

Eugeni Dodonov

CONTACT INFORMATION	Eugeni Dodonov Rua Miguel João, 1137 Jd. Bandeirantes São Carlos, SP, Brazil CEP 13562-180	<i>E-mail:</i> eugeni@dodonov.net <i>WWW:</i> http://eugeni.dodonov.net <i>Phone:</i> +55 (16) 97126471 <i>LinkedIn:</i> linkedin.com/in/eugeni_dodonov
CITIZENSHIP	Originally Russian Federation, Brazilian citizenship since 2010.	
EDUCATION	PhD. in Computer Science 2005 – 2009 University of São Paulo (USP) – ICMC, São Carlos, SP, Brazil Thesis Topic: <i>Providing Autonomy to Distributed Environments by Predicting the Dynamics of Process Behavior</i> Area of Research: distributed systems, autonomic computing, grid computing, artificial intelligence, time series forecasting.	
	Master in Computer Science 2002 – 2004 Federal University of São Carlos (UFSCar) – São Carlos, SP, Brazil Dissertation Title: <i>An Integrated Caching and Prefetching Mechanism for High-Performance Distributed File Systems</i> Area of Research: distributed systems, file systems, high performance computing	
	Bachelor in Computer Science 1998 – 2001 Federal University of São Carlos (UFSCar) – São Carlos, SP, Brazil Graduation Project: <i>Generic Userspace File System: a virtual file system for Linux kernel</i>	
PROFESSIONAL EXPERIENCE	Mandriva Conectiva , Brazil/France	
	Engineering Team Leader – Mandriva Brazil 04/2010 – <ul style="list-style-type: none">• Management of Engineering teams located in Brazil.	
	Mandriva Security Team 01/2009 – <ul style="list-style-type: none">• Responsible on providing security and bugfix updates for Mandriva products (working on about 175 security/ bugfix advisories).	
	Software Engineer 11/2008 – <ul style="list-style-type: none">• Development and maintenance of security and network applications.• Maintenance of over 70 core packages (openssh, iptables, initscripts,..).• R&D: working on semantic web, cloud storage infrastructure and security, zeroconf-based network solutions and server-focused virtualization.• OEM: development of hardware and software solutions for partners.	
	MSTECH , Bauru, Brazil 05/2007 – 05/2008 Manager of Multi-Platform Solution Development division <ul style="list-style-type: none">• Architecture and development of <i>MS-BXP</i> multi-platform remote boot and software streaming solution. Projected the initial solution architecture, multi-platform remote boot protocol, write-cache authentication mechanisms and virtualization solution for remote desktops.• Development of an multi-platform network management and monitoring solution for large-scale distributed environment over unstable network connections. Implementation of <i>SNMP</i> and <i>WMI</i> monitoring, web-based management server, secure authentication support for users and sites, and a <i>push</i>-based mechanism for update deliveries.• Architecture and development of <i>UniClient</i>, a <i>SmartClient</i> application for embedded and distributed systems. Development of a specialized Linux distribution for flash-based, network, live-cd and live-usb environment.	
	Microsoft Corporation , Redmond, U.S.A. 02/2007 – 05/2007 Software Design Engineer , <i>Core File Systems</i> group <ul style="list-style-type: none">• Proposal and implementation of a new directory index pre-allocation mechanism for <i>NTFS</i> file system.	

- Evaluation of *NTFS* and *BitVault* performance, and proposal of an optimized data allocation mechanism.

MSTECH, Bauru, Brazil

08/2003 – 02/2007

Research and Development

- Principal architect and developer of *UniRecovery*, a disk imaging and recovery application. Projected Live-CD, Live-USB, recovery partition and network-based versions of the product. Implemented an *NTFS* partition access method with over 80% performance gain over competing solutions.
- Principal architect and developer of *BlueLab Linux*, a class control application. Implementation of licensing mechanisms, low-bandwidth screen sharing, system-level access restrictions, persistent user and machine authentication. Development of custom patches for *samba*, *mozilla* and *apache* projects to support required functionalities in the application.
- Principal architect and developer of remote boot and software streaming solutions based on storage virtualization. Implementation of a Linux version of *Ardence* remote boot and software streaming protocol, remote swapping capabilities, server and client-side write-caching, high availability multi-server failover support and GUI configuration applications. Proposal and development of a custom network protocol which resulted in over 400% improvements over competing solutions.
- Development of a specialized Linux benchmark suite for Intel Brazil.
- Lead architect and developer of the *UniLinux* Linux distribution aimed at the educational market.
- Architect and developer of a scalable decentralized and distributed storage solution for large-scale datacenters. Proposed approaches for incremental file transfers, selective data backup and distributed authentication.
- Content adaptation for Intel Teach To Future (*TTF*) program. Development of a self-installable solution for the program, fully compatible with *RedHat*, *Debian*, *Mandriva* and *SuSE* distributions.
- Project and implementation of a internet-based licensing system for software activation and theft control.

ACADEMIC EXPERIENCE

Teaching:

- **2009 – 2010:** Teacher for *LATO-SENSU in software development for WEB* and *LATO-SENSU in computer networks*, Computer Science Department, UFSCar.
- **2003 – 2004:** Teacher in the *LATO-SENSU in software development for WEB*, with lectures about *Voice over IP*, Computer Science Department, UFSCar.
- **2003:** Teacher in the *MBA in Technology and Business applied to the Internet*, set of lectures about *WEB* environment configuration and administration, Computer Science Department, UFSCar.

Other:

- Ad-Hoc reviewer for *Journal of Ambient Intelligence and Humanized Computing*, *Future Generation Computer Systems* and *International Journal of Parallel, Emergent and Distributed Systems* journals.
- Technical program committee and reviewer: ICIW 2007, 2008, 2009, 2010, FCST 2010, APSCC 2008, CLEI 2009.
- Number of talks and presentations at academic events for *UFSCar*, *USP* and *UNIP* universities.

PUBLICATIONS:

I have **4** publications in International Journals, **1** book chapter and **12** publications in International Conferences. The ones I consider most relevant are ¹:

1. DODONOV, E.; MELLO, R. F. *A Novel Approach for Distributed Application Scheduling Based on Prediction of Communication Events* Future Generation Computing Systems, v. 26(5), 2010.

¹Full list is available at <http://eugeni.dodonov.net/#publications>

2. MELLO, R. F.; DODONOV, E.; BERTAGNA, R.; SENGER, L. J. *Extracting and predicting the communication behaviour of parallel applications* In: International Journal of Parallel, Emergent and Distributed Systems, v. 24(3), 2009.
3. DODONOV, E.; YANG, L. T.; MELLO, R. F. *On Application Behavior Extraction and Prediction to Support and Improve Process Scheduling Decisions*. Book chapter in Handbook of Research on Scalable Computing Technologies. 1 ed., 2009.
4. ANDRADE FILHO, J. A.; MELLO, R. F.; DODONOV, E.; SENGER, L. J.; YANG, L. T.; LI, K.-C. *Toward an Efficient Middleware for Multithreaded Applications in Computational Grid*. In: IEEE 11th International Conference on Computational Science and Engineering, 2008, São Paulo, IEEE. (*outstanding paper award*)
5. MELLO, R. F.; ANDRADE FILHO, J. A.; DODONOV, E.; ISHII, R. P.; YANG, L. T. *Optimizing distributed data access in Grid environments by using artificial intelligence techniques*. In: The Fifth International Symposium on Parallel and Distributed Processing and Applications, 2007, Niagara Falls.
6. DODONOV, E.; MELLO, R. F.; YANG, L. T. *Adaptive Technique for Automatic Communication Access Pattern Discovery Applied to Data Prefetching in Distributed Applications Using Neural Networks and Stochastic Models*. In: 4th International Symposium Parallel and Distributed Processing and Applications, 2006, Sorrento.
7. DODONOV, E.; QUAINI, J.; GUARDIA, H. *GridBox: Securing Hosts from Malicious and Greedy Applications*, Middleware for Grid Computing 2004, Toronto, Canada.

OTHER ACTIVITIES AND PROJECT PARTICIPATION **Open-Source projects:**

2008 – 2010 – Open-Source applications for Mandriva Linux distribution: network stack (drakx-net, netprofile, net_monitor), security (msec, tomoyo-gui) and research projects (PAM module for Cloud authentication, ZeroConf and XML-RPC-based solutions for environment configuration, apache module development for cloud storage).

2008 – 2009 – SWIM (Semantic Web enabled Issue Manager), development of semantic web client/server architecture to unify different bugzilla databases.

2006 – 2007 — SNMPMon, distributed system monitor and management system for *Linux* and *Windows* environments.

2006 – 2008 – *ComMonitor*, a framework for transparent online application behavior extraction, classification and prediction for MPI and socket-based network applications.

2004 – 2006 – GridBox, a light-weight security and authentication framework.

2004 – 2005 – StatMonitor, application execution monitoring tool for UNIX environments. Used by Intel to profile OpenOffice.org application suite.

2004 – SSSR (Simple Sound Recorder), a Linux-based sound recorder.

2000 – *LSSL* (acronym stands for *LSSL is Small Server Linux*) Linux distribution, aimed at unattended server installation and configuration.

2000 – McGhost, application for unattended machine cloning over network using multicasting.

1998 – 2000 – LibPCSpeaker, a library for PC speaker programming on Linux.

Freelance development:

2007 – 2009 – architecture, design, web development and performance optimizations for *MTDF – Meu Time de Futebol* project.

2008 – **TrafDump** – project and development of a cross-platform wireless environment benchmark (*developed for Intel Brazil*).

Research projects:

2005 — 2009 – *MidHPC (Middleware for High-Performance Computing)* project. Development of distributed shared memory and process behavior extraction and prediction mechanisms.

2004 – *SJVM (Single Java Virtual Machine)*, a high-performance JAVA virtual machine projected to improve java applications startup and execution performance.

2003 – 2005 – *ProGrid – A Proxy Grid Architecture*. Development of a proxy-based grid network architecture.

2003 – 2004 – *P2FS (Peer-to-peer File System)*. Proposal and development of a peer-to-peer dynamic file system for heterogeneous grid environment.

2001 – 2005 – *NPFS (Network Parallel File System)*. Research and development of a Parallel network file system with integrated caching and prefetching features.

2003 – Microsoft Academic Alliance access portal development for Computer Science Department, UFSCar.

2002 – *RAGNAR Cluster Suite*, a dynamic heterogeneous distributed clustering solution. This application won the 2st place in the 2nd Applied Computing exposition, realized at Computer Science Department, UFSCar, 2002.

2001 – **2002** – *Remoted* application. An architecture for remote device control using computing interface (IRDA, sockets, WEB browsers, cellular-based control (WAP and SMS). This application won the 1st place in the 1st Applied Computing exposition, realized at Computer Science Department, UFSCar, 2001.

2001 – **2002** – *Speeder* application. A modem-based network network connection optimizer. Won second place on 2nd on 1st Applied Computing exposition, realized at UFSCar, 2002.

TECHNICAL SKILLS **Programming:** 12 years of experience with C, python, Unix scripting (sh, bash and csh); knowledge of Java, Perl, C++, Ruby and RoR and Assembly languages.

Open-Source application customization: custom patch creation for Apache 2, SAMBA, Vim, Mozilla, NetworkManager, Bacula, Util-Linux-Ng, Linux Kernel, OpenSSL, SuperMount and NBD applications, among others;

WEB programming: SSI (apache), CGI, PHP (plain, smarty, wordpress), custom wordpress theme and plugin creation experience, perl, python (web.py, django, and custom web-server development), java (jsp, servlets, struts), Javascript and AJAX, client and server-side XML processing;

Databases: MySQL 3, 4, 5, PostgreSQL 6, 7, SQLite 2, 3;

GUI programming: QT 1, 2, 3, GTK 1, 2, PyGTK, WX Widgets, Glade, TCL/TK, FLTK 1.x, SDL, Swing;

Network programming: sockets, winsockets, multicast programming, MPI, Java RMI, Unix RPC, XML-RPC, web services, CORBA. Experience with custom DSM mechanism implementation and network file systems programming;

System administration: 15 years of system and network administration for UNIX (apache, qmail, postfix, bind, iptables, SAMBA, NIS, OpenLDAP, VPN) in small (up to 50 users) and large (up to 2000 users) environments;

Device drivers programming: Linux 2.2, 2.4 and 2.6 kernel programming, basic FreeBSD kernel programming, Windows NT+ driver development;

UNIX experience: Linux experience since 1997, FreeBSD experience since 1999, OpenBSD experience since 2000, basic Solaris, AIX and HPUNIX knowledge;

Windows programming experience: win32 and NT api programming, windows kernel debugging (kd and windbg), MingW32, assembler GUI programming (SPASM), Visual Studio 6, Borland C++ Builder 3, 5;

Linux package maintainance: advanced knowledge of RPM packaging. Custom package creation for Mandriva, ArchLinux, Slackware, Debian/Ubuntu, RedHat, SuSE and Gentoo.

Other technologies: OpenGL, R, matlab, mathematica, pylab, numpy, GiNaC, OpenSSL, SNMP, DirectFB, L^AT_EX.

LANGUAGES Russian (native language), English (fluent), Portuguese (fluent), Spanish (reading and listening), French (basic reading).

HOBBIES Besides professional activities, I like spending free time on:

- Photography,
- Blogging,
- Music (20 years of Clarinet playing, 15 years of Trumpet and brass instruments),
- Martial Arts (green belt in Tae Kwon Do, Muay Thai practicing since 2003),
- open source code writing,