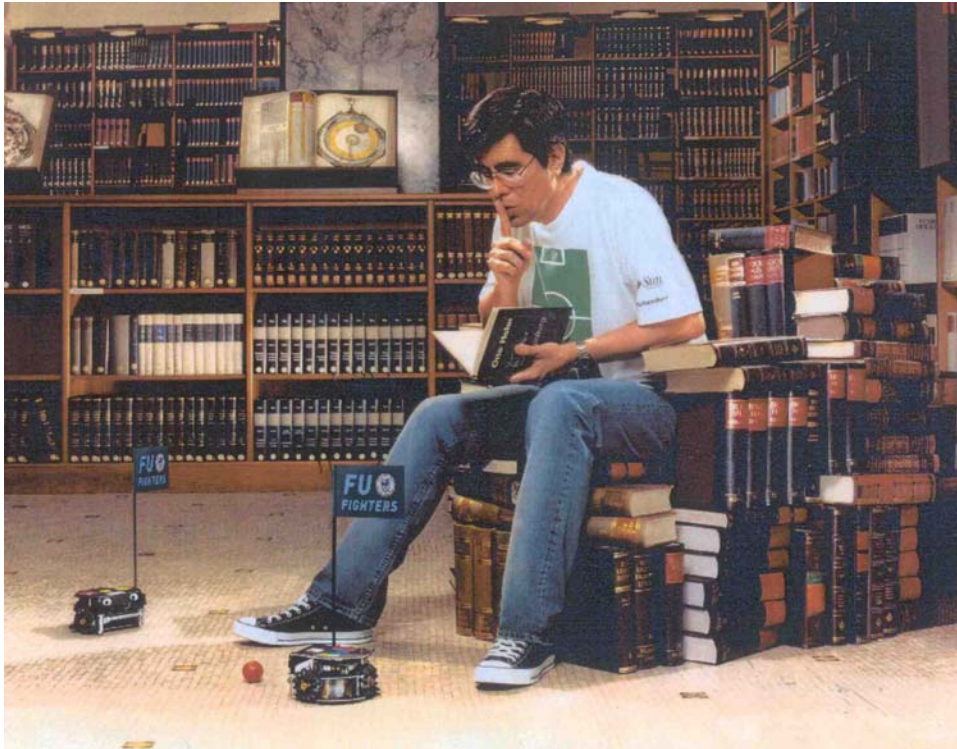


Résumé
Updated February 2012

Raúl Rojas González

Professor of Computer Science (W3)



1 Personal data

Name: Raúl Rojas González
Date of birth: 06.25.55
Place of birth: Mexico City
Marital status: Married, 1 child
Nationality: Mexican (by birth) and German (since 1996)

Member of Mexico's CONACYT "National Research System", SNI, Level III.

Address

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2 Education

- 1994 Habilitation in Computer Science at the Department of Mathematics and Computer Science, Free University of Berlin. The Habilitation is a German title that can be only obtained after the PhD.
- Habilitation thesis: "The Theory of Neural Networks" (in German). Published by Springer-Verlag, Berlin.
- 1988 PhD (summa cum laude) at the Otto Suhr Institute, Free University of Berlin (PhD in Economics and Social Sciences).
- Thesis: "On the History of the Critique of Political Economy" (in German). Published by Rotbuch Verlag, Berlin.
- 1981 Master of Economics at the Department of Economics, National Autonomous University of Mexico (UNAM).
- 1980 Master of Science (Mathematics) at the Department of Mathematics, National Polytechnic Institute, Mexico.
- Thesis: "New Results in the Theory of Oscillations of Solutions of Differential Equations" (in Spanish)
- 1977 Bachelor of Mathematics at the Department of Mathematics, National Polytechnic Institute, Mexico. Ranked first in the class of 1977.
- Thesis: "Nonlinear Optimization Algorithms" (in Spanish)

3 Professional experience

- 1997-2011 Tenured Professor of Artificial Intelligence (C4) at the Mathematics and Computer Science Department, Free University of Berlin. Chairman of the Department of CS from 1999 to 2001.
- 2010 Visiting Professor (six months, Fall term, during my sabbatical), Department of Statistics, Rice University, Houston, Texas.
- 2009 Visiting Professor, Doctoral Program in Artificial Intelligence, CS Department, Universidad Politécnica de Madrid, Spring 2009.
- 2008 Visiting Professor, Universidad de Guadalajara, Mexico, Centro Universitario de Ciencias Exactas e Ingeniería, Depto. de Computación, academic year 08/09.
- 2007 Visiting Professor (six months, Spring term, during my sabbatical), Department of Statistics, Rice University, Houston, Texas.
- 2002 Visiting Professor (six months, Fall term, during my sabbatical), Department of Mathematics and Computer Science, Mills College, Oakland, California.
- 1994-1997 Tenured Professor of Artificial Intelligence (C3) at the Mathematics and Computer Science Department, Martin Luther University Halle-Wittenberg.
- 1994 Visiting Professor (six months), Institute of Electronics of the Technical University of Vienna, Laboratory of Neural Electronics.
- 1993 Visiting Professor (six months), Computer Science Department, Martin Luther University Halle-Wittenberg.
- 1989-1994 Researcher at the Mathematics and Computer Science Department, Free University of Berlin. Leader of the Neural Networks group.
- 1986-1989 Researcher at the German National Corporation for Mathematics and Computer Science (GMD-FIRST). Member of the Prolog-Machines group.
- 1984-1986 Lecturer (part-time) at the Free University of Berlin and at the Technical College of Berlin.
- 1979-1982 Lecturer (part-time) at the Economics Department, National Autonomous University of Mexico (UNAM).
- 1977-1981 Lecturer ("Profesor Asociado C") at the Mathematics and Computer Science Department, National Polytechnic Institute, Mexico.
- 1977-1978 Leader of the Operating Systems Group at the National Nuclear Research Center, Mexico.

1976-1976 Systems analyst for the steel company Lázaro Cárdenas-Las Truchas in Mexico City.

1974-1976 Programmer at the National Nuclear Research Center, Mexico.

4 Research visits

- 2010 Visiting Professor at the Department of Computer Science, University of Auckland, New Zealand (December 2010-January 2011).
- 2006 Visiting Professor at the Department of Computer Science, Stanford University, (Fall quarter 2006).
- 2003 Visiting Professor at the Department of Electrical and Systems Engineering, University of Pennsylvania (Spring term 2003).
- 2002 Invited Professor at the Stanford Center for Innovations in Learning. Stanford University (Fall term 2002).
- 2000 Visiting Professor at the Center for Mathematics Research (CIMAT), Guanajuato, Mexico (one month).
- 1998 Senior visitor at the International Computer Science Institute (ICSI) and Distinguished Lecturer at the EE/CS Department, University of California at Berkeley (five months).
- 1995 Senior visitor at the International Computer Science Institute (ICSI) with the AI group (two months)
- 1994 Senior visitor at the International Computer Science Institute (ICSI) with the speech recognition group (three months).
- 1993 Senior visitor at the International Computer Science Institute (ICSI) with the speech recognition group (three months).

5 Membership in boards

- 2006- Member of the Editorial Board of the journal *Information Technology*, Oldenbourg Verlag, Munich.
- 2002- Member of the Editorial Board of *Journal of Universal Computer Science*, Springer-Verlag, Berlin.
- 2001-2004 Member of the Editorial Board of the *Iterations Journal* published by the Charles Babbage Institute for the History of Computing, University of Minnesota.
- 2000-2005 Member of the Executive Committee of the RoboCup Organization.
- 1999- Member of the Editorial Board of the *Annals of the History of Computing* published by the IEEE.
- 1999- Member of the Green Academy of the Heinrich-Böll-Foundation
- 1998- Director of the Konrad Zuse Internet Archiv, a project funded by the German Research Association.
- 1996- Member of the advisory council of the Journal *Künstliche Intelligenz* of the Gesellschaft für Informatik, Germany.

6 Awards and Distinctions

- 2011 Inducted as corresponding member of the Mexican Academy of Sciences, Engineering Section.
- 2010 “E-Learning Prize” of FU Berlin for the development of the system E-Chalk and of intelligent classrooms.
- 2008 *Gold Medal “Heberto Castillo”* for my robotics work, awarded by the Institute of Science and Technology (ICyT), Mexico D.F., November 2008. The ICyT created also the Medal “Raúl Rojas González” which was awarded in Mexico in 2008.
- 2008 *Technology Transfer Prize “WissensWerte”* of the Technology Foundation Berlin (TSB), October 2008, for the development of a reading system for the blind, 20.000 Euro Prize. The company Beyo GmbH is now selling the device.
- 2007 Honorary professorship (Catedra Laboris) at Universidad de Monterrey, Mexico, for the year 2007.
- 2006 *JAX Innovation Award 2006* (second prize) for the E-Chalk system, Wiesbaden, Germany, May 2006.
- 2005 *Wolfgang von Kempelen Prize for the History of Computing*, awarded jointly by the Austrian Computing Society and the Austrian Ministry for Communication, Innovation and Technology. 5000 Euro prize.
- 2002 Recipient of the *European Academic Software Award 2002* with the “E-Chalk” system during the finals held in Ronneby Sweden in November 2002. Co-recipients: Lars Knipping, Gerald Friedland.
- 2002 My book “Encyclopedia of Computers and Computer History” received the “Outstanding Reference Source” award of the American Library Association, and the “Outstanding Academic Title 2001” award of the *Current Review for Academic Libraries*.
- 2001 *First Prize in the Multimedia Contest* of the Economics Ministry with the project "E-Chalk: A Multimedia Tool for the Classroom and the Internet". In collaboration with Lars Knipping, Gerald Friedland and Ulrich Raffel. 50.000 DM prize.
- 1999 *Distinguished Scholar Award* from the German-American Academic Council and visit thereof to the University of Pennsylvania, Moore School of Engineering. As awardee I was selected to start the Moore School Lectures Series, which now takes place annually.
- 1982 German Academic Exchange Program (DAAD) award to conduct PhD studies in Germany.
- 1977 Winner of Mexico's National Council for Science and Technology Prize as best student of the class of 1972-1977 in the field of Mathematics at the National Polytechnic Institute, Mexico City.

Awards in Robotic Soccer

- 2010 Second place at the Robotic Soccer World Championship (RoboCup 2010) in Singapore, Austria, with the humanoid team FUMANoids (June 2010).

- 2009 Second place at the Robotic Soccer World Championship (RoboCup 2009) in Graz, Austria, with the humanoid team FUmoids (July 2009).
- 2007 Third place at the Robotic Soccer World Championship (RoboCup 2007) in Atlanta, Georgia, with the humanoid team FUmoids (June 2007).
- 2005 First place at the Robotic Soccer World Championship (RoboCup 2005) in Osaka, Japan, F-180 League, with my FU-Fighters Team (July 2005).
Second place in the Mid-Size League with the FU-Fighters Team (July 2005)
- 2004 First place at the Robotic Soccer World Championship (RoboCup 2004) in Lisbon, Portugal, F-180 League, with my FU-Fighters Team (July 2004).
- 2004 Small-Size League *Engineering Award* at RoboCup 2004, Lisbon, Portugal.
- 2004 First place at the Robotic Soccer Championship (German Open 2004) in Paderborn, Germany, F-180 League, with my FU-Fighters Team (April 2004).
- 2002 Second place at the Robotic Soccer World Championship (RoboCup 2002) in Fukuoka, Japan, F-180 League, with my FU-Fighters Team.
- 2000 Second place at the Robotic Soccer World Championship (RoboCup 2000) in Melbourne, Australia, F-180 League, with my FU-Fighters Team.
- 2000 First place at the Robotic Soccer European Championship (EuroCup 2000) in Amsterdam, Netherlands, F-180 League, with my FU-Fighters Team. 10,000 DM prize.
- 1999 Second place at the Robotic Soccer World Championship (RoboCup 1999) in Stockholm, Sweden, F-180 League, with my FU-Fighters Team.

Awards for theses and projects directed

- 2009 2nd Place in the European Satellite Navigation Competition, "Autonomous Logistic Robots" Miao Wang, Tinosch Ganjineh & Raul Rojas.
- 2009 3rd Place in the European Satellite Navigation Competition, "Galileo-enabled and ejectable aircraft black box", Raul Rojas, Miao Wang & Tinosch Ganjineh.
- 2002 Thesis director of the project "Exymen – An extendable media editor", which received the best undergraduate thesis award from the Gesellschaft für Informatik in Germany.
- 2001 Thesis director of the project "Reactive Robotics for Soccer" which received the special prize in the third biannual German "Studienpreis" competition.
- 1997 Thesis director of the project "Recognition of Handwritten Digits for the Postal Service" which received third prize in the first biannual German "Studienpreis" competition.

7 Startup Companies

- 2007 Co-founder of the company "Beyo GmbH" in Potsdam, Germany. The company produces reading systems for the blind and software for image processing. For the idea which lead to the startup, I was awarded the Technology Transfer Prize of the Technologiestiftung Berlin (TSB) in 2008. I sold my shares to investors in 2008.
- 2008 Co-Founder of the company "WohnoSapiens", specialized in building automation and intelligent living spaces. The first intelligent house instrumented by the company will be shown in the summer of 2009.
- 2009 Co-founder of the company "Appirion". The company is currently offering several applications for the iPhone and iPod.

8 Teaching experience

<i>Period</i>	<i>Institution</i>	<i>Courses</i>
1989-2009	Free University of Berlin	111
2009	Universidad Politécnica de Madrid	1
2007	Rice University, Houston	4
2002	Mills College, Oakland, California	3
2001, 2008	Stanford University (Berlin unit)	2
1993-1997	Martin Luther University at Halle-Wittenberg	14
1994	Technical University of Vienna	2
1985	Technical College of Berlin	1
1977-1981	National Polytechnic Institute, Mexico	9
1979-1982	National Autonomous University of Mexico	6
Total		153

The list of courses is given separately in a two-page supplement.

9 Languages

Spoken and written: Spanish, German, English, French, and Italian

10 Publications in the field of Computer Science

10.1 Books

- 1993 *Theorie der neuronalen Netze*, Springer-Verlag, Berlin, 1993; second print August 1993; third print April 1994; fourth print September 1995; fifth print August 1996; sixth and seventh print in 1998 and 1999.
- 1996 *Neural Networks - A Systematic Introduction*, Springer-Verlag, New York, 1996. Second print in 2001. Third print in 2003. Fourth print in 2004.
- 1998 R. Rojas (ed.), *Die Rechenmaschinen von Konrad Zuse*, Springer-Verlag, Berlin, 1998.
- 2000 R. Rojas, U. Hashagen (eds.), *The First Computers - History and Architectures*, MIT Press, Cambridge, Mass., 2000. Nominated for the "2001 Book Award for Individual and Group Contributions Promoting History and Computing" of the American Association of History and Computing.
- 2001 R. Rojas (ed.), *Encyclopedia of Computers and Computer History*, Fitzroy Dearborn, Chicago, 2001.
- 2003 G. Kaminka, P. Lima, R. Rojas (eds.), *RoboCup-2002: Robot Soccer World Cup VI*, Springer-Verlag LNAI 2752, Berlin, 2003.
- 2012 R. Rojas (ed.), *Konrad Zuses Computing Machines*, Springer-Verlag, Berlin, 2012 (forthcoming).

10.2 Commercial products and patents

1. Raul Rojas, Frank Darius, Jürgen Drepper, "68008-Karte für den Apple-II", MC-Mikrocomputer Zeitschrift, N. 9, 1985. Five hundred of these coprocessor boards for the Apple II were sold in Germany from 1985 to 1987.
2. Raul Rojas, Sergio Guevara, "Netbios-kompatible Netzwerkkarte für MS/PC-DOS-Systeme", Design & Elektronik, N. 4, February 1987. This network board was sold in Germany and the US from 1987 to 1990.
3. Raul Rojas, Lars Knipping, Gerald Friedland, "E-Chalk". This software, written in Java, allows the storage and transmission of lectures through the Internet. The software includes an audio, video and whiteboard module. Release 1.0 in distribution since December 2001. For this program we have received three prizes, the last one being the European Academic Software Award 2002. The software was sold from 2002 to 2007. Afterwards it was out in the public domain.
4. Patent "Reading Device for Blind or Visually Impaired Persons", US Nr. 609901635. Europe Nr. EP07122042.0, November 2007. The reader was sold by Beyo GmbH.
5. "Translate and Touch", Application for the iPhone available over iTunes since March 2009 (together with Miao Wang and Tinosch Ganjineh).
6. German Patents "Verfahren zur Bereitstellung von Informationen und Kommunikationswahlgerät zur Durchführung eines Verfahrens zur Bereitstellung von Informationen": DE 10 2009 010 449 (main patent), DE 10 2009 061 023 (secondary patent).

10.3 Refereed papers in Journals and Conferences

- 2012 Daniel Göhring, David Latotzky, Miao Wang, Raul Rojas, "Semi-Autonomous Car Control Using Brain Computer Interfaces", 12th International Conference on Intelligent Autonomous System, June, Korea, 2012.
- 2011 M. Wang, T. Ganjineh, R. Rojas, "Action Annotated Trajectory Generation for Autonomous Maneuvers on Structured Road Networks", *Proceedings of the 5th IEEE International Conference on Automation, Robotics and Application (ICARA)*, 2011.
- 2011 H. Moballegh, N. von Schmude, Raul Rojas, "Gradient Vector Griding: An Approach to Shape-based Object Detection in RoboCup Scenarios", *Proc. of the International RoboCup Symposium 2011*, Istanbul, Turkey, July 2011.
- 2011 P. Czerwionka, M. Wang, F. Wiesel, R. Rojas, „Optimized Route Network Graph as Map Reference for Autonomous Cars Operating on German Autobahn”, *Proceedings of the 5th IEEE International Conference on Automation, Robotics and Application (ICARA)*, 2011.
- 2011 D. Göhring, M. Wang, M. Schnürmacher, T. Ganjineh, R. Rojas, „Radar/Lidar Sensor Fusion for Car-Following on Highways”, *Proceedings of the 5th IEEE International Conference on Automation, Robotics and Application (ICARA)*, 2011.
- 2011 Y. Fu, H. Moballegh, R. Rojas, L. Jin, M. Wang, „Reality Sim: A Realistic Environment for Robot Simulation Platform of Humanoid Robots”, *Proceedings of the 5th IEEE International Conference on Automation, Robotics and Application*

- (ICARA), 2011. Received Best Poster Award.
- 2011 A. Reuschenbach, M. Wang, T. Ganjineh, D. Göhring, R. Rojas, “iDriver - Human Machine Interface for Autonomous Cars”, *Proceedings of the 8th IEEE International Conference on Information Technology: New Generations (ITNG)*, 2011.
- 2011 Landgraf T, Rojas R, Nguyen H, Kriegel F, Stettin K, "Analysis of the Waggle Dance Motion of Honeybees for the Design of a Biomimetic Honeybee Robot", *PLoS ONE* 6(8): e21354. doi:10.1371/journal.pone.0021354.
- 2011 Ramírez-Ortegón, Marte A., Duéñez-Guzmán, E., Rojas, R. and Cuevas, E., “Unsupervised Evaluation Measures for Parameter Selection in Binarization”, *Pattern Recognition*, Vol. 44, 2011, pp. 491-502.
- 2010 M. Gonter, C. Bauer, R. Rojas, “Fahrerspezifische Analyse des Fahrverhaltens zur Parametrierung aktiver Sicherheitssysteme“, *4. Tagung Sicherheit durch Fahrerassistenz*, Munich, April 2010.
- 2010 E. Cuevas, D. Zaldivar, M. Pérez-Cisneros, and R. Rojas, "Multi-Circle detection on images using Artificial Bee Colony (ABC) Optimization", *Softcomputing*, 2010 (submitted).
- 2010 E. Cuevas, D. Zaldivar, M. Perez-Cisneros, R. Rojas, "Learning Automata in Control Planning Strategies", in Mario Koeppen (ed.), *Intelligent Computational Optimization in Engineering: Techniques & Applications*, Springer-Verlag, Berlin, 2010.
- 2010 T. Landgraf, M. Oertel, D. Rhiel, and R. Rojas: "A biomimetic honeybee robot for the analysis of the honeybee dance communication system", *IEEE/RSJ International Conference on Intelligent Robots and Systems*, Taipeh, Taiwan, October 18-22, 2010, pp. 3397-3103.
- 2010 Marte A. Ramírez-Ortegón, Ernesto Tapia, Lilia L. Ramírez-Ramírez, Raúl Rojas and Erik Cuevas, “Transition thresholds and transition operators for binarization and edge detection”, *Pattern Recognition*, Volume 43, Issue 10, October 2010, pp. 3243-3254.
- 2010 Marte A. Ramirez-Ortegon, Ernesto Tapia, Lilia L. Ramirez-Ramirez, Raul Rojas, Erik Cuevas, “Transition pixel: A concept for binarization based on edge detection and gray-intensity histograms”, *Pattern Recognition*, Volume 43, Issue 4, April 2010, Pages 1233-1243.
- 2010 Marte A. Ramirez-Ortegon, and Raúl Rojas, “Transition Thresholds for Binarization of Historical Documents”, *Proceedings of the 20th International Conference on Pattern Recognition*, IEEE Computer Society, pp. 2362-2365, August 2010.
- 2010 Marte A. Ramirez-Ortegon, and Raul Rojas, “Unsupervised Evaluation Methods Based on Local Gray-Intensity Variances for Binarization of Historical Documents”, *Proceedings of the 20th International Conference on Pattern Recognition*, Istanbul Turkey, August 2010.
- 2010 Block M., Losch T., R. Guilboud, Rojas R.: "Semantic Local Contrast Segmentation to Binarize and Recognize Text Documents", *The Fourth International Conference on Digital Society (ICDS 2009)*, St. Maarten/Netherlands Antilles, 2010 (to appear).
- 2010 Yogev N., Block M., Rojas R.: "Painting Art To Hear for Visually Impaired and Blind People", *The Eleventh IASTED International Conference on Computer Graphics and Imaging (CGIM 2010)*, Innsbruck/Austria, 2010.

- 2010 B. Fischer, H. Mobalegh, and R. Rojas, "Low cost synchronized stereo acquisition system for single port camera controllers", *Proc. 2010 IEEE/RSJ International Conference on Intelligent Robots and Systems*, 2010.
- 2009 Raúl Rojas, Andreas Stoffel, Ernesto Tapia, "Recognition of On-Line Handwritten Commutative Diagrams", *10th International Conference on Document Analysis and Recognition (ICDAR 2009)*, July 2009, Barcelona, Spain, 2009, pp. 1211-1215.
- 2009 Marco Block, Maxim Schaubert, Fabian Wiesel, Raúl Rojas, "Multi-Exposure Document Fusion Based on Edge-Intensities", *10th International Conference on Document Analysis and Recognition (ICDAR 2009)*, July 2009, Barcelona, Spain, 2009, pp. 136-140.
- 2009 E. Cuevas, M. Perez-Cisneros, D. Zaldivar, R. Rojas, "LVQ Neural Networks for Color Segmentation", *Soft Computing Methods for Practical Environmental Solutions: Techniques and Studies*, Eds. Gestalt M. and Rivero D. IGI Global Publishers, pp. 220-250, 2009
- 2009 M.Block, R.Rojas, "Local Contrast Segmentation to Binarize Images", *Third International Conference on the Digital Society (ICDS 2009)*, Cancun/Mexiko, 2009, pp. 294-299 (Best Paper Award).
- 2009 M. Esponda, R. Rojas, "The Classroom of the Future Project", *LOGOS Conference: New Technology Platforms for Learning*, Budapest, January 2009.
- 2009 H. Moballegh, M. Mohajer, R. Rojas, "Increasing foot clearance in biped walking: Independence of body vibration amplitude from foot clearance", in L. Iocchi, H. Matsubara, A. Weitzenfeld, C. Zhou, (eds.), *RoboCup 2008: Robot Soccer World Cup XII*, LNCS. Springer, 2008, pp. 157-169.
(<http://dl.acm.org/citation.cfm?id=1575210.1575226>).
- 2008 Tim Landgraf, Hamid Moballegh, Raul Rojas, Randolph Menzel, "Design and Development of a Robotic Bee for the Analysis of Honeybee Dance Communication", *Applied Bionics and Biomechanics*, Taylor & Francis, 2008, 5, pp. 157-164
- 2008 Erik Cuevas, Daniel Zaldivar y Raul Rojas, "Neurofuzzy prediction for gaze control", accepted for publication *Canadian Journal of Electrical and Computer Engineering*, IEEE.
- 2008 H. Moballegh, R. Guilboud, G. Hohl, M. Oertel, R. Rojas, "FUMANOID - Team Description 2008", in L. Iocchi, H. Matsubara, A. Weitzenfeld, C. Zhou, (eds), *RoboCup 2008: Robot Soccer World Cup XII*, LNCS. Springer, 2008.
- 2008 Marco Block, Maro Bader, Ernesto Tapia, Marte Ramirez, Ketill Gunnarsson, Eric Cuevas, Daniel Zaldivar, Raul Rojas: "Using Reinforcement Learning in Chess Engines", *CONCIBE 2008*, Guadalajara, Mexico, May 2008.
- 2008 Gerald Friedland, Raul Rojas: "Anthropocentric Video Segmentation for Lecture Webcasts", *Journal on Image and Video Processing*, Vol. 2008, Hindawi Publishing Corp., 2008.
- 2007 Erik V. Cuevas, Daniel Zaldívar, Ernesto Tapia and Raúl Rojas, "An Incremental Fuzzy Algorithm for the Balance of Humanoid Robots", invited chapter in: Armando

- Carlos de Pina Filho (ed.), *Humanoid Robots New Developments*, I-Tech Education and Publishing, Vienna, Austria.
- 2007 E. Tapia and R. Rojas (2007), "MathFoR: The Mathematical Formula Recognition System, in the *Seventh IAPR International Workshop on Graphics Recognition (GREC07)*, Curitiba, Brazil, September 20-21.
- 2007 Alexander Lüning, Gerald Friedland, Raul Rojas: "Scaling Large-Screen Electronic Chalkboard Content to Handheld Devices", *2nd IEEE International Workshop on Multimedia Technologies for E-Learning at 9th IEEE Symposium on Multimedia*, Taichung, Taiwan (R.O.C.), December 10-12, 2007.
- 2007 Kristian Jantz, Gerald Friedland, Lars Knipping, Raul Rojas, "A Low-Cost Mobile Pointing and Drawing Device", *ACM Workshop on Educational Multimedia and Multimedia Education at the ACM SIGMM Conference on Multimedia*, Augsburg, Germany, September 2007.
- 2007 H. Moballegh, R. Guilboud, G. Hohl, A. Reuschenbach, J. Yu, R. Rojas, "FUMANOID - Team Description 2007", in U. Visser, F. Ribeiro, T. Ohashi, F. Dellaert, (eds.), *RoboCup 2007: Robot Soccer World Cup XI*, LNCS. Springer, 2007.
- 2007 Erik Cuevas, Daniel Zaldivar, Ernesto Tapia and Raul Rojas, "An Incremental Fuzzy Algorithm for The Balance of Humanoid Robots", chapter in: A. Lazinika, *Humanoid Robots – New Developments*, ARS, Vienna, June 2007.
- 2007 Gerald Friedland, Kristian Jantz, Tobias Lenz, Fabian Wiesel, Raul Rojas, "Object Cut and Past in Images and Videos", *International Journal of Semantic Computing*, World Scientific, USA, June 2007.
- 2007 David Schneider, Marco Block, Raul Rojas, "Robust Document Warping with Interpolated Vector Fields", *International Conference on Document Analysis and Recognition 2007*, Curitiba, Brasilien, April 2007.
- 2007 Marte Ramirez, Marco Block, Ernesto Tapia, Raul Rojas, "Quantile Linear Algorithms for Robust Binarization of Digitalized Letters", *International Conference on Document Analysis and Recognition 2007*, Vol. 2, pp. 1158 –1162, September 2007. Curitiba, Brasil.
- 2007 Kristian Jantz, Gerald Friedland, Raul Rojas, "Ubiquitous Pointing and Drawing", *International Journal on Emerging Technologies for Learning (iJET)*, Vol.2, No. 1, ISSN: 1863-0383, Wien, Austria, March 2007.
- 2007 Felix von Hundelshausen, Marco Block, H. J. Wünsche, Raul Kompass, Raul Rojas, "Mesh-Based Active Monte Carlo Recognition", *International Joint Conference on Artificial Intelligence*, Hyderabad, India, January 2007.
- 2007 Erik V. Cuevas, Daniel Zaldivar, and Raúl Rojas, "Particle Filter in Vision Tracking, *Electronic Journal e-Gnosis*, Vol.5, Art. 1, 2007, ISSN 1665-5745.
- 2006 G. Friedland, K. Jantz, T. Lenz, F. Wiesel, R. Rojas: "A Practical Approach to Boundary-Accurate Multi-Object Extraction from Still Images and Videos", in *Proceedings of IEEE International Symposium on Multimedia*, San Diego, California, December December 11-13, 2006.

- 2006 G. Friedland, R. Rojas: "Human-Centered Webcasting of Interactive-Whiteboard Lectures", in *Proceedings of Seventh IEEE International Workshop in Multimedia Technologies for E-Learning*, San Diego, California, December 11-13, 2006.
- 2006 E. Tapia, R. Rojas, "A Neural Architecture for Blind Source Separation", *ICA Research Network International Symposium*, Liverpool, September 2006.
- 2006 S. Jeschke, L. Knipping, R. Rojas, R. Seiler: *Intelligent Chalk-Systems for Modern Teaching: in Math, Science & Engineering Areas*, accepted for ASEE'06
- 2006 Raul Rojas, Mark Simon, Oliver Tenchio, "Parabolic Flight Reconstruction from Multiple Images from a Single Camera", *RoboCup-2006 International Symposium*, Bremen, June 2006.
- 2006 Jochen Brunhorn, Oliver Tenchio, Raul Rojas, "An Omnidirectional Wheel Based on Reuleaux Triangles", *RoboCup-2006 International Symposium*, Bremen, June 2006.
- 2006 R. Rojas, "The S1 and S2 computing machines: Konrad Zuse's work for the German military 1941-1945", submitted to *IEEE Annals of the History of Computing*.
- 2006 T. Zoppke, R. Rojas, "The Virtual Life of ENIAC: Simulating the Operation of the First Electronic Computer", *IEEE Annals of the History of Computing*.
- 2006 Alexander Gloye, Raul Rojas, "Holonomic Control of a Robot with an Omnidirectional Drive", *Künstliche Intelligenz*, Springer-Verlag, 2006.
- 2006 Erik Cuevas, Daniel Zaldivar, Raúl Rojas, Ernesto Tapia, Marco Pérez, Alberto de La Mora, and Roberto Cárdenas, "Artificial Vision Color Fuzzy Segmentation", Congress on Computer Sciences, Biomedical Engineering and Electronics CONCIBE 2006, Guadalajara, Mexico.
- 2006 Ernesto Tapia, Raul Rojas, Erik Cuevas and Daniel Zaldivar, "A Neural Architecture to separate linearly mixed signals", Congress on Computer Sciences, Biomedical Engineering and Electronics CONCIBE 2006, Guadalajara, Mexico.
- 2006 Daniel Zaldivar, Erik V. Cuevas, Marco A. Pérez and Raúl Rojas, "Neural network model for the Balance of a Biped Robot", *Journal Research in Computing Science*, Vol. 21, ISSN 1870-4069.
- 2006 Erik V. Cuevas, Daniel Zaldivar, Marco A. Pérez and Raúl Rojas, "SOFM Neural network texture segmentation", *Journal Research in Computing Science*, Vol. 21, ISSN 1870-4069.
- 2006 Erik V. Cuevas, Daniel Zaldivar, and Raúl Rojas, "Filtering for Vision Tracking", *Digital Journal e-Gnosis*, Vol.4, Art. 17, 2006, ISSN 1665-5745.
- 2005 G. Friedland, K. Jantz, R. Rojas, "SIOX: Simple Interactive Object Extraction in Still Images", *Proceedings of the 7th IEEE Symposium on Multimedia (ISM2005)*, Irvine, California, December 2005.
- 2005 G. Friedland, C. Zick, K. Jantz, L. Knipping, R. Rojas, "An Interactive Datawall for an Intelligent Classroom", *DeLFI2005, Workshop Proceedings*, pp. 25-30, Rostock, September 13th-16th, 2005.
- 2005 R. Rojas, F. Darius, C. Göktekin, and G. Heyne, "The Reconstruction of Konrad Zuse's Z3", *IEEE Annals of the History of Computing*, Vol. 27, N. 3, 2005, pp. 23-32.
- 2005 R. Rojas, Editor of the Special Issue "Autonomous Robotic Soccer" of *Information Technology*, Oldenbourg-Verlag, Editorial, Vol. 47, N. 5, 2005, pp. 239-240.

- 2005 Ketill Gunnarson, Fabian Wiesel, Raul Rojas, "Automatic On-Line Color Calibration for Autonomous Robots", *RoboCup 2005 International Symposium*, Osaka, July 2005.
- 2005 Bastian Hecht, Mark Simon, Artem Petakov, Raul Rojas, "A Neural Coach for Teaching Robots Using Diagrams", *Workshop Agents in Real Time and Dynamic Environments, IJCAI 2005*, Edinburgh, July 2005.
- 2005 Erik V. Cuevas, Daniel Zaldívar, and Raúl Rojas, "Robust fuzzy segmentation", *International Congress on Computer Sciences, Biomedical Engineering and Electronics CONCIBE 2005*, Guadalajara, Mexico, October 2005.
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