



Fabio Roli

Curriculum Vitae

April 2025

Title: Professor

Date and place of birth: October 7, 1962, Genoa, Italy

Nationality: Italian **Male**

Affiliations: University of Genova, University of Cagliari, Italy (double affiliation)

Web <https://www.saiferlab.ai/people/fabioroli>

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Education

M.S., Electronic Engineering, University of Genoa, Italy, 1988 (graduated with honours)

Ph.D., Electronic Engineering, University of Genoa, Italy, 1992

Main Positions held

November 2021 - current: Professor of Computer Engineering, University of Genoa, Italy

November 2023 – current: Professor of Computer Engineering, University of Cagliari, Italy (double affiliation)

2001-October 2021: Professor of Computer Engineering, University of Cagliari, Italy

2024-present: Director sAIfer Lab (<https://www.saiferlab.ai>)

Sep 2022 – current: Honorary Distinguished Professor, Zhejiang Normal University (China)

1998-present: Director Pattern Recognition and Applications Laboratory (<https://pralab.diee.unica.it>)

2019-2022 Visiting Professor, Northwestern Polytechnical Univ., China (Shaanxi Thousand Talents Plan)

2015-2024: Co-founder and R&D Manager of Pluribus One (<https://www.pluribus-one.it>)

2015, Oct.: Visiting Professor, Huazhong University of Science and Technology, China

2014, Oct.: Visiting Professor, Huazhong University of Science and Technology, China

2012, July: Visiting Professor, South China University of Technology, China

2008, Oct.: Visiting Professor, Nanjing University, China

2007-2011: Director of the Laboratory of Ambient Intelligence of the Sardinia DistrICT, Italy

2007-2008: Co-director of the Research Centre of the Distance Learning University of Sardinia, Italy

2001-2005: Member of the advisory board of the joint research laboratories (ICE Labs) between Tiscali company and the Dept. of Electrical and Elec. Eng. of the Univ. of Cagliari, Italy

1998-2000: Associate Professor of Computer Engineering, University of Cagliari, Italy

1995-1997: Assistant Professor of Computer Engineering, University of Cagliari, Italy

1994-1995: Adjunct Professor of Computer Engineering, University of Trento, Italy

1993-1995: Post Doctoral Fellow, University of Genoa, Italy

1988-1990: Research Fellow, University of Genoa, Italy

Research interests and impact

Fabio Roli's research over the past twenty-eight years has addressed the design of **pattern recognition** and **machine learning** systems in the context of real **security** applications. He has provided outstanding contributions to the fields of **ensemble learning** and **adversarial machine learning**, and he has played a leading role in the establishment and advancement of this research themes. Prof. Roli is one of the **pioneers** of the use of **machine learning** for **computer security**. He is often invited to give keynote speeches and tutorials on adversarial machine learning and machine learning for cybersecurity applications. He is (or has been) the PI of dozens of R&D projects, including the leading European projects on Security & Privacy CyberRoad and ILLBuster. Prof. Roli has currently published **119 journal articles** on his research topics and many of his papers are frequently cited. His current **h-index** is **82** according to Google Scholar (April 2025), and his papers collected 28226 citations.

Prof. Roli recently talked about his career and his main scientific contributions on the receipt of the “Pierre Devijver Award”. Video of his talk is available here: <https://www.youtube.com/watch?v=HbRLziqKWKI&t=1s>

Research statement

My research goal is to address fundamental issues for the design of future AI systems, in the context of real security applications. (“The master of the pattern recognition art makes little distinction between theory and practice”, F. Roli ©)

Research impact

Total citations (Google Scholar): 28226

h-index (Google Scholar): 82

i10-index Google Scholar): 282

Top 2% most cited scientists

Prof. Roli is in the Stanford University list of the top 2% most cited scientists in the world (<https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000918>)

Top Italian Scientists

Prof. Roli is one of the most cited Italian computer scientists

(https://topitalianscientists.org/tis/3558/Fabio_Roli_Top_Italian_Scientist_in_Computer_Sciences)

Top Scientists Ranking for Computer Science

Prof. Roli is in the Top Scientists Ranking for Computer Science (<https://research.com/u/fabio-rolì>)

Student mentoring and leadership

Prof. Roli has advised 40 doctoral students over his career and is currently supervising five more. In 1995, few years after his Ph.D., he moved to the University of Cagliari where he founded from scratch the Pattern Recognition and Applications laboratory (<https://pralab.dicee.unica.it>), which is now a world-class research lab with 30 staff members including six tenured Faculty members. In 2007, he created the Laboratory of Ambient Intelligence of the Sardinia DistrICT, within the Sardinia Scientific and Technology Park in Italy. In 2015, he co-founded Pluribus One, a research-intensive startup company that develops computer security products using AI technologies (<https://www.pluribus-one.it>). He is now co-leading the SmartLab at the University of Genova (<https://www.smartlab.unige.net>) and he is the Director of the sAifer Lab (<https://www.saiferlab.ai>) with a lab staff of 70 people.

Selected awards

Pierre Devijver Award, 2020 (https://iapr.org/fellowsandawards/awards_devijver.php)

Fellow of the IEEE, 2012

Fellow of the International Association for Pattern Recognition, 2004

(<https://iapr.org/fellowsandawards/index.php>).

2022 Fellow of the Asia-Pacific Artificial Intelligence Association (AAIA).

2020 Pattern Recognition Medal

Top 2% most cited scientists (<https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000918>)

Selected research grants

- Data mining for the management of telecommunication networks, FST-Atlantis s.r.l., 1998, 14.460 euro.
- Neural networks for the analysis of food products, INFORSUD-Bull Italia, 1999-2000, 52.000 Euro.
- Pattern recognition for the management of telecommunication networks, 2001-2002, FST-Atlantis s.r.l., 25.822 Euro
- Pattern recognition for fault diagnosis in analogical circuits, Ansaldo Segnalamento Ferroviario SpA, 2001-2003, 258.000 Euro.
- Pattern recognition for security in computer networks, March 2001 – March 2002, 52.000 Euro.
- Pattern recognition for fault diagnosis in analogical circuits, Consorzio Ricerche Innovative per il Sud, 2002–2003, 77.469 Euro.
- Fusion of pattern recognition algorithms for fault diagnosis in analogical circuits, Ansaldo Segnalamento Ferroviario SpA, 2003, 100.000 Euro.
- Biometric recognition in sky resorts, Cap Research srl, 2003-2004, 58.000 Euro.

- TRACE, Identification and tracking of electronic devices, Ansaldo Segnalamento Ferroviario Spa, 2005, 50.000 Euro.
- SAFENET, Advanced technologies for Internet security, Tiscali Services SpA, 2005-2007, 300.000 Euro.
- Distributed architectures for multi-sensor surveillance, Elsas SpA, 2006-2007, 172.100 Euros.
- Multi-input processing and recognition for surveillance of wide areas, Vitrociset S.p.A., 2006-2007, 280.000 Euro.
- Infrared face recognition, Regione Autonoma della Sardegna, 2008, 58.000 Euro.
- Biometric recognition for access control, Regione Autonoma della Sardegna, 2008, 120.000 Euro.
- Pattern recognition for quality control, CONDOMETT S.r.l., 2008, 25.000 Euro.
- Pattern recognition for quality control, CONDOMETT SARDA S.r.l., 2008, 25.000 Euro.
- Multi-sensor processing and recognition for the analysis of animal behaviour, Regione Autonoma della Sardegna, 2008, 22.500 Euro.
- Document analysis, STI SpA, 2008-2009, 58.000 Euro.
- Advanced technologies for Internet security, funded by Tiscali Services SpA, 2005-2008, 300.000 Euros.
- Multi-input processing and recognition for surveillance of wide areas, funded by Vitrociset S.p.A., 2006-2008, 280.000 Euros.
- TABULA RASA, Trusted biometrics under spoofing attacks, funded by European Union, FP7 project, 2010-2013, 180.469 euros.
- Fingerprint liveness detection, funded by Cross Match Technologies Inc, 2010, 80.000 euros.
- Secure Computer Vision and Pattern Recognition, funded by Regione Autonoma della Sardegna, 2012-2015, 280.00 Euros
- Advanced Video Content Analysis, funded by Regione Autonoma della Sardegna, 2012-2015, 435.150 Euros.
- Management and Authenticity Verification of multimedia contents, funded by European Union, FP7 project, 2013-2015, 350.000 Euros
- Buster of illegal contents spread by malicious computer networks, funded by European Union, DG HOME, 2014-2016, 120.000 euros
- Development of the Cybercrime and Cyber-terrorism Research Roadmap, funded by European Union, FP7 project, 2014-2016, 120.000 Euros
- Advanced social engineering and vulnerability Assessment, funded by European Union, H2020, 2015-2019 185.000 euros
- LETS CROWD (Law Enforcement agencies human factor methods and Toolkit for the Security and protection of CROWDs in mass gatherings), funded by European Union, H2020, 2017-2019, 300.000 euros.
- RexLearn, Reliable and Explainable Adversarial Machine Learning, PRIN 2017, Ministry of Italian University and Research, 260.492 euros
- European Lighthouse on Secure and Safe AI NETWORK OF EXCELLENCE FUNDED BY THE EUROPEAN UNION, 312.500 euros (<https://elsa-ai.eu/>)
- TRITON, Generative Automation of Security Penetration Tests, funded by European Union, Horizon Europe Program, European Defence Fund, 2024-2027, 484.375 euros.

University teaching

- 2022- present: Trustworthy Artificial Intelligence
- 2022- present: Machine Learning and Data Analysis
- 2022- present: Database Systems
- 1996-present: Computer Architectures (undergraduate course)
- 1998-2010: Artificial Intelligence (graduate semester course)
- 2001-2015: Pattern Recognition (graduate semester course)
- MSc and PhD course on “Multiple Classifier Systems”, Nanjing University, China, October 7-15, 2008
- MSc and PhD course on “Elements of Statistical Pattern Recognition”, South China University of Technology, China, 19-27 July 2012
- MSc and PhD course on “Elements of Statistical Pattern Recognition”, Huazhong University of Science and Technology, China, 20-27 October 2014

- MSc and PhD course on “Machine Learning”, Huazhong University of Science and Technology, China, 7-14 October 2015
- MSc online course on “Machine Learning”, Xidian University, China, 17 June – 23 June 2020
- MSc online course on “Machine Learning”, Northwestern Polytechnical Univ., China, 20 July – 7 August 2020

Selection of tutorials and short courses

- Tutorial on “Fusion of Multiple Classifiers”, International Conference Fusion 2002, Annapolis, Maryland, USA, July 2002.
- Short course on “Linear Combiners of Pattern Classifiers”, E.R. Caianiello, Summer School on “Ensemble Methods for Learning Machines”, Vietri sul Mare, Salerno, Italy, September 2002
- Short course on “Multiple Classifier Systems”, Italian School on Machine Vision, Vietri sul Mare, Salerno, Italy, 11-15 November 2002
- Short course on “Fusion of Multiple Pattern Classifiers”, NATO Summer School on Data Fusion for Situation Monitoring, Incident Detection, Alert and Response Management, Yerevan, Armenia, August 2003
- Tutorial on “Fusion of Multiple Pattern Classifiers”, National Conference of the Italian Association for Artificial Intelligence, Pisa, Italy, 23-26 September 2003
- Short course on “Pattern Recognition”, Annual, Italian, School for PhD Students in Computer Science, Benevento, Italy, 13-22 September 2004
- Short Course on “Multiple Classifier Fusion in Biometrics”, 6th Summer School for Advanced Studies on Biometrics for Secure Authentication: Multimodal Systems and Identity Management”, Alghero, Italy, 8-12 June, 2009.
- Tutorial on “Multiple Classifier Systems”, International School “The Analysis of Patterns”, Cagliari, Italy, September 27th - October 3rd, 2009
- Tutorial on “Multiple Classifier Systems”, ICMLC 2010, Int. Conference on Machine Learning and Cybernetics, Qingdao, China, 11-14 July 2010
- Tutorial on “Adaptive Biometric Systems”, 2011 IEEE Workshop on Computational Intelligence in Biometrics and Identity Management, April 11-15, Paris, France.
- Tutorial on “Adaptive biometric systems that can improve with use”, 2011 IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC 2011), Anchorage, Alaska, October 9-12, 2011
- Tutorial on Multiple Classifier Systems, 2012 IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC 2012), Seoul, Korea, October 14, 2012.
- Corso Breve su “Adversarial Pattern Recognition”, Scuola la Visione delle Macchine 2014, 18 Giugno 2014
- Tutorial on “Adversarial Machine Learning”, IEEE SMC 2015 Int. Conference, Hong Kong, 9 October 2015.
- Tutorial on “Adversarial Pattern Recognition”, 2016 Int. Conference on Pattern Recognition, Cancun, Mexico, Dec. 4th, 2016
- Tutorial on “Data-driven Pattern Recognition: Philosophical, Historical, and Technical Issues”, 2016 Int. Conference on Pattern Recognition, Cancun, Mexico, Dec. 4th, 2016
- Short course on “Adversarial Machine Learning”, IEEE SPS Winter School on Security and Privacy Issues in Biometrics, Abu Dhabi, January 2017
- Short course on “Machine Learning”, International 2017 Summer School on Signal Processing Meets Deep Learning, Capri, Italy, September 2017
- Short course on “Adversarial Machine Learning” International Summer School on Machine Learning, Benicassim, Spain, June 2017
- Tutorial on “Adversarial Pattern Recognition”, Int. Conference on Computer Vision, Venice, Italy, 22 Oct. 2017
- Tutorial on “Adversarial Machine Learning”, IJCAI-ECAP'18, Stockholm, Sweden, July 15, 2018
- Short course on “Adversarial Machine Learning”, 3rd International Summer School on Deep Learning 2019, Warsaw, Poland, July 24-25, 2019
- Short course on “Adversarial Machine Learning”, DeepLearn 2022 Winter, 5th International School on Deep Learning, Bournemouth, UK · January 17-21, 2022, <https://irdta.eu/deeplearn/2022wi/>

Editorial activities

Editorial Board Member, Science China Information Sciences

Advisory editor International Journal Machine Learning and Cybernetics

Associate editor of the Pattern Recognition Letters journal (until 2011)

Associate editor of the Pattern Analysis and Applications journal
 Associate editor of the Electronic Letters on Computer Vision and Image Analysis (until June 2008)
 Associate editor of the Information Fusion journal (until 2005)
 Associate editor of the Journal of Advances in Information Fusion (until August 2008)

Leadership in Scientific Associations

President of the Italian Group of Researchers in Pattern Recognition (June 2012 – 2016)
 Chairman of the Technical Committee on Statistical Techniques in Pattern Recognition of the International Association for Pattern Recognition (August 2004 – August 2008)
 Member of the Governing Board of the International Association for Pattern Recognition (June 2008 – June 2012)
 Member of the Governing Board of the IEEE Systems, Man, and Cybernetics Society (2010-2014)
 Member of the NATO panel for Information and Communications Security, NATO Science for Peace and Security (2008 – 2011)

General Chairman of conferences and workshops

- International workshop on Connectionist Methods and Architectures for Pre-processing and Analysis of Remote-Sensing Images and Data, Cagliari, Italy, 24-25 October 1996.
- First International Workshop on Multiple Classifier Systems (MCS 2000), Cagliari, Italy, 21-23 June, 2000
- Second International Workshop on Multiple Classifier Systems (MCS 2001), Guilford, UK, 2-4 July, 2001
- Third International Workshop on Multiple Classifier Systems (MCS 2002), Cagliari, Italy, 24-26 June, 2002
- Fourth International Workshop on Multiple Classifier Systems (MCS 2003), Guildford, UK, 11-13 June, 2003
- Fifth International Workshop on Multiple Classifier Systems (MCS 2004), Cagliari, Italy, 9-11 June 2004
- Sixth International Workshop on Multiple Classifier Systems (MCS 2005), Monterey Bay, California, USA, 13-15 June 2005
- Seventh International Workshop on Multiple Classifier Systems (MCS 2007), Prague, Czech Republic, 23-25 May, 2007
- 13th International Conference on Image Analysis and Processing (ICIAP 2005), Cagliari, Italy, 6-8 September, 2005
- International workshop on statistical techniques in pattern recognition, S+SSPR 2006, Hong Kong, China, 17-19 August, 2006
- International workshop on statistical techniques in pattern recognition, S+SSPR 2008, Orlando, Florida, USA, 4-6 December, 2008
- Eighth International Workshop on Multiple Classifier Systems (MCS 2009), Reykjavik, Iceland, 10-12 June, 2009
- International School “The Analysis of Patterns”, Cagliari, Italy, September 27th - October 3rd, 2009
- 9th International Workshop on Multiple Classifier Systems (MCS 2010), Cairo, Egypt, 7-9 April, 2010
- 10th International Workshop on Multiple Classifier Systems (MCS 2011), Naples, Italy, 15-17 June, 2011
- Dagstuhl Perspectives Workshop on Machine Learning Methods for Computer Security, Dagstuhl, Germany, 10-14 Sept. 2012
- 11th International Workshop on Multiple Classifier Systems (MCS 2013), Nanjing, China, 15-17 May, 2013.
- 12th International Workshop, MCS 2015, Günzburg, Germany, June 29 - July 1, 2015
- The eighth International Conference on Image Processing Theory, Tools and Applications (IPTA 2018) November 7-10, 2018, Xi'an, China.

Selection of invited, keynote, plenary speaker talks

1. Invited speaker, International Conference “The potential of neuro-computing in regional science”, Vienna, Austria, September 11-12, 1996
2. Invited speaker, “Multiple Classifier Systems”, Italian School on Machine Vision, Vietri sul Mare, Salerno, Italy, 11-15 November 2002
3. Invited speaker, “Multiple Expert Fusion and Information Fusion in Biometrics”, Third COST 275 Workshop on Biometric over the internet, Hatfield, UK, 27-28 October 2005.
4. Invited speaker, “Image Spam Filtering”, I-techpartner Software Forum, Porto, Portugal, 5-6 December 2007.

5. Plenary speaker, “Adversarial pattern classification”, ICMLC 2009, Int. Conference on Machine Learning and Cybernetics, Boading, Hebei, China, 12-15 July 2009
6. Plenary speaker, “Adversarial pattern classification”, Int. Workshop on Computational Intelligence, Pattern Recognition, and Classifier Systems, University of Cairo, Egypt, April 10, 2010.
7. Invited speaker, “Alan Turing, spam mail, pattern recognition: an intriguing triangle”, the 2010 IEEE SMC Lecture Series in Guangzhou, China, July 9, 2010.
8. Plenary speaker, “Pattern classifiers under attack”, 2011 Irish Machine Vision and Image Processing Conference, Dublin, Ireland, 7-9 September 2011
9. Invited speaker, “Personal and Time Management for Young Scientists”, The UK-Ireland IEEE-SMC-Celebration Lecture Series 2013 on “The Making of an Academic”, University of Ulster Belfast Campus, 25th March, 2013.
10. Invited speaker, “The adversarial relationship between classifier and patterns in the cyber-world”, The UK-Ireland IEEE-SMC 2013 Workshop on "Understanding the Cyber World: A Rendez-Vous for Machine Learning, Pattern Recognition, and Cybernetics", University of Ulster Belfast Campus, 26th March, 2013.
11. Invited speaker, “Fingerprint liveness detection: lessons learned at PRA laboratory”, International Fingerprint Recognition Group, Maale Hachamisha, Jerusalem, Israel, June 9-14, 2013
12. Plenary speaker, “Pattern Recognition Systems under Attack”, Eighteenth Iberoamerican Congress on Pattern Recognition, CIARP 2013, Cuba, 20-23 Nov. 2013.
13. Plenary speaker, “The rise of adversarial patterns in the cyber-physical space”, CYBCONF 2015, 2nd IEEE International Conference on Cybernetics, Gdynia, Poland, 24 to 26 of June 2015.
14. Plenary speaker, “Adversarial pattern recognition”, 5th International Conference on Pattern Recognition Applications and Methods, ICPRAM 2016, Rome, 24-26 Feb. 2016.
15. Invited speaker, “Some thoughts on safety of machine learning”, HUML 2016, The Human Use of Machine Learning: An Interdisciplinary Workshop, Venice, 16th Dec. 2016
16. Invited speaker, “L’intelligenza artificiale è sicura?”, Security Summit 2018, Roma, 6-7 Giugno 2018.
17. Plenary talk, “Adversarial Machine Learning”, The 16th Chinese Workshop on Machine Learning and applications (MLA 2018), Nanjing, China, Nov. 3-5 2018
18. Invited speaker, “Cybersecurity after the Rise of Adversarial Machine Learning”, 2019 Huawei Security Technology SAB Summit, Munich, 10-11 July 2019
19. Invited speaker, “Cybersecurity after the Rise of Adversarial Machine Learning”, Int. Workshop on Machine Learning for Cybersecurity, Loughborough (UK), March 11th 2019
20. Keynote speaker, “The Security of Machine Learning”, Online Huawei Cloud Service Summit 2020, 4-6 Nov. 2020
21. Invited speaker, “From known knowns to unknown unknowns in AI: Historical and Technical Issues”, Online BERLIN AvH WORKSHOP QUANTUM COMPUTING&LOGIC, 15h Jan. 2021
22. Pierre Devijver Award Lecture (plenary speaker), “From known knowns to unknown unknowns: a few reflections on my journey into pattern recognition”, Online IAPR Joint International Workshops on Statistical techniques in Pattern Recognition (SPR 2020) and Structural and Syntactic Pattern Recognition (SSPR 2020), 21-22 Jan. 2021
23. Plenary speaker, “From known knowns to unknown unknowns in AI: Historical and Technical Issues”, 2021 13th International Conference on Bioinformatics and Biomedical Technology (ICBBT 2021) and 2021 International Workshop on Frontiers of Graphics and Image Processing, Xi’an, China, 21-23 May, 2021
24. Plenary speaker, TII ABU DHABI JULY 2022
25. Plenary speaker, Deepfake Video Generation and Detection Paris 23 June 2022
26. Plenary speaker, KU Leuven - PHD School on Security & Privacy in the age of AI Sept. 2022
27. Invited speaker, EURASIP Journal on Image and Video Processing Webinar July 21st, 2022
28. Plenary speaker, HUAWEI AI Security Workshop at Cyber Security Week Brussels 22nd June 2023

Publications

Number of papers in refereed int. journals: 124

Number of edited books: 14

Number of book chapters: 16

Number of papers in refereed international conferences: 180

A complete list of Fabio Roli's papers is available here:

<https://scholar.google.it/citations?user=sCypmFAAAAAAJ&hl=it>

Journal articles

1. Matous Kozaka, Luca Demetrio, Dmitrijs Trizna, and Fabio Roli, Updating Windows Malware Detectors: Balancing Robustness and Regression against Adversarial EXEmples, Computers and Security, accepted March 2024 (Quartile in Computer Science Scimago: **Q1**)
2. Antonio Emanuele Cinà, Ambra Demontis; Battista Biggio; Fabio Roli; Marcello Pelillo Energy-Latency Attacks via Sponge Poisoning, Information Sciences, 2025 (accepted Jan 25)
3. Andrea Ponte, Dmitrijs Trizna, Luca Demetrio, Battista Biggio, Ivan Tesfai Ogbu and Fabio Roli, SLIFER: Investigating Performance and Robustness of Malware Detection Pipelines, Computers and Security, accepted Dec. 2024 (Quartile in Computer Science Scimago: **Q1**)
4. Raffaele Mura, Giuseppe Floris, Luca Scionis, Giorgio Piras, Ambra Demontis, Giorgio Giacinto, Battista Biggio, Fabio Roli, Hyperparameter Optimization for Fast Minimum-Norm Attacks Neurocomputing, 2024, in press, (Quartile in Computer Science Scimago: **Q1**)
5. Antonio Emanuele Cinà, Kathrin Grosse, Sebastiano Vascon, Battista Biggio, Fabio Roli, Marcello Pelillo, Backdoor Learning Curves: Explaining Backdoor Poisoning Beyond Influence Functions International Journal of Machine Learning and Cybernetics, 2024, (Quartile in Computer Science Scimago: **Q1**), <https://doi.org/10.1007/s13042-024-02363-5>
6. Dmitrijs Trizna, Luca Demetrio, Battista Biggio, Fabio Roli, Nebula: Self-Attention for Dynamic Malware Analysis, IEEE Transactions on Information Forensics & Security, accepted, 2024, (Quartile in Computer Science Scimago: **Q1**)
7. Giulia Orrù, Jie Gao, Marco Micheletto, Sara Concas, Xiaoyi Feng, Gian Luca Marcialis, Fabio Roli, Texture and Artifact Decomposition for Improving Generalization in Deep-learning-based Deepfake Detection, Engineering Applications of Artificial Intelligence, Volume 133, Part C, July 2024, <https://doi.org/10.1016/j.engappai.2024.108450> (Quartile in Computer Science Scimago: **Q1**)
8. Li, Zhishan; Chen, Hongxu; Biggio, Battista; He, Yifan; Cai, Haoran; Roli, Fabio; Xie, Lei, Towards Effective Traffic Sign Detection via Two-Stage Fusion Neural Networks, IEEE Transactions on Intelligent Transportation Systems, 2024, pag. 1-12, Print ISSN: 1524-9050, Online ISSN: 1558-0016 Digital Object Identifier: 10.1109/TITS.2024.3373793, (Quartile in Computer Science Scimago: **Q1**)
9. Giulia Boato; Francesco G.B. De Natale; Gianluca De Stefano; Cecilia Pasquini; Fabio Roli, Adversarial mimicry attacks against image splicing forensics: an approach for jointly hiding manipulations and creating false detections, Pattern Recognition Letters, 2024 (accepted Jan 2024) <https://doi.org/10.1016/j.patrec.2024.01.023> (Quartile in Computer Science Scimago: **Q1**)
10. Yang Zheng; Luca Demetrio; Antonio Emanuele Cinà; Xiaoyi Feng; Zhaoqiang Xia; Xiaoyue Jiang; Ambra Demontis; Battista Biggio; Fabio Roli, Hardening RGB-D Object Recognition Systems against Adversarial Patch Attacks, Information Sciences, in press 2023 (Quartile in Computer Science Scimago: **Q1**)
11. Emanuele Ledda; Giorgio Fumera; Fabio Roli, Dropout Injection at Test Time for Post Hoc Uncertainty Quantification in Neural Networks, Information Sciences, in press 2023 (Quartile in Computer Science Scimago: **Q1**)
12. Lei Li; Zongwei Li; Huijian Han; Lei Yang; Xiaoyi Feng; Fabio Roli, Wooden Spoon Crack Detection by Prior Knowledge-Enriched Deep Convolutional Network, Engineering Applications of Artificial Intelligence, 2023, in press, (Quartile in Computer Science Scimago: **Q1**)
13. Simone Maurizio La Cava, Giulia Orrù, Martin Drahansky, Gian Luca Marcialis, Fabio Roli, 3D Face Reconstruction: the Road to Forensics, ACM Computing Surveys, ACM Computing Surveys, Volume 56, Issue 3, Article No.: 77, pp 1–38, 2023, <https://doi.org/10.1145/3625288>
14. Yang Zheng; Xiaoyi Feng; Zhaoqiang Xia; Xiaoyue Jiang; Maura Pintor; Ambra Demontis; Battista Biggio; Fabio Roli, Stateful Detection of Adversarial Reprogramming, Information Sciences, in press 2023 (Quartile in Computer Science Scimago: **Q1**)

15. Antonio Emanuele Cinà, Kathrin Grosse, Ambra Demontis, Battista Biggio, Fabio Roli, Marcello Pelillo, Machine Learning Security against Data Poisoning: Are We There Yet?, Computer, SI on Trustworthy AI, in press, 2023 10.1109/MC.2023.3299572
16. Yang Zheng, Xiaoyi Feng, Zhaoqiang Xia, Xiaoyue Jiana, Ambra Demontis, , Maura Pintor, Battista Biggio, Fabio Roli, Why Adversarial Reprogramming Works, When It Fails, and How to Tell the Difference, Information Sciences, in press 2023 (Quartile in Computer Science Scimago: **Q1**)
17. ANTONIO EMANUELE CINÀ, KATHRIN GROSSE, AMBRA DEMONTIS, SEBASTIANO VASCON, WERNER ZELLINGER, BERNHARD A. MOSER, ALINA OPREA, BATTISTA BIGGIO, MARCELLO PELILLO, FABIO ROLI, Wild Patterns Reloaded: A Survey of Machine Learning Security against Training Data Poisoning, ACM Computing Surveys, Volume 55 Issue 13s, 2023, (Quartile in Computer Science Scimago: **Q1**)
18. Maura Pintor, Daniele Angioni, Angelo Sotgiu, Luca Demetrio, Ambra Demontis, Battista Biggio, Fabio Roli, ImageNet-Patch: A Dataset for Benchmarking Machine Learning Robustness against Adversarial Patches, Pattern Recognition, [Volume 134](https://doi.org/10.1016/j.patcog.2022.109064), February 2023, <https://doi.org/10.1016/j.patcog.2022.109064> (Quartile in Computer Science Scimago: **Q1**)
19. Lu Zhang; Lambotharan, Sangarapillai; Zheng, Gan; Liao, Guisheng; AsSadhan, Basil; Roli, Fabio, Attention-based Adversarial Robust Distillation in Radio Signal Classifications for Low-Power IoT Devices, IEEE Internet of Things Journal, FEBRUARY 1, 2023, Volume: 10, Issue: 3, Page(s): 2646-2657, Print ISSN: 2327-4662, Online ISSN: 2327-4662, Digital Object Identifier: 10.1109/JIOT.2022.3215188
20. Roberto Casula, Marco Micheletto, Giulia Orrù, Gian Luca Marcialis, Fabio Roli, Towards realistic fingerprint presentation attacks: the ScreenSpoof method, Pattern Recognition Letters, 2022
21. Sara Concas, Simone Maurizio La Cava, Giulia Orrù, Carlo Cuccu, Jie Gao, Xiaoyi Feng, Gian Luca Marcialis, Fabio Roli, Analysis of Score-Level Fusion Rules for Deepfake Detection, Applied Sciences, MDPI, 2022, 12(15), 7365; <https://doi.org/10.3390/app12157365>
22. Luca Demetrio, Battista Biggio, Fabio Roli, Practical Attacks on Machine Learning: A Case Study on Adversarial Windows Malware, IEEE Security & Privacy, 2022, doi: 10.1109/MSEC.2022.3182356
23. Zhang, Lu; Lambotharan, Sangarapillai; Zheng, Gan; Liao, Guisheng; Demontis, Ambra; Roli, Fabio, A Hybrid Training-time and Run-time Defense Against Adversarial Attacks in Modulation Classification, IEEE Wireless Communications Letters, Publication Date: JUNE 2022, Volume: 11, Issue: 6, Page(s): 1161-1165, Print ISSN: 2162-2337, Online ISSN: 2162-2345, Digital Object Identifier: 10.1109/LWC.2022.3159659
24. Stefano Melacci, Gabriele Ciravegna, Angelo Sotgiu, Ambra Demontis, Battista Biggio, Marco Gori, and Fabio Roli, Domain Knowledge Alleviates Adversarial Attacks in Multi-Label Classifiers, IEEE Transactions on Pattern Analysis and Machine Intelligence, in press, 2022, 10.1109/TPAMI.2021.3137564, (Quartile in Computer Science Scimago: **Q1**)
25. Marco Micheletto, Gian Luca Marcialis, Giulia Orrù, and Fabio Roli, Fingerprint recognition with embedded presentation attacks detection: are we ready?, IEEE Transactions on Information Forensics & Security, in press, 2021, (Quartile in Computer Science Scimago: **Q1**)
26. Marco Melis, Michele Scalas, Ambra Demontis, Davide Maiorca, Battista Biggio, Giorgio Giacinto, Fabio Roli, Do Gradient-based Explanations Tell Anything About Adversarial Robustness to Android Malware?, International Journal of Machine Learning and Cybernetics, in press, 2021 (Quartile in Computer Science Scimago: **Q1**)
27. LUCA DEMETRIO, SCOTT E. COULL, BATTISTA BIGGIO, GIOVANNI LAGORIO, ALESSANDRO ARMANDO, FABIO ROLI, Adversarial EXEmpleS: A Survey and Experimental Evaluation of Practical Attacks on Machine Learning for Windows Malware Detection, ACM Transactions on Privacy and Security, in press, 2021 (Quartile in Computer Science Scimago: **Q1**)
28. Giulia Orrù, A. Panzino, Gian Luca Marcialis, Fabio Roli, EEG personal recognition based on "qualified majority" over signal patches, IET Biometrics, August 2021, <https://doi.org/10.1049/bme2.12050> (Quartile in Computer Science Scimago: **Q2**)
29. Luca Demetrio, Battista Biggio, Giovanni Lagorio, Fabio Roli, Alessandro Armando, Functionality-preserving Black-box Optimization of Adversarial Windows Malware, IEEE Transactions on Information Forensics & Security, in press, 2021, Print ISSN: 1556-6013, Electronic ISSN: 1556-6021, DOI: 10.1109/TIFS.2021.3082330, (Quartile in Computer Science Scimago: **Q1**)
30. Zhang, Lu; Lambotharan, Sangarapillai; Zheng, Gan; AsSadhan, Basil; Roli, Fabio, Countermeasures Against Adversarial Examples in Radio Signal Classification, IEEE Wireless Communications Letters, in press, 2021, Print ISSN: 2162-2337 Online ISSN: 2162-2345 Digital Object Identifier: 10.1109/LWC.2021.3083099 (Quartile in Electrical and Electronic Engineering Scimago: **Q1**)

31. Paul Temple, Gilles Perrouin, Mathieu Acher, Battista Biggio, Jean-Marc Jézéquel, Fabio Roli: Empirical assessment of generating adversarial configurations for software product lines. *Empirical Software Engineering* 26(1): 6 (2021) (Quartile in Computer Science Scimago: **Q1**)
32. Davide Maiorca, Ambra Demontis, Battista Biggio, Fabio Roli, Giorgio Giacinto: Adversarial Detection of Flash Malware: Limitations and Open Issues. *Computers and Security*. 96: 101901 (2020) (Quartile in Computer Science Scimago: **Q1**)
33. Angelo Sotgiu, Ambra Demontis, Marco Melis, Battista Biggio, Giorgio Fumera, Xiaoyi Feng, Fabio Roli: Deep neural rejection against adversarial examples. *EURASIP Journal on Information Security*, 2020: 5 (2020) (Quartile in Computer Science Scimago: **Q2**)
34. Lei Li, Zhaoqiang Xia, Xiaoyue Jiang, Yupeng Ma, Fabio Roli, Xiaoyi Feng: 3D face mask presentation attack detection based on intrinsic image analysis. *IET Biometrics*, 9(3): 100-108 (2020) (Quartile in Computer Science Scimago: **Q2**)
35. Lei Li, Zhaoqiang Xia, Huijian Han, Guiqing He, Fabio Roli, Xiaoyi Feng: Infrared and visible image fusion using a shallow CNN and structural similarity constraint. *IET Image Processing*, 14(14): 3562-3571 (2020) (Quartile in Computer Science Scimago: **Q2**)
36. Lei Li, Zhaoqiang Xia, Xiaoyue Jiang, Fabio Roli, Xiaoyi Feng: CompactNet: learning a compact space for face presentation attack detection. *Neurocomputing*, 409: 191-207 (2020) (Quartile in Computer Science Scimago: **Q1**)
37. Giulia Orrù, Gian Luca Marcialis, Fabio Roli: A novel classification-selection approach for the self updating of template-based face recognition systems. *Pattern Recognition*. 100: 107121 (2020) (Quartile in Computer Science Scimago: **Q1**)
38. Alessandro Carcangiu, Lucio Davide Spano, Giorgio Fumera, Fabio Roli: DEICTIC: A compositional and declarative gesture description based on hidden markov models. *International Journal of Human-Computer Studies*. 122: 113-132 (2019) (Quartile in Computer Science Scimago: **Q1**)
39. Ambra Demontis, Marco Melis, Battista Biggio, Davide Maiorca, Daniel Arp, Konrad Rieck, Iginio Corona, Giorgio Giacinto, Fabio Roli: Yes, Machine Learning Can Be More Secure! A Case Study on Android Malware Detection. *IEEE Transactions on Dependable and Secure Computing*, 16(4): 711-724 (2019) (Quartile in Computer Science Scimago: **Q1**)
40. Bahram Lavi, Giorgio Fumera, Fabio Roli: Multi-stage ranking approach for fast person re-identification. *IET Computer Vision* 12(4): 513-519 (2018) (Quartile in Computer Science Scimago: **Q2**)
41. Battista Biggio, Fabio Roli: Wild patterns: Ten years after the rise of adversarial machine learning. *Pattern Recognition*. 84: 317-331 (2018) (Quartile in Computer Science Scimago: **Q1**)
42. Luca Ghiani, Abdenour Hadid, Gian Luca Marcialis, Fabio Roli: Fingerprint liveness detection using local texture features. *IET Biometrics* 6(3): 224-231 (2017) (Quartile in Computer Science Scimago: **Q2**)
43. Luca Ghiani, David A. Yambay, Valerio Mura, Gian Luca Marcialis, Fabio Roli, Stephanie Schuckers: Review of the Fingerprint Liveness Detection (LivDet) competition series: 2009 to 2015. *Image and Vision Computing*. 58: 110-128 (2017) (Quartile in Computer Science Scimago: **Q1**)
44. Peng Tang, Jin Zhang, Xinggang Wang, Bin Feng, Fabio Roli, Wenyu Liu: Learning extremely shared middle-level image representation for scene classification. *Knowledge and Information Systems* 52(2): 509-530 (2017) (Quartile in Computer Science Scimago: **Q1**)
45. Battista Biggio, Giorgio Fumera, Gian Luca Marcialis, Fabio Roli: Statistical Meta-Analysis of Presentation Attacks for Secure Multibiometric Systems. *IEEE Transactions on Pattern Analysis and Machine Intelligence* 39(3): 561-575 (2017) (Quartile in Computer Science Scimago: **Q1**)
46. Ignazio Pillai, Giorgio Fumera, Fabio Roli: Designing multi-label classifiers that maximize F measures: State of the art. *Pattern Recognition*. 61: 394-404 (2017) (Quartile in Computer Science Scimago: **Q1**)
47. Enrica Santucci, Luca Didaci, Giorgio Fumera, Fabio Roli: A parameter randomization approach for constructing classifier ensembles. *Pattern Recognit.* 69: 1-13 (2017) (Quartile in Computer Science Scimago: **Q1**)
48. Jianxin Wu, Xiang Bai, Marco Loog, Fabio Roli, Zhi-Hua Zhou: Editorial of the Special Issue on Multi-instance Learning in Pattern Recognition and Vision. *Pattern Recognition*. 71: 444-445 (2017) (Quartile in Computer Science Scimago: **Q1**)
49. Samuel Rota Bulò, Battista Biggio, Ignazio Pillai, Marcello Pelillo, Fabio Roli: Randomized Prediction Games for Adversarial Machine Learning. *IEEE Transactions on Neural Networks and Learning Systems*. 28(11): 2466-2478 (2017) (Quartile in Computer Science Scimago: **Q1**)
50. Ambra Demontis, Marco Melis, Battista Biggio, Giorgio Fumera, Fabio Roli: Super-Sparse Learning in Similarity Spaces. *IEEE Computational Intelligence Magazine* 11(4): 36-45 (2016) (Quartile in Computer Science Scimago: **Q1**)

51. M. Ali Akber Dewan, Eric Granger, Gian Luca Marcialis, Robert Sabourin, Fabio Roli: Adaptive appearance model tracking for still-to-video face recognition. *Pattern Recognition*. 49: 129-151 (2016) (Quartile in Computer Science Scimago: **Q1**)
52. Federico Pala, Riccardo Satta, Giorgio Fumera, Fabio Roli: Multimodal Person Reidentification Using RGB-D Cameras. *IEEE Transactions on Circuits Systems and Video Technology*. 26(4): 788-799 (2016) (Quartile in Electrical and Electronic Engineering Scimago: **Q1**)
53. Fei Zhang, Patrick P. K. Chan, Battista Biggio, Daniel S. Yeung, Fabio Roli: Adversarial Feature Selection Against Evasion Attacks. *IEEE Transactions on Cybernetics*. 46(3): 766-777 (2016) (Quartile in Computer Science Scimago: **Q1**)
54. Huang Xiao, Battista Biggio, Blaine Nelson, Han Xiao, Claudia Eckert, Fabio Roli: Support vector machines under adversarial label contamination. *Neurocomputing* 160: 53-62 (2015) (Quartile in Computer Science Scimago: **Q1**)
55. Yu Guan, Chang-Tsun Li, Fabio Roli: On Reducing the Effect of Covariate Factors in Gait Recognition: A Classifier Ensemble Method. *IEEE Transactions on Pattern Analysis and Machine Intelligence*. 37(7): 1521-1528 (2015) (Quartile in Computer Science Scimago: **Q1**)
56. Song Bai, Xiang Bai, Wenyu Liu, Fabio Roli: Neural shape codes for 3D model retrieval. *Pattern Recognit. Lett.* 65: 15-21 (2015) (Quartile in Computer Science Scimago: **Q1**)
57. Battista Biggio, Giorgio Fumera, Paolo Russu, Luca Didaci, Fabio Roli: Adversarial Biometric Recognition : A review on biometric system security from the adversarial machine-learning perspective. *IEEE Signal Processing Magazine* 32(5): 31-41 (2015) (Quartile in Computer Science Scimago: **Q1**)
58. Wing W. Y. Ng, Junjie Hu, Daniel S. Yeung, Shaohua Yin, Fabio Roli: Diversified Sensitivity-Based Undersampling for Imbalance Classification Problems. *IEEE Transactions on Cybernetics*. 45(11): 2402-2412 (2015) (Quartile in Computer Science Scimago: **Q1**)
59. Battista Biggio, Giorgio Fumera, Fabio Roli: Pattern Recognition Systems under Attack: Design Issues and Research Challenges. *International Journal of Pattern Recognition and Artificial Intelligence*. 28(7) (2014) (Quartile in Computer Science Scimago: **Q3**)
60. Christophe C. Pagano, Eric Granger, Robert Sabourin, Gian Luca Marcialis, Fabio Roli: Adaptive ensembles for face recognition in changing video surveillance environments. *Information Sciences*. 286: 75-101 (2014) (Quartile in Computer Science Scimago: **Q1**)
61. Gian Luca Marcialis, Fabio Roli, Gianluca Fadda: A novel method for head pose estimation based on the "Vitruvian Man". *Int. Journal of Machine Learning and Cybernetics*. 5(1): 111-124 (2014) (Quartile in Computer Science Scimago: **Q1**)
62. Luca Didaci, Gian Luca Marcialis, Fabio Roli: Analysis of unsupervised template update in biometric recognition systems. *Pattern Recognition Letters*. 37: 151-160 (2014) (Quartile in Computer Science Scimago: **Q1**)
63. Battista Biggio, Giorgio Fumera, Fabio Roli: Security Evaluation of Pattern Classifiers under Attack. *IEEE Transactions on Knowledge and Data Engineering*. 26(4): 984-996 (2014) (Quartile in Computer Science Scimago: **Q1**)
64. Ajita Rattani, Gian Luca Marcialis, Fabio Roli: A multi-modal dataset, protocol and tools for adaptive biometric systems: a benchmarking study. *International Journal of Biometrics*. 5(3/4): 266-287 (2013) (Quartile in Computer Science Scimago: **Q3**)
65. Igino Corona, Giorgio Giacinto, Fabio Roli: Adversarial attacks against intrusion detection systems: Taxonomy, solutions and open issues. *Information Sciences*. 239: 201-225 (2013) (Quartile in Computer Science Scimago: **Q1**)
66. Gian Luca Marcialis, Fabio Roli, Luca Didaci: Multimodal fingerprint verification by score-level fusion: An experimental investigation. *Journal of Intelligent and Fuzzy Systems*. 24(1): 51-60 (2013) (Quartile in Computer Science Scimago: **Q3**)
67. Ignazio Pillai, Giorgio Fumera, Fabio Roli: Threshold optimisation for multi-label classifiers. *Pattern Recognition*. 46(7): 2055-2065 (2013) (Quartile in Computer Science Scimago: **Q1**)
68. Ignazio Pillai, Giorgio Fumera, Fabio Roli: Multi-label classification with a reject option. *Pattern Recognition*. 46(8): 2256-2266 (2013) (Quartile in Computer Science Scimago: **Q1**)
69. Ajita Rattani, Gian Luca Marcialis, Fabio Roli: Biometric system adaptation by self-update and graph-based techniques. *Journal of Visual Languages and Computing*. 24(1): 1-9 (2013) (Quartile in Computer Science Scimago: **Q2**)
70. Battista Biggio, Zahid Akhtar, Giorgio Fumera, Gian Luca Marcialis, Fabio Roli: Security evaluation of biometric authentication systems under real spoofing attacks. *IET Biometrics*. 1(1): 11-24 (2012) (Quartile in Computer Science Scimago: **Q3**)

71. Norman Poh, Ajita Rattani, Fabio Roli: Critical analysis of adaptive biometric systems. *IE'T Biometrics*. 1(4): 179-187 (2012) (Quartile in Computer Science Scimago: **Q3**)
72. Gian Luca Marcialis, Pietro Coli, Fabio Roli: Fingerprint Liveness Detection Based on Fake Finger Characteristics. *Int. Journal of Digital Crime and Forensics* 4(3): 1-19 (2012) (Quartile in Computer Science Scimago: **Q4**)
73. Riccardo Satta, Giorgio Fumera, Fabio Roli: Fast person re-identification based on dissimilarity representations. *Pattern Recognition Letters*. 33(14): 1838-1848 (2012) (Quartile in Computer Science Scimago: **Q1**)
74. Battista Biggio, Ignazio Pillai, Giorgio Fumera, Fabio Roli, A survey and experimental evaluation of image spam filtering techniques, *Pattern Recognition Letters*, no. 32, pp. 1436 – 1446, 2011 (Quartile in Computer Science Scimago: **Q1**)
75. Battista Biggio, Giorgio Fumera, Fabio Roli , "Multiple Classifier Systems for Robust Classifier Design in Adversarial Environments", *Journal of Machine Learning and Cybernetics*, vol. 1, issue 1, pp. 27--41, 2010. (Quartile in Computer Science Scimago: **Q1**)
76. G. Marcialis, F. Roli, S. Schuckers, First International Fingerprint Liveness Detection Competition 2009, *LivDet 2009, Biometric Technology Today*, 17(3), pp. 7-9, 2009. (Quartile in Computer Science Scimago: **Q4**)
77. Roberto Tronci, Giorgio Giacinto, Fabio Roli, Designing multiple biometric systems: measures of ensemble effectiveness, *Engineering Applications of Artificial Intelligence*, 22, pp. 66-78, (2009) (Quartile in Computer Science Scimago: **Q2**)
78. I. Corona, G. Giacinto, C. Mazzariello, F. Roli, C. Sansone , "Information fusion for computer security: State of the art and open issues", *Information Fusion*, vol. 10, pp. 274-284, 2009. (Quartile in Computer Science Scimago: **Q1**)
79. Giorgio Giacinto, Fabio Roli, Carlo Sansone: Information fusion in computer security. *Information Fusion* 10(4): 272-273 (2009) (Quartile in Computer Science Scimago: **Q1**)
80. G. Marcialis, F. Roli, D. Muntoni, "Group-specific face verification using hair colour", *Journal of Visual Languages and Computing*, vol. 20, pp. 101-109, 2009. (Quartile in Computer Science Scimago: **Q2**)
81. G. Marcialis, F. Roli, L. Didaci, "Personal identity verification by serial fusion of fingerprint and face matchers", *Pattern Recognition*, vol. 42, issue 11: Elsevier, pp. 2807-2817, 2009. (Quartile in Computer Science Scimago: **Q1**)
82. Pietro Coli, Gian Luca Marcialis, Fabio Roli: Fingerprint silicon Replicas: Static and Dynamic Features for Vitality Detection Using an Optical Capture Device. *Int. Journal of Image and Graphics*. 8(4): 495-512 (2008) (Quartile in Computer Science Scimago: **Q4**)
83. G. Giacinto, R. Perdisci, M. Del Rio, F. Roli, "Intrusion detection in computer networks by a modular ensemble of one-class classifiers", *Information Fusion*, 9(1), 2008, pp. 69-82 (Quartile in Computer Science Scimago: **Q1**)
84. F. Alonso, F. Roli, G. Marcialis, J. Fierrez Aguillar, J. Ortega, Performance of fingerprint quality measures depending on sensor technology, *Journal of Electronic Imaging*, 17, 11, 2008. (Quartile in Computer Science Scimago: **Q3**)
85. G. Fumera, F. Roli, A. Serrau, "A Theoretical Analysis of Bagging as a Linear Combination of Classifiers", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Vol. 30, No. 7, June 2008, pp. 1293-1299. (Quartile in Computer Science Scimago: **Q1**)
86. R. Perdisci, G. Giacinto, F. Roli, Alarm Clustering for Intrusion Detection Systems in Computer Networks, *Engineering Applications in Artificial Intelligence*, Volume 19, Issue 4, June 2006, pp. 361-438. 2006. (Quartile in Computer Science Scimago: **Q2**)
87. G.L. Marcialis and F. Roli, "Decision-level fusion of PCA and LDA-based face recognition algorithms", *International Journal of Image and Graphics*, Vol. 6, No. 2, pp. 293-311. 2006. (Quartile in Computer Science Scimago: **Q4**).
88. G. Fumera, I. Pillai, F. Roli, "Spam filtering based on the analysis of text information embedded into images", *Journal of Machine Learning Research*, Vol. 7, December 2006, pp. 2699-2720. 2006. (Quartile in Computer Science Scimago: **Q1**)
89. G. Fumera and F. Roli, "A Theoretical and Experimental Analysis of Linear Combiners for Multiple Classifier Systems", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Vol. 27(6), 2005, pp. 942-956. (Quartile in Computer Science Scimago: **Q1**)
90. L. Didaci , G. Giacinto, F. Roli and G.L. Marcialis, "A study on the performances of Dynamic Classifier Selection based on Local Accuracy Estimation", *Pattern Recognition*, vol.38,n.1, January 2005. (Quartile in Computer Science Scimago: **Q1**)

91. G.L. Marcialis and F. Roli, "Fusion of multiple fingerprint matchers by single-layer perceptron with class-separation loss function", *Pattern Recognition Letters*, Vol. 26 (12), 2005, pp. 1830-1839. (Quartile in Computer Science Scimago: **Q1**)
92. F. Roli, Review of the book *Statistical and neural classifiers: an integrated approach to design* by S. Raudy, Springer Pub., *Pattern Analysis and Applications*, Vol. 7, 1, April 2004, pp. 114-115. (Quartile in Computer Science Scimago: **Q2**)
93. G.Fumera, F. Roli, Analysis of error-reject trade-off in linearly combined multiple classifiers, *Pattern Recognition*, Vol. 37, 6, June 2004, pp. 1245-1265. (Quartile in Computer Science Scimago: **Q1**)
94. G.Giacinto, F. Roli, Bayesian Relevance Feedback for Content-Based Image Retrieval, *Pattern Recognition*, 37(7), 2004, pp. 1499-1508. (Quartile in Computer Science Scimago: **Q1**)
95. G.L. Marcialis, F. Roli, Fusion of appearance-based face recognition algorithms, *Pattern Analysis and Applications*, 7 (2), 2004, pp. 151-163. (Quartile in Computer Science Scimago: **Q2**)
96. G.L. Marcialis, F. Roli, Fingerprint verification by fusion of optical and capacitive sensors, *Pattern Recognition Letters*, 25 (11), 2004, pp. 1315-1322. (Quartile in Computer Science Scimago: **Q1**)
97. Y.Yao, G.L. Marcialis, M. Pontil, P. Frasconi, F. Roli, Combining Flat and Structural Representations for Fingerprint Classification with Recursive Neural Networks and Support Vector Machine, *Pattern Recognition*, Vol. 36 (2), 2003, pp. 397-406. (Quartile in Computer Science Scimago: **Q1**)
98. G.Giacinto, F. Roli, L. Didaci, Fusion of multiple classifiers for intrusion detection in computer networks, *Pattern Recognition Letters*, 2003, 24/12, pp. 1795-1803. (Quartile in Computer Science Scimago: **Q1**)
99. R.P.W. Duin, F. Roli, D. de Ridder, A note on core research issues for statistical pattern recognition, *Pattern Recognition Letters*, Volume 23, 4, February 2002, pp. 493-499. (Quartile in Computer Science Scimago: **Q1**)
100. G. Armano, A. Murru, F. Roli, Stock Market Prediction by a Mixture of Genetic-Neural Experts, *Int. Journal of Pattern Recognition and Artificial Intelligence*, Vol. 16, 5, 2002, pp. 501-52. (Quartile in Computer Science Scimago: **Q3**)
101. Fabio Roli, Josef Kittler: Fusion of multiple classifiers. *Information Fusion* 3(4): 243 (2002). (Quartile in Computer Science Scimago: **Q1**)
102. G.Giacinto e F.Roli, "Design of effective neural network ensembles for image classification purposes", *Image and Vision Computing*, Vol 19/9-10, August 2001, pp 697-705. Quartile in Computer Science Scimago: **Q2**)
103. G.Giacinto e F.Roli, "An approach to the automatic design of multiple classifier systems", *Pattern Recognition Letters*, 22(1), 2001, pp. 25-33. (Quartile in Computer Science Scimago: **Q1**)
104. G. Giacinto, F. Roli, Dynamic classifier selection based on multiple classifier behaviour, *Pattern Recognition*, Vol. 34, Issue: 9, September 2001, pp. 1879-1881. (Quartile in Computer Science Scimago: **Q1**)
105. G.Giacinto, F.Roli, e L.Bruzzzone, "Combination of Neural and Statistical Algorithms for Supervised Classification of Remote-Sensing Images", *Pattern Recognition Letters*, May 2000, vol. 21, 5, pp. 385-397. (Quartile non in Computer Science Scimago: **Q1**)
106. W.Cudlip, C.Lysons, G.Deane, H.Strionk, e F.Roli, "A new information system in support of landscape assessment: PLAINS", *Computers, Environment and Urban Systems*, Vol. 23, 6, 2000, pp. 459-467. (Quartile in Computer Science Scimago: **Q1**)
107. G.Giacinto, F.Roli, e G.Fumera, "Selection of image classifiers", *Electronics Letters*, Vol. 36, 5, March 2000, pp. 420-422 (Quartile in Electrical and Electronic Engineering Scimago: **Q1**)
108. G.Fumera, F.Roli, e G.Giacinto, "Reject option with multiple thresholds", *Pattern Recognition*, N. 33, Vol. 12, 33, 2000, pp. 165-167. (Quartile in Computer Science Scimago: **Q1**)
109. A.Jozwik, S.B.Serpico e F.Roli, "A parallel network of modified 1-NN and k-NN classifiers - Application to remote-sensing image classification", *Pattern Recognition Letters*, 19, 1998, pp. 57-62. (Quartile in Computer Science Scimago: **Q1**)
110. F.Roli, Review of the Book "Applied Neural Networks for Signal Processing" by Fa-Long Luo and Rolf Unbehauen, Cambridge Univ. Press., *Neural Networks*, 11, 1998, pp. 975-976. (Quartile in Computer Science Scimago: **Q2**)
111. L.Bruzzzone, F.Roli, e S.B.Serpico, "Structured Neural Networks for Signal Classification", *Signal Processing*, 64, 1998, pp. 271-290. (Quartile in Computer Science Scimago: **Q1**)
112. G.Giacinto, R.Paolucci e F.Roli, "Application of Neural Networks and Statistical Pattern Recognition Algorithms to Earthquake Risk Evaluations", *Pattern Recognition Letters*, Vol. 18, 11-13, November 1997, pp.1353-1362. (Quartile in Computer Science Scimago: **Q1**)
113. L.Bruzzzone, C.Conese, F.Maselli e F.Roli, "Multisource classification of complex rural areas by statistical and neural-network approaches", *International Journal of Photogrammetric Engineering and Remote Sensing*, Vol. 63, 5, May 1997, pp. 523-533. (Quartile NON in Computer Science Scimago: **Q2**)
114. F.Roli, "A Measure of Texture Anisotropy for Crack Detection on Textured Surfaces", *Electronics Letters*, Vol. 32, 14, July 1996, pp. 1274-1275. (Quartile in Electrical and Electronic Engineering Scimago: **Q1**)

- 115.S.B.Serpico, L.Bruzzone e F.Roli, "An Experimental Comparison of Neural and Statistical Non-Parametric Algorithms for Supervised Classification of Remote-Sensing Images", *Pattern Recognition Letters*, Vol 17, 13, November 1996, pp. 1331-1341. (Quartile in Electrical and Electronic Engineering Scimago: **Q1**)
- 116.F. Roli, "Multisensor image recognition by neural networks with understandable behaviour", *International Journal of Pattern Recognition and Artificial Intelligence*, Vol. 10, 8, 1996, pp. 887-917. (Quartile in Computer Science Scimago: **Q3**)
- 117.F.Roli, S.B.Serpico e G.Vernazza, "A hybrid system for 2D image recognition", *Proceedings of the IEEE, Special Issue on "Signals and Symbols"*, Vol. 84, 11, November 1996, pp. 1659-1681, (Quartile in Electrical and Electronic Engineering Scimago: **Q1**)
- 118.F.Roli, S.B.Serpico e G.Vernazza, "Image Recognition by integration of connectionist and symbolic approaches", *International Journal of Pattern Recognition and Artificial Intelligence*, Vol. 9, 3, June 1995, pp. 485-515. (Quartile in Computer Science Scimago: **Q3**)
- 119.L. Bruzzone, F.Roli e S.B.Serpico, "An extension of the Jeffreys-Matusita distance to multiclass cases for feature selection", *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 33, 6, November 1995, pp. 1318-1321. (Quartile in Electrical and Electronic Engineering Scimago: **Q1**)
- 120.S.B.Serpico e F. Roli, "Classification of multi-sensor remote-sensing images by structured neural networks", *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 33, 3, May 1995, pp. 562-578. (Quartile in Electrical and Electronic Engineering Scimago: **Q1**)
- 121.F.Roli e S.B.Serpico, "Land-cover classification in remote-sensing images using structured neural networks", *International Journal of EARSel Advances in Remote Sensing*, Vol. 4, 3, December 1995, pp. 107-115.
- 122.P.Pellegretti, F.Roli, S.B.Serpico, G.Vernazza, "Supervised learning of descriptions for image recognition purposes", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Vol. 16, 1, January 1994, pp. 92-98, (Quartile in Computer Science Scimago: **Q1**)
- 123.F. Roli, S.B.Serpico e G.Vernazza, "Intelligent Control of Signal Processing Algorithms in Communications", *IEEE Journal on Selected Areas in Communications*, Vol. 12, 9, December 1994, pp. 1553-1565. (Quartile in Computer Science Scimago: **Q1**)
- 124.F.Roli, F.Fontana, P.Pellegretti e C.Dambra, "Knowledge-Based Control in Multisensor Image Processing and Recognition", *Optical Engineering Journal*, Vol. 32, 6, June 1993, pp. 1153-1166. (Quartile in Electrical and Electronic Engineering Scimago: **Q1**).

Editor

1. Friedhelm Schwenker, Fabio Roli, Josef Kittler: Multiple Classifier Systems - 12th International Workshop, MCS 2015, Günzburg, Germany, June 29 - July 1, 2015, *Proceedings. Lecture Notes in Computer Science 9132*, Springer 2015, ISBN 978-3-319-20247-1
2. Zhi-Hua Zhou, Fabio Roli, Josef Kittler: Multiple Classifier Systems, 11th International Workshop, MCS 2013, Nanjing, China, May 15-17, 2013. *Proceedings. Lecture Notes in Computer Science 7872*, Springer 2013, ISBN 978-3-642-38066-2
3. Carlo Sansone, Josef Kittler, Fabio Roli: Multiple Classifier Systems - 10th International Workshop, MCS 2011, Naples, Italy, June 15-17, 2011. *Proceedings. Lecture Notes in Computer Science 6713*, Springer 2011, ISBN 978-3-642-21556-8
4. Neamat El Gayar, Josef Kittler, Fabio Roli: Multiple Classifier Systems, 9th International Workshop, MCS 2010, Cairo, Egypt, April 7-9, 2010. *Proceedings. Lecture Notes in Computer Science 5997*, Springer 2010, ISBN 978-3-642-12126-5
5. Jon Atli Benediktsson, Josef Kittler, Fabio Roli: Multiple Classifier Systems, 8th International Workshop, MCS 2009, Reykjavik, Iceland, June 10-12, 2009. *Proceedings. Lecture Notes in Computer Science 5519*, Springer 2009, ISBN 978-3-642-02325-5
6. Niels da Vitoria Lobo, Takis Kasparis, Fabio Roli, James Tin-Yau Kwok, Michael Georgiopoulos, Georgios C. Anagnostopoulos, Marco Loog:
7. Structural, Syntactic, and Statistical Pattern Recognition, Joint IAPR International Workshop, SSPR & SPR 2008, Orlando, USA, December 4-6, 2008. *Proceedings. Lecture Notes in Computer Science 5342*, Springer 2008, ISBN 978-3-540-89688-3
8. Michal Haindl, Josef Kittler, Fabio Roli: Multiple Classifier Systems, 7th International Workshop, MCS 2007, Prague, Czech Republic, May 23-25, 2007, *Proceedings. Lecture Notes in Computer Science 4472*, Springer 2007, ISBN 978-3-540-72481-0
9. Dit-Yan Yeung, James T. Kwok, Ana L. N. Fred, Fabio Roli, Dick de Ridder: Structural, Syntactic, and Statistical Pattern Recognition, Joint IAPR International Workshops, SSPR 2006 and SPR 2006, Hong Kong,

- China, August 17-19, 2006, Proceedings. Lecture Notes in Computer Science 4109, Springer 2006, ISBN 3-540-37236-9
10. Fabio Roli, Sergio Vitulano: Image Analysis and Processing - ICIAP 2005, 13th International Conference, Cagliari, Italy, September 6-8, 2005, Proceedings. Lecture Notes in Computer Science 3617, Springer 2005, ISBN 3-540-28869-4
 11. Nikunj C. Oza, Robi Polikar, Josef Kittler, Fabio Roli: Multiple Classifier Systems, 6th International Workshop, MCS 2005, Seaside, CA, USA, June 13-15, 2005, Proceedings. Lecture Notes in Computer Science 3541, Springer 2005, ISBN 3-540-26306-3
 12. Fabio Roli, Josef Kittler, Terry Windeatt: Multiple Classifier Systems, 5th International Workshop, MCS 2004, Cagliari, Italy, June 9-11, 2004, Proceedings. Lecture Notes in Computer Science 3077, Springer 2004, ISBN 3-540-22144-1
 13. Terry Windeatt, Fabio Roli: Multiple Classifier Systems, 4th International Workshop, MCS 2003, Guilford, UK, June 11-13, 2003, Proceedings. Lecture Notes in Computer Science 2709, Springer 2003, ISBN 3-540-40369-8
 14. Fabio Roli, Josef Kittler: Multiple Classifier Systems, Third International Workshop, MCS 2002, Cagliari, Italy, June 24-26, 2002, Proceedings. Lecture Notes in Computer Science 2364, Springer 2002, ISBN 3-540-43818-1
 15. Josef Kittler, Fabio Roli: Multiple Classifier Systems, Second International Workshop, MCS 2001 Cambridge, UK, July 2-4, 2001, Proceedings. Lecture Notes in Computer Science 2096, Springer 2001, ISBN 3-540-42284-6
 16. Josef Kittler, Fabio Roli: Multiple Classifier Systems, First International Workshop, MCS 2000, Cagliari, Italy, June 21-23, 2000, Proceedings. Lecture Notes in Computer Science 1857, Springer 2000, ISBN 3-540-67704-6

Book Chapters

1. David Yambay, Luca Ghiani, Gian Luca Marcialis, Fabio Roli, Stephanie Schuckers: Review of Fingerprint Presentation Attack Detection Competitions. Handbook of Biometric Anti-Spoofing, 2nd Ed. 2019: 109-131, 2019.
2. Fabio Roli: Multiple Classifier Systems. Encyclopedia of Biometrics 2015: 1142-1147, 2015
3. Giorgio Fumera, Gian Luca Marcialis, Battista Biggio, Fabio Roli, Stephanie A. C. Schuckers: Multimodal Anti-spoofing in Biometric Recognition Systems. Handbook of Biometric Anti-Spoofing 2014: 165-184, 2014
4. Gian Luca Marcialis, Fabio Roli, Pietro Coli, Giovanni Delogu, "A Fingerprint Forensic Tool for Criminal Investigations", *Handbook of Research on Computational Forensics, Digital Crime and Investigation: Methods and Solutions*, 2010.
5. Battista Biggio, Giorgio Fumera, Fabio Roli, "Bayesian Linear Combination of Neural Networks", *Innovations in Neural Information Paradigms and Applications*, vol. 247: Springer Berlin / Heidelberg, pp. 201-230, 2009.
6. Battista Biggio, Giorgio Fumera, Fabio Roli, "Evade Hard Multiple Classifier Systems", *Supervised and Unsupervised Ensemble Methods and Their Applications*, vol. 245: Springer Berlin / Heidelberg, pp. 15-38, 2009.
7. Fabio Roli: Multiple Classifier Systems. Encyclopedia of Biometrics 2009: 981-986, 2009
8. Fabio Roli, Luca Didaci, Gian Luca Marcialis, "Adaptive biometric systems that can improve with use", *Advances in Biometrics: Sensors, Systems and Algorithms*: Springer, pp. 447-471, 2008.
9. Igino Corona, Giorgio Giacinto, Fabio Roli, "Intrusion Detection in Computer Systems using Multiple Classifier Systems", *Supervised and Unsupervised Ensemble Methods and Their Applications*, O. Okun and G. Valentini, no. 126: Springer-Verlag, Berlin/Heidelberg, pp. 91-114, 2008.
10. Gian Luca Marcialis, Fabio Roli, Alessandra Serrau, "Graph-Based and Structural Methods for Fingerprint Classification", *Applied Graph Theory in Computer Vision and Pattern Recognition*: Springer, pp. 205-226, 2007.
11. G. Giacinto, F. Roli, "Instance-Based Relevance Feedback in Image Retrieval using Dissimilarity Spaces", *Case-Based Reasoning for signals and images*: Springer, 2007.
12. G.L. Foresti, G. Giacinto, F. Roli, "Detecting Dangerous Behaviors of Mobile Objects in Parking Areas", *Multisensor Surveillance Systems: The Fusion Perspective*: Kluwer Academic Publishers, pp. 199-211, 2003.
13. Gian Luca Marcialis, Fabio Roli, "Fusion of Face Recognition Algorithms for Video-Based Surveillance Systems", *Multisensor Surveillance Systems: The Fusion Perspective*: Kluwer Academic, pp. 235-250, 2003.
14. Fabio Roli, Giorgio Giacinto, "Design of Multiple Classifier Systems", *Hybrid Methods in Pattern Recognition*: World Scientific Publishing, 2002.
15. F. Roli, G. Giacinto, "Pattern Recognition for Intrusion Detection in Computer Networks", *Pattern Recognition and String Matching*: Kluwer Academic Publishers, 2002.

16. Giorgio Giacinto, Fabio Roli, Gianni Vernazza, "Comparison and combination of statistical and Neural Network algorithms for remote-sensing image classification", *Neurocomputation in Remote Sensing Data Analysis*: Springer-Verlag, pp. 117-124, 1997.
17. F. Roli, S.B. Serpico, G. Vernazza, "Neural Networks for classification of remotely sensed images", *Fuzzy Logic and Neural Network Handbook*: McGraw-Hill, 1996.

International conference papers

1. Saskia Laura Schroeder et al., "SoK: On the Offensive Potential of AI", 3rd IEEE Conference on Secure and Trustworthy Machine Learning (SaTML), 2025
2. Antonio Emanuele Cinà, Jérôme Rony, Maura Pintor, Luca Demetrio, Ambra Demontis, Battista Biggio, Ismail Ben Ayed, Fabio Roli, AttackBench: Evaluating Gradient-based Attacks for Adversarial Examples, AAAI 2025, The 39th Annual AAAI Conference on Artificial Intelligence, GSS Rating A++
3. Chang, L., Dost, K., Zhao, K., Demontis, A., Roli, F., Dobbie, G., Wicker, J., 2023. BAARD: Blocking Adversarial Examples by Testing for Applicability, Reliability and Decidability. Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2023).
4. Emanuele LEDDA e altri "BLUES: Before-reLU-EStimates Bayesian Inference for Crowd Counting" has been accepted for presentation at ICIAP 2023.
5. Antonio Cinà et al. "Minimizing Energy Consumption of Deep Learning Models " è stato accettato ad ICIAP 23
6. Maura Pintor, Luca Demetrio, Angelo Sotgiu, Giovanni Manca, Ambra Demontis, Nicholas Carlini, Battista Biggio, Fabio Roli, Indicators of Attack Failure: Debugging and Improving Optimization of Adversarial Examples, Thirty-sixth Conference on Neural Information Processing Systems, NeurIPS 2022,
7. Marco Micheletto, Giulia Orrù, Gian Luca Marcialis, Fabio Roli, FINGERPRINT RECOGNITION WITH EMBEDDED PRESENTATION ATTACKS DETECTION: ARE WE READY?, The 29th IEEE International Conference on Image Processing, ICIP 2022.
8. Maura Pintor, Fabio Roli, Wieland Brendel, Battista Biggio, Fast Minimum-norm Adversarial Attacks through Adaptive Norm Constraints, NeurIPS 2021, Thirty-fifth Conference on Neural Information Processing Systems.
9. Alessandro Betti, Marco Gori, Stefano Melacci, Marcello Pelillo, Fabio Roli, Can machines learn to see without visual databases?, Data-Centric AI workshop at NeurIPS2021.
10. Lu Zhang, Sangarapillai Lambotharan, Gan Zheng, Fabio Roli, A Neural Rejection System Against Universal Adversarial Perturbations in Radio Signal Classification, IEEE GLOBECOM 2021, December 7 – 11, 2021.
11. Antonio Emanuele Cinà, Kathrin Grosse, Sebastiano Vascon, Ambra Demontis, Battista Biggio, Fabio Roli, Marcello Pelillo, Explaining Backdoor Poisoning Beyond Influence Functions, ICCV 2nd Workshop on Adversarial Robustness In the Real World, oppure mandato a AAAI conference? Verificare 2021, in press
12. Maura Pintor, Luca Demetrio, Giovanni Manca, Battista Biggio, Fabio Roli, Slope: A First-order Approach for Measuring Gradient Obfuscation, ESANN 2021 - European Symposium on Artificial Neural Networks, Computational Intelligence and Machine Learning, accepted, in press, 2021
13. Antonio Emanuele Cinà, Sebastiano Vascon, Ambra Demontis, Battista Biggio, Fabio Roli and Marcello Pelillo, The Hammer and the Nut: Is Bilevel Optimization Really Needed to Poison Linear Classifiers?, International Joint Conference on Neural Networks, IJCNN 2021, accepted, in press, 2021
14. G Orrù, D Ghiani, M Pintor, GL Marcialis, F Roli, Detecting Anomalies from Video-Sequences: a Novel Descriptor, ICPR20, 2020
15. Luca Demetrio, Battista Biggio, Giovanni Lagorio, Fabio Roli, Alessandro Armando: Explaining Vulnerabilities of Deep Learning to Adversarial Malware Binaries. ITASEC 2019
16. Paul Temple, Mathieu Acher, Gilles Perrouin, Battista Biggio, Jean-Marc Jézéquel, Fabio Roli: Towards quality assurance of software product lines with adversarial configurations. SPLC (A) 2019: 38:1-38:12
17. Ambra Demontis, Marco Melis, Maura Pintor, Matthew Jagielski, Battista Biggio, Alina Oprea, Cristina Nita-Rotaru, Fabio Roli: Why Do Adversarial Attacks Transfer? Explaining Transferability of Evasion and Poisoning Attacks. USENIX Security Symposium 2019: 321-338 2018
18. Marco Melis, Davide Maiorca, Battista Biggio, Giorgio Giacinto, Fabio Roli: Explaining Black-box Android Malware Detection. EUSIPCO 2018: 524-528
19. Bojan Kolosnjaji, Ambra Demontis, Battista Biggio, Davide Maiorca, Giorgio Giacinto, Claudia Eckert, Fabio Roli: Adversarial Malware Binaries: Evading Deep Learning for Malware Detection in Executables. EUSIPCO 2018: 533-537
20. Giulia Orrù, Gian Luca Marcialis, Fabio Roli: An experimental investigation on self adaptive facial recognition algorithms using a long time span data set. IPTA 2018: 1-6 2017

21. Luis Muñoz-González, Battista Biggio, Ambra Demontis, Andrea Paudice, Vasin Wongrassamee, Emil C. Lupu, Fabio Roli: Towards Poisoning of Deep Learning Algorithms with Back-gradient Optimization. *AISeC@CCS* 2017: 27-38
22. Igino Corona, Battista Biggio, Matteo Contini, Luca Piras, Roberto Corda, Mauro Mereu, Guido Mureddu, Davide Ariu, Fabio Roli: DeltaPhish: Detecting Phishing Webpages in Compromised Websites. *ESORICS* (1) 2017: 370-388
23. Luca Ghiani, Gian Luca Marcialis, Fabio Roli: Fingerprint presentation attacks detection based on the user-specific effect. *IJCB* 2017: 352-358
24. Marco Melis, Ambra Demontis, Battista Biggio, Gavin Brown, Giorgio Fumera, Fabio Roli: Is Deep Learning Safe for Robot Vision? Adversarial Examples Against the iCub Humanoid. *ICCV Workshops* 2017: 751-759
25. Alessandro Carcangiu, Lucio Davide Spano, Giorgio Fumera, Fabio Roli: Gesture Modelling and Recognition by Integrating Declarative Models and Pattern Recognition Algorithms. *ICIAP* (1) 2017: 84-95
26. Ambra Demontis, Battista Biggio, Giorgio Fumera, Giorgio Giacinto, Fabio Roli: Infinity-Norm Support Vector Machines Against Adversarial Label Contamination. *ITASEC* 2017: 106-115 2016
27. Paolo Russu, Ambra Demontis, Battista Biggio, Giorgio Fumera, Fabio Roli: Secure Kernel Machines against Evasion Attacks. *AISeC@CCS* 2016: 59-69
28. Luca Ghiani, Gian Luca Marcialis, Fabio Roli, Pierluigi Tueri: User-specific effects in Fingerprint Presentation Attacks Detection: Insights for future research. *ICB* 2016: 1-6
29. Bahram Lavi, Giorgio Fumera, Fabio Roli: A Multi-Stage Approach for Fast Person Re identification. *S+SSPR* 2016: 63-73
30. Ambra Demontis, Paolo Russu, Battista Biggio, Giorgio Fumera, Fabio Roli: On Security and Sparsity of Linear Classifiers for Adversarial Settings. *S+SSPR* 2016: 322-332 2015
31. Jart Armin, Bryn Thompson, Davide Ariu, Giorgio Giacinto, Fabio Roli, Piotr Kijewski: 2020 Cybercrime Economic Costs: No Measure No Solution. *ARES* 2015: 701-710
32. Davide Ariu, Luca Didaci, Giorgio Fumera, Enrico Frumento, Federica Freschi, Giorgio Giacinto, Fabio Roli: Yet Another Cybersecurity Roadmapping Methodology. *ARES* 2015: 719-726
33. Valerio Mura, Luca Ghiani, Gian Luca Marcialis, Fabio Roli, David A. Yambay, Stephanie A. C. Schuckers: LivDet 2015 fingerprint liveness detection competition 2015. *BTAS* 2015: 1-6
34. Igino Corona, Matteo Contini, Davide Ariu, Giorgio Giacinto, Fabio Roli, Michael Lund, Giorgio Marinelli: PharmaGuard: Automatic identification of illegal search-indexed online pharmacies. *CYBCONF* 2015: 324-329
35. Battista Biggio, Marco Melis, Giorgio Fumera, Fabio Roli: Sparse support faces. *ICB* 2015: 208-213
36. Marco Melis, Luca Piras, Battista Biggio, Giorgio Giacinto, Giorgio Fumera, Fabio Roli: Fast Image Classification with Reduced Multiclass Support Vector Machines. *ICIAP* (2) 2015: 78-88
37. Pierluigi Tueri, Valerio Mura, Gian Luca Marcialis, Fabio Roli: A Classification-Selection Approach for Self Updating of Face Verification Systems Under Stringent Storage and Computational Requirements. *ICIAP* (2) 2015: 540-550
38. Ambra Demontis, Battista Biggio, Giorgio Fumera, Fabio Roli: Super-Sparse Regression for Fast Age Estimation from Faces at Test Time. *ICIAP* (2) 2015: 551-562
39. Huang Xiao, Battista Biggio, Gavin Brown, Giorgio Fumera, Claudia Eckert, Fabio Roli: Is Feature Selection Secure against Training Data Poisoning? *ICML* 2015: 1689-1698
40. Christophe C. Pagano, Eric Granger, Robert Sabourin, Gian Luca Marcialis, Fabio Roli: Adaptive Classification for Person Re-identification Driven by Change Detection. *ICPRAM* (1) 2015: 45-55
41. Battista Biggio, Igino Corona, Zhi-Min He, Patrick P. K. Chan, Giorgio Giacinto, Daniel S. Yeung, Fabio Roli: One-and-a-Half-Class Multiple Classifier Systems for Secure Learning Against Evasion Attacks at Test Time. *MCS* 2015: 168-180
42. Muhammad A. O. Ahmed, Luca Didaci, Giorgio Fumera, Fabio Roli: An Empirical Investigation on the Use of Diversity for Creation of Classifier Ensembles. *MCS* 2015: 206-219
43. Francesco Marra, Giovanni Poggi, Fabio Roli, Carlo Sansone, Luisa Verdoliva: Counter-forensics in machine learning based forgery detection. *Media Watermarking, Security, and Forensics* 2015
44. M. Ali Akber Dewan, Eric Granger, Robert Sabourin, Gian Luca Marcialis, Fabio Roli: Video Face Recognition From A Single Still Image Using an Adaptive Appearance Model Tracker. *SSCI* 2015: 196-202 2014
45. Christophe C. Pagano, Eric Granger, Robert Sabourin, Gian Luca Marcialis, Fabio Roli: Dynamic Weighted Fusion of Adaptive Classifier Ensembles Based on Changing Data Streams. *ANNPR* 2014: 105-116
46. Battista Biggio, Konrad Rieck, Davide Ariu, Christian Wressnegger, Igino Corona, Giorgio Giacinto, Fabio Roli: Poisoning behavioral malware clustering. *AISeC@CCS* 2014: 27-36

47. Christophe C. Pagano, Eric Granger, Robert Sabourin, Ajita Rattani, Gian Luca Marcialis, Fabio Roli: Efficient adaptive face recognition systems based on capture conditions. CIBIM 2014: 60-67
48. Francesco Marra, Fabio Roli, Davide Cozzolino, Carlo Sansone, Luisa Verdoliva: Attacking the triangle test in sensor-based camera identification. ICIAP 2014: 5307-5311
49. Ignazio Pillai, Giorgio Fumera, Fabio Roli: Learning of Multilabel Classifiers. ICPR 2014: 3452-3456
50. Battista Biggio, Samuel Rota Bulò, Ignazio Pillai, Michele Mura, Eyasu Zemene Mequanint, Marcello Pelillo, Fabio Roli: Poisoning Complete-Linkage Hierarchical Clustering. S+SSPR 2014: 42-52
51. Luca Ghiani, Abdenour Hadid, Gian Luca Marcialis, Fabio Roli: Fingerprint Liveness Detection using Binarized Statistical Image Features. BTAS 2013: 1-6
52. Yu Guan, Xingjie Wei, Chang-Tsun Li, Gian Luca Marcialis, Fabio Roli, Massimo Tistarelli: Combining gait and face for tackling the elapsed time challenges. BTAS 2013: 1-8
53. Battista Biggio, Ignazio Pillai, Samuel Rota Bulò, Davide Ariu, Marcello Pelillo, Fabio Roli: Is data clustering in adversarial settings secure? AISEC 2013: 87-98
54. Battista Biggio, Luca Didaci, Giorgio Fumera, Fabio Roli: Poisoning attacks to compromise face templates. ICB 2013: 1-7
55. Ivana Chingovska, J. Yang, Zhen Lei, Dong Yi, Stan Z. Li, Olga Kähm, Christian Glaser, Naser Damer, Arjan Kuijper, Alexander Nouak, Jukka Komulainen, Tiago Freitas Pereira, Shubham Gupta, Shubham Khandelwal, Shubham Bansal, Ayush Rai, Tarun Krishna, Dushyant Goyal, Muhammad-Adeel Waris, Honglei Zhang, Iftikhar Ahmad, Serkan Kiranyaz, Moncef Gabbouj, Roberto Tronci, Maurizio Pili, Nicola Sirena, Fabio Roli, Javier Galbally, Julian Fierrez, Allan da Silva Pinto, Hélio Pedrini, W. S. Schwartz, Anderson Rocha, André Anjos, Sébastien Marcel: The 2nd competition on counter measures to 2D face spoofing attacks. ICB 2013: 1-6
56. Luca Ghiani, David Yambay, Valerio Mura, Simona Tocco, Gian Luca Marcialis, Fabio Roli, Stephanie Schuckers: LivDet 2013 Fingerprint Liveness Detection Competition 2013. ICB 2013: 1-6
57. M. Ali Akber Dewan, Eric Granger, Fabio Roli, Robert Sabourin, Gian Luca Marcialis: A comparison of adaptive appearance methods for tracking faces in video surveillance. ICDP 2013: 1-7
58. Gianluca Fadda, Gian Luca Marcialis, Fabio Roli, Luca Ghiani: Exploiting the Golden Ratio on Human Faces for Head-Pose Estimation. ICIAP (1) 2013: 280-289
59. Gian Luca Marcialis, Luca Didaci, Fabio Roli: Estimating the Serial Combination's Performance from That of Individual Base Classifiers. ICIAP (1) 2013: 622-631
60. Luca Didaci, Giorgio Fumera, Fabio Roli: Diversity in Classifier Ensembles: Fertile Concept or Dead End? MCS 2013: 37-48
61. Battista Biggio, Igino Corona, Davide Maiorca, Blaine Nelson, Nedim Srndic, Pavel Laskov, Giorgio Giacinto, Fabio Roli: Evasion Attacks against Machine Learning at Test Time. ECML/PKDD (3) 2013: 387-402
62. Riccardo Satta, Federico Pala, Giorgio Fumera, Fabio Roli: Real-time Appearance-based Person Re-identification Over Multiple Kinect™ Cameras. VISAPP (2) 2013: 407-410
63. Zahid Akhtar, Giorgio Fumera, Gian Luca Marcialis, Fabio Roli: Evaluation of serial and parallel multibiometric systems under spoofing attacks. BTAS 2012: 283-288
64. Battista Biggio, Giorgio Fumera, Fabio Roli: Learning sparse kernel machines with biometric similarity functions for identity recognition. BTAS 2012: 325-330
65. Riccardo Satta, Giorgio Fumera, Fabio Roli: A General Method for Appearance-Based People Search Based on Textual Queries. ECCV Workshops (1) 2012: 453-461
66. David Yambay, Luca Ghiani, Paolo Denti, Gian Luca Marcialis, Fabio Roli, Stephanie A. C. Schuckers: LivDet 2011 - Fingerprint liveness detection competition 2011. ICB 2012: 208-215
67. Zahid Akhtar, Giorgio Fumera, Gian Luca Marcialis, Fabio Roli: Evaluation of multimodal biometric score fusion rules under spoof attacks. ICB 2012: 402-407
68. Luca Ghiani, Gian Luca Marcialis, Fabio Roli: Fingerprint liveness detection by local phase quantization. ICPR 2012: 537-540
69. Ignazio Pillai, Giorgio Fumera, Fabio Roli: F-measure optimisation in multi-label classifiers. ICPR 2012: 2424-2427
70. Ajita Rattani, Gian Luca Marcialis, Eric Granger, Fabio Roli: A dual-staged classification-selection approach for automated update of biometric templates. ICPR 2012: 2972-2975
71. Gian Luca Marcialis, Luca Didaci, Alessandro Pisano, Eric Granger, Fabio Roli: Why template self-update should work in biometric authentication systems? ISSPA 2012: 1086-1091
72. Luca Didaci, Fabio Roli: A Bayesian analysis of co-training algorithm with insufficient views. ISSPA 2012: 1108-1112

73. Riccardo Satta, Giorgio Fumera, Fabio Roli: Appearance-based people recognition by local dissimilarity representations. *MM&Sec 2012*: 151-156
74. Luca Ghiani, Gian Luca Marcialis, Fabio Roli: Experimental results on the feature-level fusion of multiple fingerprint liveness detection algorithms. *MM&Sec 2012*: 157-164
75. Battista Biggio, Giorgio Fumera, Fabio Roli, Luca Didaci: Poisoning Adaptive Biometric Systems. *SSPR/SPR 2012*: 417-425
76. Gian Luca Marcialis, Luca Ghiani, Katja Vetter, Dirk Morgeneier, Fabio Roli: Large Scale Experiments on Fingerprint Liveness Detection. *SSPR/SPR 2012*: 501-509
77. Luca Didaci, Giorgio Fumera, Fabio Roli: Analysis of Co-training Algorithm with Very Small Training Sets. *SSPR/SPR 2012*: 719-726
78. Massimiliano Dibitonto, Antonio Buonaiuto, Gian Luca Marcialis, Daniele Muntoni, Carlo Maria Medaglia, Fabio Roli: Fusion of Radio and Video Localization for People Tracking. *AmI 2011*: 258-263
79. Davide Ariu, Giorgio Giacinto, Fabio Roli: Machine learning in computer forensics (and the lessons learned from machine learning in computer security). *AISeC 2011*: 99-104
80. Ajita Rattani, Gian Luca Marcialis, Fabio Roli: Self adaptive systems: An experimental analysis of the performance over time. *CIBIM 2011*: 36-43
81. Battista Biggio, Zahid Akhtar, Giorgio Fumera, Gian Luca Marcialis, Fabio Roli: Robustness of multi-modal biometric verification systems under realistic spoofing attacks. *IJCB 2011*: 1-6
82. Murali Mohan Chakka, André Anjos, Sébastien Marcel, Roberto Tronci, Daniele Muntoni, Gianluca Fadda, Maurizio Pili, Nicola Sirena, Gabriele Murgia, Marco Ristori, Fabio Roli, Junjie Yan, Dong Yi, Zhen Lei, Zhiwei Zhang, Stan Z. Li, William Robson Schwartz, Anderson Rocha, Hélio Pedrini, Javier Lorenzo-Navarro, Modesto Castrillón Santana, Jukka Määttä, Abdenour Hadid, Matti Pietikäinen: Competition on counter measures to 2-D facial spoofing attacks. *IJCB 2011*: 1-6
83. Roberto Tronci, Daniele Muntoni, Gianluca Fadda, Maurizio Pili, Nicola Sirena, Gabriele Murgia, Marco Ristori, Sardegna Ricerche, Fabio Roli: Fusion of multiple clues for photo-attack detection in face recognition systems. *IJCB 2011*: 1-6
84. Zahid Akhtar, Giorgio Fumera, Gian Luca Marcialis, Fabio Roli: Robustness analysis of likelihood ratio score fusion rule for multimodal biometric systems under spoof attacks. *ICCST 2011*: 1-8
85. Ignazio Pillai, Giorgio Fumera, Fabio Roli: A Classification Approach with a Reject Option for Multi-label Problems. *ICIAP (1) 2011*: 98-107
86. Ignazio Pillai, Riccardo Satta, Giorgio Fumera, Fabio Roli: Exploiting Depth Information for Indoor-Outdoor Scene Classification. *ICIAP (2) 2011*: 130-139
87. Riccardo Satta, Giorgio Fumera, Fabio Roli, Marco Cristani, Vittorio Murino: A Multiple Component Matching Framework for Person Re-identification. *ICIAP (2) 2011*: 140-149
88. Zahid Akhtar, Giorgio Fumera, Gian Luca Marcialis, Fabio Roli: Robustness Evaluation of Biometric Systems under Spoof Attacks. *ICIAP (1) 2011*: 159-168
89. Ajita Rattani, Gian Luca Marcialis, Fabio Roli: Temporal Analysis of Biometric Template Update Procedures in Uncontrolled Environment. *ICIAP (1) 2011*: 595-604
90. Ignazio Pillai, Giorgio Fumera, Fabio Roli: Classifier Selection Approaches for Multi-label Problems. *MCS 2011*: 167-176
91. Battista Biggio, Igino Corona, Giorgio Fumera, Giorgio Giacinto, Fabio Roli: Bagging Classifiers for Fighting Poisoning Attacks in Adversarial Classification Tasks. *MCS 2011*: 350-359
92. Riccardo Satta, Giorgio Fumera, Fabio Roli: Exploiting Dissimilarity Representations for Person Re-identification. *SIMBAD 2011*: 275-289
93. Battista Biggio, Giorgio Fumera, Fabio Roli: Design of robust classifiers for adversarial environments. *SMC 2011*: 977-982
94. Carlo Lobrano, Roberto Tronci, Giorgio Giacinto, Fabio Roli: A Score Decidability Index for Dynamic Score Combination. *ICPR 2010*: 69-72
95. Gian Luca Marcialis, Fabio Roli, Alessandra Tidu: Analysis of Fingerprint Pores for Vitality Detection. *ICPR 2010*: 1289-1292
96. Battista Biggio, Giorgio Fumera, Fabio Roli: Multiple Classifier Systems under Attack. *MCS 2010*: 74-83
97. Carlo Lobrano, Roberto Tronci, Giorgio Giacinto, Fabio Roli: Dynamic Linear Combination of Two-Class Classifiers. *SSPR/SPR 2010*: 473-482
98. Norman Poh, Rita Wong, Josef Kittler, Fabio Roli: Challenges and Research Directions for Adaptive Biometric Recognition Systems. *ICB 2009*: 753-764
99. Luca Didaci, Gian Luca Marcialis, Fabio Roli: Modelling FRR of Biometric Verification Systems Using the Template Co-update Algorithm. *ICB 2009*: 765-774

100. Ajita Rattani, Biagio Freni, Gian Luca Marcialis, Fabio Roli: Template Update Methods in Adaptive Biometric Systems: A Critical Review. ICB 2009: 847-856
101. Gian Luca Marcialis, Aaron Lewicke, Bozhao Tan, Pietro Coli, Dominic Grimberg, Alberto Congiu, Alessandra Tidu, Fabio Roli, Stephanie A. C. Schuckers: First International Fingerprint Liveness Detection Competition - LivDet 2009. ICIAP 2009: 12-23
102. Ajita Rattani, Gian Luca Marcialis, Fabio Roli: An Experimental Analysis of the Relationship between Biometric Template Update and the Doddington's Zoo: A Case Study in Face Verification. ICIAP 2009: 434-442
103. Battista Biggio, Giorgio Fumera, Fabio Roli: Multiple Classifier Systems for Adversarial Classification Tasks. MCS 2009: 132-141
104. Luca Didaci, Gian Luca Marcialis, Fabio Roli: Semi-supervised Co-update of Multiple Matchers. MCS 2009: 152-160
105. Roberto Tronci, Giorgio Giacinto, Fabio Roli: Dynamic Score Combination: A Supervised and Unsupervised Score Combination Method. MLDM 2009: 163-177
106. Biagio Freni, Gian Luca Marcialis, Fabio Roli: Online and Offline Fingerprint Template Update Using Minutiae: An Experimental Comparison. AMDO 2008: 441-448
107. Giorgio Fumera, Fabio Roli, Battista Biggio, Ignazio Pillai: Improving Image Spam Filtering Using Image Text Features. CEAS 2008
108. Ajita Rattani, Gian Luca Marcialis, Fabio Roli: Capturing large intra-class variations of biometric data by template co-updating. CVPR Workshops 2008: 1-6
109. Freni, Gian Luca Marcialis, Fabio Roli: Replacement Algorithms for Fingerprint Template Update. ICIAR 2008: 884-893
110. Roberto Tronci, Giorgio Giacinto, Fabio Roli: Dynamic score combination of binary experts. ICPR 2008: 1-4
111. Battista Biggio, Giorgio Fumera, Fabio Roli: Adversarial Pattern Classification Using Multiple Classifiers and Randomisation. SSPR/SPR 2008: 500-509
112. Gian Luca Marcialis, Ajita Rattani, Fabio Roli: Biometric Template Update: An Experimental Investigation on the Relationship between Update Errors and Performance Degradation in Face Verification. SSPR/SPR 2008: 684-693
113. Biagio Freni, Gian Luca Marcialis, Fabio Roli: Template Selection by Editing Algorithms: A Case Study in Face Recognition. SSPR/SPR 2008: 745-754
114. Luca Didaci, Gian Luca Marcialis, Fabio Roli: A Theoretical and Experimental Analysis of Template Co-update in Biometric Verification Systems. SSPR/SPR 2008: 765-774
115. Roberto Tronci, Giorgio Giacinto, Fabio Roli: Combination of Experts by Classifiers in Similarity Score Spaces. SSPR/SPR 2008: 821-830
116. Pietro Coli, Gian Luca Marcialis, Fabio Roli: Power spectrum-based fingerprint vitality detection. AutoID 2007: 169-173
117. Battista Biggio, Giorgio Fumera, Ignazio Pillai, Fabio Roli: Image Spam Filtering by Content Obscuring Detection. CEAS 2007
118. Pietro Coli, Gian Luca Marcialis, Fabio Roli: Vitality Detection from Fingerprint Images: A Critical Survey. ICB 2007: 722-731
- Fabio Roli, Luca Didaci, Gian Luca Marcialis: Template Co-update in Multimodal Biometric Systems. ICB 2007: 1194-1202
119. Roberto Tronci, Giorgio Giacinto, Fabio Roli: Dynamic Score Selection for Fusion of Multiple Biometric Matchers. ICIAP 2007: 15-22
120. Battista Biggio, Giorgio Fumera, Ignazio Pillai, Fabio Roli: Image Spam Filtering Using Visual Information. ICIAP 2007: 105-110
121. Gian Luca Marcialis, Fabio Roli: Score-level fusion of fingerprint and face matchers for personal verification under "stress" conditions. ICIAP 2007: 259-264
122. Gian Luca Marcialis, Fabio Roli: Serial Fusion of Fingerprint and Face Matchers. MCS 2007: 151-160
123. Battista Biggio, Giorgio Fumera, Fabio Roli: Bayesian Analysis of Linear Combiners. MCS 2007: 292-301
124. Roberto Tronci, Giorgio Giacinto, Fabio Roli: Index Driven Combination of Multiple Biometric Experts for AUC Maximisation. MCS 2007: 357-366
125. Manuela Zanda, Gavin Brown, Giorgio Fumera, Fabio Roli: Ensemble Learning in Linearly Combined Classifiers Via Negative Correlation. MCS 2007: 440-449
126. Roberto Tronci, Giorgio Giacinto, Fabio Roli: Selection of Experts for the Design of Multiple Biometric Systems. MLDM 2007: 795-809
127. Luca Didaci, Fabio Roli: Using Co-training and Self-training in Semi-supervised Multiple Classifier Systems. SSPR/SPR 2006: 522-530

128. Fabio Roli, Gian Luca Marcialis: Semi-supervised PCA-Based Face Recognition Using Self-training. SSPR/SPR 2006: 560-568
129. Pietro Coli, Gian Luca Marcialis, Fabio Roli: Analysis and Selection of Features for the Fingerprint Vitality Detection. SSPR/SPR 2006: 907-915
130. Alessandra Serrau, Gian Luca Marcialis, Horst Bunke, Fabio Roli: An Experimental Comparison of Fingerprint Classification Methods Using Graphs. GbRPR 2005: 281-290
131. Giorgio Giacinto, Roberto Perdisci, Fabio Roli: Network Intrusion Detection by Combining One-Class Classifiers. ICIAP 2005: 58-65
132. Giorgio Giacinto, Fabio Roli, Roberto Tronci: Score Selection Techniques for Fingerprint Multi-modal Biometric Authentication. ICIAP 2005: 1018-1025
133. Fabio Roli: Semi-supervised Multiple Classifier Systems: Background and Research Directions. Multiple Classifier Systems 2005: 1-11
134. Giorgio Fumera, Fabio Roli, Alessandra Serrau: Dynamics of Variance Reduction in Bagging and Other Techniques Based on Randomisation. Multiple Classifier Systems 2005: 316-325
135. Giorgio Giacinto, Roberto Perdisci, Fabio Roli: Alarm Clustering for Intrusion Detection Systems in Computer Networks. MLDM 2005: 184-193
136. Gian Luca Marcialis, Fabio Roli: Fingerprint Verification by Decision-Level Fusion of Optical and Capacitive Sensors. ECCV Workshop BioAW 2004: 307-317
137. Giorgio Giacinto, Fabio Roli: Nearest-Prototype Relevance Feedback for Content Based Image Retrieval. ICPR (2) 2004: 989-992
138. Gian Luca Marcialis, Fabio Roli: High Security Fingerprint Verification by Perceptron-Based Fusion of Multiple Matchers. Multiple Classifier Systems 2004: 364-373
139. Giorgio Giacinto, Fabio Roli: Instance-Based Relevance Feedback for Image Retrieval. NIPS 2004: 489-496
140. Giorgio Fumera, Ignazio Pillai, Fabio Roli: A Two-Stage Classifier with Reject Option for Text Categorisation. SSPR/SPR 2004: 771-779
141. Gian Luca Marcialis, Fabio Roli, Alessandra Serrau: Fusion of Statistical and Structural Fingerprint Classifiers. AVBPA 2003: 310-317
142. Gian Luca Marcialis, Fabio Roli: Experimental Results on Fusion of Multiple Fingerprint Matchers. AVBPA 2003: 814-820
143. Giorgio Fumera, Ignazio Pillai, Fabio Roli: Classification with reject option in text categorisation systems. ICIAP 2003: 582-587
144. Sarunas Raudys, Fabio Roli: The Behavior Knowledge Space Fusion Method: Analysis of Generalization Error and Strategies for Performance Improvement. Multiple Classifier Systems 2003: 55-64
145. Giorgio Fumera, Fabio Roli: Linear Combiners for Classifier Fusion: Some Theoretical and Experimental Results. Multiple Classifier Systems 2003: 74-83
146. Giorgio Giacinto, Fabio Roli, Luca Didaci: A Modular Multiple Classifier System for the Detection of Intrusions in Computer Networks. Multiple Classifier Systems 2003: 346-355
147. Giorgio Giacinto, Fabio Roli: Dissimilarity Representation of Images for Relevance Feedback in Content-Based Image Retrieval. MLDM 2003: 202-214
148. Gian Luca Marcialis, Fabio Roli: Fusion of LDA and PCA for Face Verification. Biometric Authentication 2002: 30-38
149. Josef Kittler, Marco Ballette, Jacek Czyz, Fabio Roli, Luc Vandendorpe: Enhancing the performance of personal identity authentication systems by fusion of face verification experts. ICME (2) 2002: 581-584
150. Fabio Roli, Giorgio Fumera, Gianni Vernazza: Analysis of Error-Reject Trade-off in Linearly Combined Classifiers. ICPR (2) 2002: 120-125
151. Giorgio Giacinto, Fabio Roli: Intrusion Detection in Computer Networks by Multiple Classifier Systems. ICPR (2) 2002: 390-393
152. Fabio Roli, Sarunas Raudys, Gian Luca Marcialis: An Experimental Comparison of Fixed and Trained Fusion Rules for Crisp Classifier Outputs. Multiple Classifier Systems 2002: 232-241
153. Fabio Roli, Giorgio Fumera: Analysis of Linear and Order Statistics Combiners for Fusion of Imbalanced Classifiers. Multiple Classifier Systems 2002: 252-261
154. Josef Kittler, Marco Ballette, Jacek Czyz, Fabio Roli, Luc Vandendorpe: Decision Level Fusion of Intramodal Personal Identity Verification Experts. Multiple Classifier Systems 2002: 314-324
155. Fabio Roli, Josef Kittler, Giorgio Fumera, Daniele Muntoni: An Experimental Comparison of Classifier Fusion Rules for Multimodal Personal Identity Verification Systems. Multiple Classifier Systems 2002: 325-336
156. Giorgio Fumera, Fabio Roli: Performance Analysis and Comparison of Linear Combiners for Classifier Fusion. SSPR/SPR 2002: 424-432

157. Giorgio Giacinto, Fabio Roli: Query Shifting Based on Bayesian Decision Theory for Content-Based Image Retrieval. SSPR/SPR 2002: 607-616
158. Giorgio Fumera, Fabio Roli: Support Vector Machines with Embedded Reject Option. SVM 2002: 68-82
159. Yuan Yao, Gian Luca Marcialis, Massimiliano Pontil, Paolo Frasconi, Fabio Roli: A New Machine Learning Approach to Fingerprint Classification. AI*IA 2001: 57-63
160. Gian Luca Marcialis, Fabio Roli, Paolo Frasconi: Fingerprint Classification by Combination of Flat and Structural Approaches. AVBPA 2001: 241-246
161. Giorgio Fumera, Fabio Roli, Gianni Vernazza: A Method for Error Rejection in Multiple Classifier Systems. ICIAP 2001: 454-458
162. Fabio Roli, Giorgio Giacinto, Gianni Vernazza: Methods for Designing Multiple Classifier Systems. Multiple Classifier Systems 2001: 78-87
163. Giorgio Fumera, Fabio Roli: Error Rejection in Linearly Combined Multiple Classifiers. Multiple Classifier Systems 2001: 329-338
164. Ludmila I. Kuncheva, Fabio Roli, Gian Luca Marcialis, Catherine A. Shipp: Complexity of Data Subsets Generated by the Random Subspace Method: An Experimental Investigation. Multiple Classifier Systems 2001: 349-358
165. Giorgio Giacinto, Fabio Roli, Giorgio Fumera: Adaptive Query Shifting for Content-Based Image Retrieval. MLDM 2001: 337-346
166. Giorgio Giacinto, Fabio Roli: A Theoretical Framework for Dynamic Classifier Selection. ICPR 2000: 2008-2011
167. Giorgio Giacinto, Fabio Roli, Giorgio Fumera: Design of Effective Multiple Classifier Systems by Clustering of Classifiers. ICPR 2000: 2160-2163
168. Giorgio Giacinto, Fabio Roli, Giorgio Fumera: Unsupervised Learning of Neural Network Ensembles for Image Classification. IJCNN (3) 2000: 155-162
169. Giorgio Giacinto, Fabio Roli: Dynamic Classifier Selection. Multiple Classifier Systems 2000: 177-189
170. Giorgio Giacinto, Fabio Roli, Giorgio Fumera: Selection of Classifiers Based on Multiple Classifier Behaviour. SSPR/SPR 2000: 87-93
171. Giorgio Fumera, Fabio Roli, Giorgio Giacinto: Multiple Reject Thresholds for Improving Classification Reliability. SSPR/SPR 2000: 863-871
172. Giorgio Giacinto, Fabio Roli: Methods for Dynamic Classifier Selection. ICIAP 1999: 659-664
173. Giorgio Giacinto, Fabio Roli: Automatic Design of Multiple Classifier Systems by Unsupervised Learning. MLDM 1999: 131-143
174. Giorgio Giacinto, Fabio Roli: Adaptive Selection of Image Classifiers. ICIAP (1) 1997: 38-45
175. Jim Austin, Giorgio Giacinto, I. Kanellopoulos, Ken Lees, Fabio Roli, Gianni Vernazza, G. Wilkinson: The COMPARES Project: CONnectionist Methods for Preprocessing and Analysis of REMote Sensing Data. ICIAP
176. Fabio Roli, Sebastiano B. Serpico, Lorenzo Bruzzone, Gianni Vernazza: Classification of multispectral remote-sensing images by neural networks. EUSIPCO 1996: 1-4
177. Fabio Roli, Sebastiano B. Serpico, Lorenzo Bruzzone: Classification of multisensor remote-sensing images by multiple structured neural networks. ICPR 1996: 180-184
178. Lorenzo Bruzzone, Fabio Roli, Sebastiano B. Serpico: Crack Detection by a Measure of Texture Anisotropy. ICIAP 1995: 743-747
179. R. Re, Fabio Roli, Sebastiano B. Serpico, Gianni Vernazza: A technique for defining the architecture and weights of a neural image classifier. ICASSP 1992: 401-404
180. O. Fichera, P. Pellegretti, Fabio Roli, Sebastiano B. Serpico: Automatic acquisition of visual models for image recognition. ICPR (1) 1992: 95-98
181. F. Roli, C. Dambra, S. Dellepiane, G. Vernazza. International Conference on Digital Signal Processing, 626-633 1991, Remote sensing data fusion by means of a region-overlapping technique, 1991 C. Dambra, F. Roli, S. B. Serpico, A. Wielogorski, A. Agostinelli: IGARSS'91; Proceedings of the 11th Annual International Geoscience, 1991
182. S. Dellepiane, G. Ghiglia, F. Roli, S. B. Serpico, G. Vernazza: A Learning System For The Generation Of Conceptual Descriptions For Workpiece Recognition Purposes, Proceedings. 14 Annual Conference of Industrial Electronics Society 1, 76-81, 1988.