Davide Salomoni

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Personal data

Davide Salomoni was born in Urbino, Italy on July 25, 1964. He is an Italian citizen and lives in the Bologna area, Italy.

Work experience

INFN-CNAF, Bologna **September 2011 – now**

Davide is a Dirigente Tecnologo (Director of Technology) at the Italian National Institute for Nuclear Physics (INFN). His role is Head of the Research and Development team at CNAF (the INFN National Center for research and development on IT technologies), Bologna. Davide's interests are currently focused on the evolution, scalability, and interoperability of Cloud computing and storage technologies and on low-power architectures. He leads or contributes to several national and international projects, such as: COKA (an INFN-funded project on the efficient usage of many-core architectures); PRISMA (PiattafoRme cloud Interoperabili per SMArt-government), an innovative project funded by the Italian Ministry of Education and Research (MIUR) and by the Ministry of Economic Development (MISE); EGI (the European Grid Infrastructure); Open City Platform (OCP), a MIUR-funded Smart Cities project in the "Cloud computing technologies" section, where he coordinates the IaaS area; he is also the coordinator of the INFN Cloud computing workgroup and is active in several Cloud-related initiatives.

INFN-CNAF, Bologna **September 2005 – September 2011**

Manager of the computing farm of the INFN National Computing Center (called "Tier-1"), located at CNAF, Bologna. In this period Davide dealt with the definition, start-up and implementation of operational services in the Tier-1 computing farm, and on the development at both national and international level of distributed computing. He was engaged in several working groups and European projects, such as EGEE (Enabling Grids for E-Science) and Open Grid Forum (OGF) Europe. For two years he represented INFN in the Scientific-Technical Committee of the Italian Resarch and Academic Network (GARR). He was project lead and initiatior of the WNoDeS (Worker Nodes on Demand Service) initiative, focusing on the development of services integrating Grid and Cloud interfaces for scientific tasks. Since January 1, 2009 he's an INFN Director of Technology.

NIKHEF, Amsterdam **September 2003 – September 2005**

Working as senior scientist at NIKHEF (Nationaal instituut voor subatomaire fysica, the Dutch institute for research in Astro-Particle Physics, Amsterdam), Davide focused on distributed computing and in particular on Grid computing technologies, contributing to the design, management and development of the Tier-1 computing center at NIKHEF/SARA and to Grid-related project in the Netherlands.

COLT Telecom, Amsterdam **March 2001 – June 2003**

Working in Amsterdam at COLT Telecom (a multinational telecommunications, IT managed services and data center services company), Davide was first Technical Manager of the Dutch Internet Team, contributing to the design and production readiness of the Amsterdam data center, and to the definition and implementation of some commercial products. Later he moved on to being a member of the architectural group of the COLT Telecom Europe Internet Division.

SLAC, USA **January 1999 – February 2001**

In January 1999, shortly before the start-up of the BaBar physics experiment at the Stanford Linear Acceleration Center (SLAC), Davide moved to SLAC (Menlo Park, USA), where he was manager of the local networking group, focusing in particular on the optimization of the local area network, on the BaBar network data transfer, and on the evolution of wide-area high-speed data transmission technologies for physics experiments.

INFN-CNAF, Bologna **January 1991 – December 1998**

After receiving his MD in Physics from the University of Bologna in July 1990, he started working at INFN CNAF first with grants funded by Digital Equipment Corporation (DEC), then with INFN temporary contracts, and eventually as INFN staff scientist. In this period he focused on networking technologies, designing and developing monitoring systems for the then-current DECnet, IP and X.25 networks used by INFN and by the Italian scientific community at large. He represented INFN in several national and international working groups linked to the design and development of network communication protocols and distributed infrastructures. He was one the writers of the first design plan of the Italian academic and research network (GARR) and was the first manager of its Network Operations Center.

Education

Physics MD, University of Bologna **June 22, 1990**

Davide got his Physics MD from the University of Bologna with a 110/110 mark, with a thesis on microprocessor simulations.

Expertise

Working for more than 23 years in the fields of networking, distributed computing and scientific computing, Davide has got extensive expertise at both technical and management level in team management, definition of novel services, design and operation of complex networks and of distributed computing infrastructures, in commercial and academic enviroments. He worked and is familiar with Internet communication protocols, modern programming languages, virtualization technologies and distributed computing frameworks such as Grids and Clouds. In his managerial roles, in several cases he faced mission-critical tasks where quality of service and attention to the customer were of paramount importance, linked to budget constraints and to the management of the involved teams.

Besides his mother tongue (Italian), he speaks fluent English and has basic French and Dutch language skills.

Curriculum Vitae of Donatella Lucchesi

Address Department of Physics and Astronomy
University of Padova
via Marzolo 8 35131 Padova – Italy
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Born February 29, 1964 in Lucca Italy
Citizenship Italian

Academic Career:
October 2010 - present: Associate Professor at the University of Padova
October 2006 - October 2010: Researcher at the University of Padova
April 2005 – October 2006: Researcher at the Istituto Nazione Fisica Nucleare (Padova)
March 2001 – April 2005: Senior post-doctor at the University of Padova
February 1999 – February 2001: Post-doctor at the University of Padova
July 1995- July 1997: Post-doctor at Istituto Nazione Fisica Nucleare (Pisa)
October 1991- September 1994: PhD in Physics at the University of Catania
July 1990: "laurea" in Physics at the University of Pisa
July 1987: Summer student at Fermi National Laboratory
July 1983: high school degree

Research Activity Summary
1989-1990
WA84 at the CERN SPS. where Donatella Lucchesi prepared her "laurea" thesis and published her first physics results
1991-1994
CDF experiment, Tevatron collider at Fermilab, Pisa institution.
For her Phd she studied the B0d -B0d-bar oscillations and measured the mixing frequency for the first time at hadronic collider.
1995-2001
CDF experiment, participation to the R&D activities for the tracking detector improvements.
2002-2007
CDFII experiment, coordination of a subgroup for the measurements of the B0s which brought to the precise measurement of the B0s mixing frequency.
She started to coordinate computing activities in CDF.
2008-2011
CDFII experiment, participation to the upgrade of the calorimetric trigger. She collaborated with the Higgs searches working group exploiting the decay modes
H->WW e H->ZZ with which was obtained the first mass exclusion after the LEP experiments. Measurement of the ZZ production cross section.
INFN reviewer of ATLAS and CMS computing.
She obtained a University grant, PRIN 2008, "New trigger strategies at hadron colliders for high energy physics new frontiers research" (coordinator of the Padova unit).
European Grant FP7-PEOPLE-IOF-2008: ITES, scientific coordinator.
2012-Present
LHCb collaboration, INFN and University of Padova group was accepted as new collaborator in LHCb with Donatella Lucchesi as PI.

Committees and Commitments

1999-2003	LEP Working group member
2004-2006	Heavy Flavor Averaging Group member
2005-2009	Coordinator of the Italian CDF computing
2006-2012	PI of the CDF-Padova institutions

2007-2009 CDF computing and data handling co-head
2009-2011 Member of the INFN review panel for Atlas and CMS
2011 Member of the review panel of ATLAS and CMS Operations Program (DOE)
2011 Member of the review panel of Open Science Grid (OSG) (DOE)
2011-present Chair of the INFN Computing review panel
2012-present Member of the Computing Scrutiny Group CERN
2012 Member of the review panel of ATLAS and CMS Operations Program (DOE)
2012-present PI of the LHCb Padova institution
2013-present Member of the executive board of the department of physics and astronomy of the University of Padova
2013-present Member of the CTS (Technical and Scientific Committee of CNAF-Tier1
2014 Member of the review panel of LBNE (DOE)

Supervised Students
Simone Pagan Griso: *Study of Bs production at CDF II*
Stefano Camarda: *Study and development of algorithms aimed at the H ->bb-bar selection at CDFII*
Matteo Bauce: *ZZ production cross section measurement in the four lepton decay channel at CDF experiment*
Stefano Gelain: *Study of new technologies for real time events selection in hep experiments*
Simone Pagan Griso, PhD: *Searches for a High-Mass Higgs Boson Produced in p-pbar Collisions at sqrt(s) = 1.96 TeV.*
"14th annual URA Thesis Award"
Maria d'Errico, PhD: *Search for a high-mass Higgs boson produced in pp-bar collisions at sqrt(s) = 1.96 TeV with an hadronic tau in the final state*
Matteo Bauce PhD *Study of the ZZ diboson production at CDF II*

Major Conferences
1995 -XXXth Rencontres de Moriond *B mixing,lifetimes and rare decays at CDF and D0*
-Hadron 95 *CDF Results on B Lifetimes and Mixing*
1996 -Invited talk at the Italian Physics Society *B Physics Results at CDF*
1997 -16th International Workshop on Weak Interactions and Neutrinos *Prospects for Observing CP Violation at the Tevatron*
1998 -III International Conference Hyperons, Charm and Beauty Hadrons *B Physics in Run II with upgraded CDF II*
2000 -Les Rencontres de Physique de la Vallee d'Aoste *Fully reconstructed Hadronic B decays at CDF*
2001 -KAON2001 International Conference on CP Violation *Future CDF/D0 B physics*
2002 -Workshop on the CKM unitarity triangle, "Interest of having precise determinations of b-hadron lifetimes", talk *Delta Gamma/Gamma results review and future perspectives*
-8th International Conference on B-Physics at Hadron machines *CDF - Secondary Vertex Trigger*
2003 -Workshop on the CKM Unitarity Triangle *Bs Physics and Prospects at the Tevatron*
2004 -32nd Conference on High Energy Physics, plenary talk *New results for heavy flavors and QCD tests at Tevatron*
2006 -First Workshop on Theory, Phenomenology and Experiments in heavy flavour physics *Bs Mixing at the Tevatron*
-IEEE *LcgCAF: CDF submission portal to LCG*
2007 -3rd International Conference on e-Science and Grid Computing *CDF Monte Carlo Production on LCG GRID via LcgCAF*
2008 -IFAE2008 Invited talk on *Results from the Tevatron*
2009 -CHEP09, 17th International Conference on Computing in High Energy and Nuclear Physics *CDF way to Grid*
2010 -ICHEP2010 35th International Conference on High Energy Physics *Standard Model high mass Higgs search at CDF*
2013 -ICNFP 2013 2nd International Conference on New Frontiers in Physics 2013 *The LHCb Upgrade*
Donatella Lucchesi is co-author of more than 700 articles on international reviews.

Curriculum vitæ et studiorum di Massimo Masera

1986	Laurea in Fisica con lode all'Università di Torino.
1990	Dottorato di Ricerca in Fisica all'Università di Torino.
1990-2001	Ricercatore universitario a Torino
2000-2002	Congedo al CERN come project associate nell'ambito dell'offline team dell'esperimento ALICE
Dal 2001	Professore Associato a Torino
2013	Abilitazione Scientifica Nazionale a Professore Ordinario in Fisica delle Interazioni Fondamentali

Attività scientifica

L'attività scientifica di Massimo Masera, sin dal dottorato di ricerca, si è svolta prevalentemente in esperimenti che partecipavano al programma di fisica con ioni relativistici del CERN.

1986-1995. Fasci di ^{16}O e ^{32}S all'SPS del CERN: HELIOS (High Energy Lepton and Ion Spectrometer) .

Nell'esperimento NA34/2 si è occupato della simulazione e dell'analisi dei dati raccolti con i rivelatori di molteplicità a pad di silicio (ring counters) di responsabilità del gruppo di Torino. Per la tesi di dottorato ha studiato la caratterizzazione delle collisioni tra nuclei attraverso la determinazione di molteplicità ed energia trasversa. Ha partecipato alle simulazioni legate alla progettazione dei ring counters usati successivamente in NA34/3. In questo esperimento ha partecipato all'analisi dei dati, in particolare allo studio della produzione di coppie di muoni a bassa massa invariante e della produzione relativa dei mesoni ϕ e $(\rho+\omega)$, studiata nel canale di decadimento in una coppia di muoni.

1990-2000. Fascio di ^{208}Pb all'SPS del CERN: NA50.

NA50 era essenzialmente uno spettrometro di muoni ottimizzato per la rilevazione del mesone J/ψ, corredato da rivelatori per la caratterizzazione degli eventi, quali il rivelatore di molteplicità (M.D.), un calorimetro elettromagnetico e un calorimetro a zero gradi. M. Masera ha partecipato al progetto e alla realizzazione di M.D. Ha condiviso fino al 2000 con L. Ramello la responsabilità dei programmi di simulazione, ricostruzione e analisi dei dati forniti da M.D. Si è inoltre occupato del monitoraggio online del rivelatore, scrivendo parte del software di monitoring e di event display nonché dello studio della produzione della J/ψ normalizzata al processo di Drell--Yan in funzione della molteplicità, che è stata interpretata come un effetto della formazione di un plasma di quark e gluoni.

2000 – oggi. Fasci di 208Pb al Large Hadron Collider del CERN: ALICE (A Large Ion Collider Experiment).

M. Masera è membro della collaborazione sin dalla stesura del proposal e il suo impegno a tempo pieno è iniziato nel 2000 su tre linee di responsabilità: l'Inner Tracking System (ITS); il calcolo distribuito e la simulazione e analisi dei dati. Dal

2002 è Project Leader dell'offline dell'ITS; in questa veste si è occupato in particolare di ricostruzione di vertici (primari e secondari) e di tracciamento in modalità standalone. Dal 2013, con I. Belikov, coordina il Work Package relativo alla simulazione e ricostruzione dei dati di un nuovo ITS che dovrebbe essere operativo nel run 3 di LHC. Il Technical Design Report è stato approvato nel 2014. Ha iniziato ad occuparsi di calcolo distribuito durante la sua permanenza al CERN (2000-2002) con le prime simulazioni distribuite geograficamente. E' stato coordinatore del calcolo italiano di ALICE dal 2002 al 2013, promuovendo la realizzazione di centri di calcolo partecipanti al Tier-2 di WLCG per l'esperimento ALICE (Torino, Catania, Bari, Padova-LNL) e, più recentemente, la realizzazione di facility per l'analisi interattiva, realizzate con tecnologie di cloud computing. Per quanto riguarda la fisica, M. Masera ha partecipato alla messa a punto di procedure di analisi dei dati, dapprima utilizzando simulazioni. Ha contributo, in particolare come supervisor di laureandi, dottorandi e ricercatori post-doc, alla definizione delle strategie di ricostruzione di mesoni contenenti charm attraverso i loro canali di decadimento adronico all'interno del barrel di ALICE e all'identificazione di particelle di basso momento con l'ITS, necessaria per la ricostruzione di spettri in momento trasverso di adroni identificati.

M.Masera è stato relatore di 19 presentazioni a congressi internazionali, 1 a un congresso nazionale ed è co-autore di circa 140 pubblicazioni su riviste scientifiche.

Altre responsabilità

- 2001-2002. Coordinatore scientifico dell'Unità di Ricerca di Torino di un progetto PRIN avente per obiettivo lo sviluppo di algoritmi di simulazione e ricostruzione di eventi in collisioni nucleari ad alta energia
- 2003-2005. Coordinatore nazionale di un progetto PRIN avente per obiettivo lo sviluppo di modelli di calcolo dedicati all'analisi e alla gestione di grandi volumi di dati.
- 2013-2015. Coordinatore scientifico dell'Unità di Ricerca di Torino di un progetto PRIN avente per obiettivo l'ottimizzazione dell'accesso ai dati di LHC con tecnologie di cloud computing.
- E' stato supervisore di 8 assegnisti e post-doc dal 2001 a oggi.
- E' stato supervisore di 8 dottorandi dal 2005 a oggi.
- E' membro del collegio dei docenti della Scuola di Dottorato in Fisica e Astronomia di Torino.
- Ha svolto attività di referee per il MIUR e per l'INFN (SuperB).