chairs**

Erich Kaltofen                          North Carolina State Univ., Raleigh, USA

Anthony D. Kennedy                    Edinburgh University, Scotland



## Euro-Par'99 Referees

(excluding members of the programme and organisation committees)

Adelantado, Martin	Boukerche, Azzedine	Cole, Murray
Akl, Selim	Boulet, Pierre	Conter, Jean
Albanesi, Maria Grazia	Bourzoufi, Hafid	Corbal, Jesus
Alvarez-Hamelin, I.	Braconnier, Thierry	Correia, Miguel
Amir, Yair	Bradford, Russell	Costa, Antonio
Amodio, Pierluigi	Brandes, Thomas	Costa, Ernesto
Ancourt, Corinne	Braunl, Thomas	Cotofana, Sorin
Arbab, Farhad	Broggi, Alberto	Coudert, David
Arbenz, Peter	Broom, Bradley	Coulette, Bernard
Arnold, Marnix	Browne, Shirley	Counilh, Marie-Christine
Aronson, Leon	Brugnano, Luigi	Courtier, Philippe
Asenjo, Rafael	Brun, Olivier	Cristal, Adrian
Avresky, D.	Bungartz, Hans-Joachim	Crouzet, Yves
Aydt, Ruth	Burkhart, Helmar	Crégut, Xavier
Ayguade, Eduard	Buvry, Max	Cubero-Castan, Michel
Aykanat, Cevdet	Caires, Luis	Cucchiara, Rita
Baden, Scott	Calamoneri, Tiziana	Cung, Van-Dat
Bagchi, Saurabh	Cameron, Stephen	Dackland, Krister
Bai, Z.	Caniaux, Guy	Daoudi, El Mostafa
Baker, Mark	Cappello, Franck	Dechering, Paul
Bal, Henri	Carissimi, Alexandre	Defago, Xavier
Baquero, Carlos	Caromel, Denis	Dekeyser, Jean-Luc
Barreiro, Nuno	Carter, Larry	Delmas, Olivier
Bartoli, Alberto	Cassé, Hugues	Delord, Xavier
Baudon, Olivier	Castro, Miguel	Denissen, Will
Becchetti, Luca	Catthoor, Francky	Denneulin, Yves
Béchenne, Jean-Luc	Cavalheiro, Gerson	Di, Vito
Becka, Martin	Chartier, Philippe	Di Martino, Beniamino
Beemster, Marcel	Charvillat, Vincent	Di Stefano, Luigi
Bellegarde, Françoise	Chassin de	Doblas, Francisco Javier
Belloso, Frank	Kergommeaux, Jacques	Dominique, Orban
Benzi, Michele	Chauhan, Arun	Doreille, Mathias
Beraldi, Roberto	Chaumette, Serge	Dörfel, Mathias
Bernon, Carole	Cheng, Ben-Chung	Douville, Hervé
Berthomé, Pascal	Chesneaux, Jean-Marie	Drira, Khalil
Bétourné, Claude	Chich, Thierry	Duato, José
Biancardi, Alberto	Chmielewski, Rafal	Duchien, Laurence
Birkett, Nick	Cilio, Andréa	Durand, Bruno
Bodeveix, Jean-Paul	Cinque, Luigi	Eigenmann, Rudolf
Boichat, Romain	Ciuffoletti, Augusto	Eijkhout, Victor
Bolychevsky, Alex	Clocksinn, William	Eisenbeis, Christine
Bos, André	Coelho, Fabien	Eldershaw, Craig

- Ellmenreich, Nils  
 Endo, Toshio  
 Erhel, Jocelyne  
 Etienne, Daniel  
 Evans., D.J.  
 Even, Shimon  
 Fabbri, Alessandro  
 Faber, Peter  
 Farcy, Alexandre  
 Feautrier, Paul  
 Fent, Alfred  
 Ferragina, Paolo  
 Ferreira, Maria  
 Fidge, Colin  
 Fimmel, Dirk  
 Fischer, Claude  
 Fischer, Markus  
 Fleury, Eric  
 Fonlupt, Cyril  
 Fraboul, Christian  
 Fradet, Pascal  
 Fragopoulou, Paraskevi  
 Frietman, Edward E.E.  
 Fünfroeken, Stefan  
 Galilee, François  
 Gallopoulos, Efstratios  
 Gamba, Paolo  
 Gandriaux, Marcel  
 Gaspar, Graca  
 Gatlin, Kang Su  
 Gauchard, David  
 Gautama, Hasyim  
 Gavaghan, David  
 Gavaille, Cyril  
 Geist, Al  
 Geleyn, Jean-François  
 van Gemund, Arjan  
 Gengler, Marc  
 Genius, Daniela  
 Gerndt, Michael  
 Getov, Vladimir  
 Girau, Bernard  
 Goldman, Alfredo  
 Gonzalez, Antonio  
 Gonzalez, José
- Gonzalez-Escribano, A.  
 Goossens, Bernard  
 Grammatikakis, Miltos  
 Gratton, Serge  
 Greiner, Alain  
 Griebel, Martin  
 Grislin-Le Strugeon, E.  
 Gropp, William  
 Guedes, Paulo  
 Guivarch, Ronan  
 Guo, Katherine  
 Gupta, Anshul  
 Gustedt, Jens  
 Guyennet, Hervé  
 Hains, Gaetan  
 Hains, Gaétan  
 Halleux, Jean-Pierre  
 Han, Eui-Hong  
 Haquin, Thierry  
 Harald, Kosch  
 Hart, William  
 Hatcher, Phil  
 Hegland, Markus  
 Helary, Jean-Michel  
 Henty, David  
 Herley, Kieran  
 Herrmann, Christoph  
 Higham, Nicholas J.  
 Hitz, Markus  
 Hoisie, Adolfo  
 Houzet, Dominique  
 Hruz, Tomas  
 Hurfin, Michel  
 Ierotheou, Cos  
 Izu, Cruz  
 Jabouille, Patrick  
 Jeannot, Emmanuel  
 Jégou, Yvon  
 Jin, Guohua  
 Jonker, Pieter  
 Joshi, Mahesh  
 Jourdan, Stephan  
 Juanele, Guy  
 Juurlink, Ben  
 Kågström, Bo
- Kakugawa, Hirotugu  
 Kalbarczyk, Zbigniew  
 Kale, Laxmikant  
 Katayama, Takuya  
 Kaufman, Linda  
 Kehr, Roger  
 Keleher, Peter  
 Kelly, Paul  
 Kesselman, Carl  
 Killijian, Marc-Olivier  
 Kindermann, Stephan  
 Kiper, Ayse  
 Klasing, Ralf  
 Knijnenburg, Peter  
 Knoop, Jens  
 Koelbel, Charles  
 Kolda, Tamara  
 Kosch, Harald  
 Kossmann, Donald  
 Koster, Jacko  
 Kredel, Heinz  
 Kruse, Hans-Guenther  
 Kuchen, Herbert  
 Kucherov, Gregory  
 Kurmann, Christian  
 Kvasnicka, Dieter  
 de Laat, Cees  
 Ladagnous, Philippe  
 Lahlou, Chams  
 Langlois, Philippe  
 Larriba-Pey, Josep L.  
 Laure, Erwin  
 Lavenier, Dominique  
 LeCun, Bertrand  
 Lecomber, David  
 Lecomber, david  
 Lecussan, Bernard  
 Leese, Robert  
 Legall, Françoise  
 Leuschel, Michael  
 L'Excellent, Jean-Yves  
 Li, Xiaoye S.  
 Lindermeier, Markus  
 van Lohuizen, Marcel P.  
 Lombardi, Luca

Lombardo, Maria-Paola	Morin, Christine	Pizzuti, Clara
Lopes, Cristina	Morris, John	Plaks, Toomas
Lopes, Luis	Morvan, Franck	Planton, Serge
Lopez, David	Mostefaoui, Achour	Porto, Stella
Loucks, Wayne	Mounie, Gregory	Pozo, Roldan
Luksch, Peter	Mucci, Philip	Prakash, Ravi
Lusk, Ewing	Muller, Jean-Michel	Pritchard, David
Lutton, Evelyne	Mutka, Matt	Prylli, Loïc
Llosa, Josep	Mzoughi, Abdelaziz	Pryor, Rich
Manolopoulos, Yannis	Nash, Jonathan	Pucci, Geppino
Marchetti, Carlo	Nemeth, Zsolt	Puglisi, Chiara
Marchetti-Spaccamela, A.	Neves, Nuno	Quaglia, Francesco
Marcuello, Pedro	Nichitiu, Codrin	Quinton, Patrice
Marquet, Pascal	Nicole, Denis	Quéinnec, Philippe
Marquet, Philippe	Norman, Arthur	Rackl, Guenther
Martel, Ivàn	Novillo, Diego	Radulescu, Andrei
Marthon, Philippe	O'Boyle, Michael	Raghavan, Padma
Martin, Bruno	Ogihara, Mitsunori	Rajopadhye, Sanjay
Maslennikov, Oleg	Ogston, Elizabeth	Ramirez, Alex
Masuhara, Hidehiko	Oksa, Gabriel	Rapine, Christophe
Mauran, Philippe	Oliveira, Rui	Rastello, Fabrice
Maurice, Pierre	Ortega, Daniel	Rau-Chaplin, Andrew
Mautor, Thierry	Owezarski, Philippe	Rauber, Thomas
Mechelli, Marco	Oyama, Yoshihiro	Ravara, Antnio
Méhaut, Jean-François	Oztekin, Bilgehan U.	Raynal, Michel
Mehofer, Eduard	Paillassa, Béatrice	van Reeuwijk, C.
Mehrotra, Piyush	Pantel, Marc	Renaudin, Marc
Meister, Gerd	Paprzycki, Marcin	Rescigno, Adele
Melideo, Giovanna	Paugam-Moisy, Héléne	Revol, Nathalie
Merlin, John	Pazat, Jean-Louis	Rezgui, Abdelmounaam
Mery, Dominique	Pedone, Fernando	Richter, Harald
Meszaros, Tamas	Pellégrini, François	Risset, Tanguy
Meurant, Gérard	Pereira, Carlos	Roberto, Vito
Mevel, Yann	Perez, Christian	Roch, Jean-Louis
Meyer, Ulrich	Perrin, Guy-René	Rochange, Christine
Michael, W.	Perry, Nigel	Roos, Steven
Michaud, Pierre	Petit, Antoine	Rose, Kristoffer
Miller, Bart	Petit, Serge	Royer, Jean-François
Miller, Quentin	Petrosino, Alfredo	Rubi, Franck
Moe, Randi	Phillips, Cynthia	Rychlik, Bohuslav
Monnier, Nicolas	Pialot, Laurent	Sagnol, David
Montanvert, Annick	Piccardi, Massimo	Sajkowski, Michal
Monteil, Thierry	Pietracaprina, Andréa	Sanchez, Jesus
Moreira, Ana	Pingali, Keshav	Sanders, Peter
Morère, Pierre	Pitt-Francis, Joe	Sanjeevan, K.

Santos, Eunice	Stanton, Jonathan	Thuné, Michael
Saouter, Yannick	Stathis, Pyrrhos	Tiskin, Alexandre
Savoia, Giancarlo	Stein, Benhur	Toetenel, Hans
Schaerf, Andréa	Steinbach, Michael	Torng, Eric
Schreiber, Robert S.	Stricker, Thomas M.	Tortorici, Adèle
Schreiner, Wolfgang	Strout, Michelle Mills	Trehel, Michel
Schulz, Martin	Stunkel, Craig	Trichina, Eléna
Schuster, Assaf	Subhlok, Jaspal	Trystram, Denis
Schwertner-Charao, A.	Sumii, Eijiro	Tsikak, Themis
Seznec, André	Surlaker, Kapil	Tuecke, Steve
Siegle, Markus	Swarbrick, Ian	Tûma, Miroslav
Sieh, Volkmar	Swierstra, Doaitse	Tvrdik, Pavel
Silva, Luis Moura	Sybein, Jop	Ubeda, Stephane
Silva, Mario	Szychowiak, Michal	Ueberhuber, C. W.
Slomka, Frank	Talbi, El ghazali	Ugarte, Asier
Smith, Jim	Talcott, Carolyn	Vakalis, Ignatis
Smith, Warren	Taylor, Valerie	Zomaya, Albert
Sobaniec, Cezary	Temam, Olivier	Zory, Julien
Spezzano, Giandomenico	Thakur, Rajeev	Zwiers, Job
Stanca, Marian	Thiesse, Bernard	

Euro-Par' 99 Parallel Processing

5th International Euro-Par Conference Toulouse,

France, August 31–September 3, 1999 Proceedings

Amestoy, P.; Berger, P.; Daydé, M.; Duff, I.; Fraysse, V.;

Giraud, L.; Ruiz, D. (Eds.)

1999, LXIV, 1503 p. 198 illus. In 2 volumes, not available  
separately., Softcover

ISBN: 978-3-540-66443-7