



15th Euromicro International Conference on Parallel, Distributed and Network-based Processing PDP 2007

Naples, Italy, February 7-9, 2007

FINAL PROGRAM

Full papers are allowed **25 minutes** for presentation and **5 minutes** for discussion.
Short papers are allowed **15 minutes** for presentation and **5 minutes** for discussion.

February 7th

8:30 **Registration**

9:15 – 9:30 **Main room: Opening and Welcome**

Erwin Grosspietsch, Euromicro
Andrea Clematis, IMATI-CNR, Chair of Euromicro TC on PDP
Domenico Saccà, ICAR-CNR, Director
Salvatore Gaglio, Dept. ICT of CNR

9:30 – 10:30 **Main Room: Invited speaker**

Domenico Talia, *Using grids for exploiting data abundance in science*
Chair: Mario R. Guarracino

10:30 – 11:00 **Coffee Break**

Main room
**T6: Parallel Computer
Systems**

Chair: Gennaro Della
Vecchia

Room A
**S7: Next Generation
of Web Computing**

Chair: Konrad Klöckner

Room B
**T5: Languages,
Compilers and
Runtime
Support Systems**

Chair: Ivanoe De Falco

11:00 – 11:30

21. Analyzing the
benefits of protocol
offload by full-system
simulation

Andrés Ortiz
Julio Ortega
Antonio F. Diaz
Alberto Prieto

31. Automatic analysis
of control flow in web
services composition
processes

Francesco Moscato
Giusy Di Lorenzo
Nicola Mazzocca
Valeria Vittorini

14. A tool for the
expression of failure
detection protocols

Vincenzo De Florio
Chris Blondia

11:30 – 12:00

27. Design and
implementation of
floating point stack on
general RISC
architecture

Xuehai Qian
He Huang
Hao Zhang
Guoping Long
Junchao Zhang
Dongrui Fan

13. CollaborationBus:
an editor for the easy
configuration of
ubiquitous computing
environments

Tom Gross
Nicolai Marquardt

30. Pretenuring in Java
by
object lifetime and
reference density using
scratch-pad memory

Kelvin Chong
C.Y. Ho
Anthony Fong

12:00 – 12:30	28. Fault-tolerant solutions for a MPI compute intensive application Jose C. Mouriño Maria J. Martin <u>Patricia Gonzalez</u> Ramon Doallo	101. A high-level reference model for reusable object-level coordination support in groupware applications <u>Miguel Gómez-Hernández</u> Juan Asensio-Pérez Eduardo Gómez-Sánchez Miguel L. Bote-Lorenzo Yannis Dimitriadis	22. The cost of security in skeletal systems <u>Marco Danelutto</u> Marco Aldinucci
12:30 – 13:00	63. Congestion management in MINs through marked & validated packets <u>Joan-LLuís Ferrer</u> Elvira Baydal Antonio Robles Pedro López José Duato	12:30-12:50 Short Paper 98. DNK-WSD: a distributed approach for knowledge discovery in peer to peer networks <u>Giovanni Aiello</u> Marco Alessi Massimo Cossentino Pietro Storniolo Alfonso Urso	12:30-12:50 Short Paper 16. SockMi: a solution for migrating TCP/IP connections Massimo Bernaschi <u>Francesco Casadei</u> Paolo Tassotti

13:00 – 14:30 Lunch

T6: Parallel Computer Systems (cont'd)

S8: Parallel and Distributed Image Processing, Video Processing and Multimedia

Industrial Session

Chair: Giuseppe De Pietro

Chair: Andreas Uhl

14:30 – 15:00	69. An application specific processor for Montecarlo simulations Gianni Danese <u>Francesco Leporati</u> Mauro Giachero Nelson Nazzicari Alvaro Spelgatti Marco Bera	60. Parallel detection of targets in hyperspectral images using heterogeneous networks of workstations <u>Antonio Plaza</u> David Valencia Soraya Blazquez Javier Plaza	SPEAR: a hw/sw reconfigurable multiprocessor architecture Gianfranco di Nuzzo <u>Claudio Parrella</u> Fabio Sciutto Loris Valenti Cosimo Zaccaria <i>STMicroelectronics</i>
15:00 – 15:30	85. Dynamic SMP clusters with communication on the fly in SoC technology applied for medium-grain parallel matrix multiplication <u>Marek Tudruj</u> Lukasz Masko	84. Optimizing image content-based query applications over high latency communication media <u>Gerassimos Barlas</u>	Building tomorrow clusters with AMD multi-core processors <u>Hervé Chevanne</u> <i>AMD</i>

15:30 – 16:00	87. Functional tests of the RADIC fault tolerance architecture <u>Angelo Duarte</u> Dolores Rexachs Emilio Luque	102. Further Developments of a Dynamic Distributed Video Proxy-Cache System <u>Claudiu Cobarzan</u> László Böszörményi	Invited Talk: Yaroslav D. Sergeev Infinity computer and calculus
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16:00 – 16:30	24. Scheduling and data redistribution strategies on star platforms Yves Robert Loris Marchal Veronika Rehn Frédéric Vivien	16:00-16:20 Short Paper 80. Distributed differential evolution for the registration of remotely sensed images. <u>Ivanoe De Falco</u> Antonio Della Cioppa Domenico Maisto Umberto Scafuri Ernesto Tarantino
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16:20-16:40 Short Paper

81. Metadata integration and media transcoding in universal-plug-and-play (UPnP) enabled networks

Michael Jakab
Michael Kropfberger
Roland Tusch
Michael Ofner
Hermann Hellwagner
László Böszörményi

16:40 - 17:10 Coffee Break

17:10 - 18:30

PANEL DISCUSSION
Convergence of basic research and industrial achievements in Information Technology

Chair: Roberto Vaccaro

19:30 Welcome Reception at Hotel Royal

February 8th

9:00 – 10:00 **Main room: Invited speaker**
 Michael Heroux, *Optimal kernels to optimal solutions: algorithm and software issues in solver development*
 Chair: Pasqua D'Ambra

10:00 – 10:30 **Coffee Break**

Main Room
**T2: Network-based
 and Internet-based
 Computing**

*Chair: Erwin
 Grosspietsch*

Room A
**S9: Pervasive
 Computing
 Environments and
 Services**

*Chairs: Antonio
 Coronato, Giuseppe De
 Pietro, Luigi Romano*

Room B
**S12: Parallel and
 Distributed Data
 Storage**

Chair: Peter Sobe

10:30 – 11:00	25. Improving search in peer-to-peer literature sharing systems via semantic small world <u>Hai Jin</u> Xiaomin Ning	23. A distributed data gathering algorithm for wireless sensor networks with uniform architecture Marcos Goyeneche <u>Jesus Villadangos</u> Jose Javier Astrain Manuel Prieto Alberto Cordoba	113. Performance evaluation of the PVFS-2 architecture <u>Thomas Ludwig</u> Julian Kunkel
11:00 – 11:30	55. Scheduling communication requests traversing a switch: complexity and algorithms Yves Robert <u>Matthieu Gallet</u> Frédéric Vivien	48. Combining programmable hardware and web services technologies for delivering high-performance and interoperable security Alessandro Cilardo <u>Luigi Coppolino</u> Antonino Mazzeo Luigi Romano	114. Cost-effectiveness of storage grids <u>A. Brinkmann</u> S. Effert
11:30 – 12:00	56. An effective starvation avoidance mechanism to enhance the token coherence protocol <u>Blas Cuesta</u> Antonio Robles José Duato	49. Performance evaluation of security services: an experimental approach <u>Luigi Coppolino</u> Alessandro Cilardo Antonino Mazzeo Luigi Romano	115. Parallel external computation of the cycle structure of invertible cryptographic functions Joerg Keller <u>Andreas Beckmann</u>

12:00 – 12:30	58. Boosting Ethernet Performance by Segment-Based Routing <u>Andres Mejia</u> Sven-Arne Reinemo Jose Flich Tor Skeie Jose Duato	107. On Modeling Reliability of Data Transport in Wireless Sensor Networks <u>Faisal Karim Shaikh</u> Abdelmajid Khelil Neeraj Suri	116. Multiple phase I/O technique for improving data access locality David Singh <u>Florin Isaila</u> Alejandro Calderón Félix García Jesús Carretero
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12:30 – 14:00 Lunch

T2: Network-based and Internet-based Computing (cont'd)

S9:Pervasive Computing Environments and Services (cont'd)

14:00– 14:30	66. Activity prescheduling in grid workflows Eugenio Zimeo <u>Giancarlo Tretola</u>	108. A self-aware clock for pervasive computing systems Andrea Bondavalli Andrea Ceccarelli <u>Lorenzo Falai</u>
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14:30 – 15:00	<i>15:00-15:20 Short Paper</i> 46. Differentiated quality of service for e-commerce applications through connection scheduling based on system-level thread priorities <u>Javier Alonso</u> Jordi Guitart Jordi Torres	110. Adaptable parsing of real-time data streams <u>Ferdinando Campanile</u> Alessandro Cilaro Luigi Coppolino Luigi Romano
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15:00 – 15:30	<i>15:20-15:40 Short Paper</i> 17. Communication study and implementation analysis of parallel asynchronous iterative algorithms on message passing architectures <u>Didier El Baz</u>	111. Dynamic distribution and execution of tasks in pervasive grids Antonio Coronato <u>Giuseppe De Pietro</u> Luigi Gallo
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15:30 – 16:00	15:40-16:00 Short Paper	112. Performance evaluations of the FTOG framework for effective object management and load distribution
	18. Towards On-Demand Ubiquitous Metascheduling on Computational Grids	
	Jose M. Alonso Vicente Hernandez <u>Germàn Moltò</u>	<u>Myungseok Kang</u> Jonghyuk Park Hag Bae Kim

16: 00 Excursion to the Royal Palace of Caserta

21:00 Conference Dinner at Villa Doria D'Angri

February 9th

Main room
S11: Modeling, Simulation and Optimization of Peer-to-Peer environments

Chairs: Julien Bourgeois, Giovanni Chiola

Room A
T4: Distributed Systems

Chair: Giovanni Schmid

Room B

9:30 – 10:00	71. Social peer-to-peer for resource discovery	90. Evaluating Resource Discovery Protocols for Hierarchical and Super-Peer Grid Information System
	<u>Lu Liu</u> Stephen Mackin Nick Antonopoulos	<u>Carlo Mastroianni</u> Domenico Talia Oreste Verta

10:00 – 10:30	96. Efficient simulation of large-scale p2p networks: compact data structures	57. HAND: highly available dynamic deployment infrastructure for globus toolkit 4
	<u>Andreas Binzenhöfer</u> Tobias Hoßfeld Gerald Kunzmann Kolja Eger	Li Qi <u>Hai Jin</u> Ian Foster Jarek Gawor

10:30 – 11:00 Coffee Break

**S11: Modeling,
Simulation and
Optimization of
Peer-to-Peer
environments
(cont'd)**

**T3: Models and Tools
for Programming
Environments**

Chair: Andrea Clematis

**T1: Advanced
Applications**

Chair: Daniela di
Serafino

11: 00 – 11:30	99. Efficient simulation of large-scale p2p networks: modeling network transmission times <u>Gerald Kunzmann</u> Robert Nagel Tobias Hoßfeld Andreas Binzenheöfer Kolja Eger	15. A Performance model for stream-based computations <u>Nicola Tonellotto</u> Domenico Laforenza Marco Danelutto Marco Vanneschi Corrado Zoccolo	37. Grid multi-resolution docking <u>Ignacio Garzón</u> Eduardo Huedo Rubén Montero Ignacio Llorente Pablo Chacón
11:30 – 12:00	100. An analytical model of a bittorrent peer Mario Barbera Alfio Lombardo <u>Giovanni Schembra</u> Mirco Tribastone	52. pDomus: a prototype for cluster-oriented distributed hash tables <u>José Rufino</u> António Pina Albano Alves José Exposto	65. Improving the development process for CSE software <u>Michael Heroux</u> James Willenbring Michael Phenow
12:00 – 12:30	103. RealPeer - a framework for simulation-based development of peer-to-peer systems <u>Dieter Hildebrandt</u> Ludger Bischofs Wilhelm Hasselbring	53. Global predicate monitoring applied for control of parallel irregular computations Janusz Baorkowski Damian Kopanski <u>Marek Tudruj</u>	12:00-12:20 Short Paper 51. A new parallel arrangement algorithm based on odd-even mergesort <u>Ezequiel Herruzo</u> Guillermo Ruiz J. Ignacio Benavides Emilio L. Zapata <u>Oscar Plata</u>
12:30 – 13:00	104. SLOSL – a modelling language for topologies and routing in overlay networks <u>Stefan Behnel</u>	64. An annotation-based framework for parallel computing <u>João Luis Sobral</u> Carlos Augusto Cunha	12:20-12:40 Short Paper 86. A grid-based parallel approach of the multiobjective branch and bound <u>Mohand Mezmaz</u> Nouredine Melab El-Ghazali Talbi

13:00 – 14:30 Lunch

T4: Distributed Systems (cont'd)

T3: Models and Tools for Programming Environments (cont'd)

S10: Multi-Agent and Bio-Inspired Algorithms and Applications for Distributed Systems

Chairs: Gianluigi Folino, Carlo Mastroianni

14:30 – 15:00

61. An evaluation of ring-based algorithms for the eventually perfect failure detector class

Joachim Wieland
Mikel Larrea
Alberto Lafuente

68. Performance analysis for clusters of symmetric multiprocessors

Jose Badia
Francisco Almeida
Juan Gómez

Invited Talk:
Franco Zambonelli

Self-organizing services for browsing the world: challenges and directions

15:00 – 15:30

83. Distributed storage with compressed (1 out of N) codes

Peter Sobe

15:00-15-20 Short Paper

34. Monitoring and analysis framework for grid middlewares

Ramon Nou
Ferran Julià
David Carrera
Jordi Caubet

50. A parallel skeleton for the strength pareto evolutionary algorithm 2

Ofelia González
Coromoto León
Gara Miranda
Casiano Rodríguez
Carlos Segura

15:30 – 16:00

36. A modified O(n) leader election algorithm for complete networks

María Castillo
Federico Fariña
Alberto Córdoba
Jesús Villadangos

15:20-15:40 Short Paper

59. A hierarchical radiosity method with scene distribution

Emilio Padrón
Margarita Amor
Montserrat Bóo
Ramón Doallo

94. A Distributed differential evolution approach for mapping in a grid environment

Ivanoe De Falco
Antonio Della Cioppa
Umberto Scafuri
Ernesto Tarantino

16:00 – 16:30

15:40-16:00 Short Paper

88. Automated deployment support for parallel distributed computing

Magdalena Slawinska
Dawid Kurzyniec
Jaroslaw Slawinski
Vaidy Sunderam

41. On the intrinsic fault tolerance nature of parallel genetic programming

Francisco Fernández de Vega
Daniel Lombrana
González

16:30 – 16:45 Closing

16:45 – 18:00 WIP Session

SOCIAL EVENTS

Welcome Reception
Hotel Royal
Via Partenope, 38/44
February 7, 7:30 p.m.

Tickets for accompanying persons are available at the desk (€ 33,00 each)
The Hotel Royal is within walking distance from the Conference site

Excursion to the
Royal Palace of Caserta
February 8, 4:00 p.m.

Offered by the Faculty of Science and the Department of Mathematics of the
Second University of Naples

Seats are limited to 90 participants. Registration at the desk.
Bus departure from the Conference site at 4:00 p.m.

Conference Dinner
Villa Doria D'Angri
University of Naples "Parthenope"
Via Petrarca, 82
February 8, 9:00 p.m.

Co-sponsored by University of Naples "Parthenope" and AMD

Tickets for accompanying persons are available at the desk (€ 60,00 each)

Bus departure from the Conference site at 8:30 p.m.