

## REVISTAS INTERNACIONALES / INTERNATIONAL JOURNALS

- 1.** Ríos Sánchez B., Arriaga Gómez M.F., Guerra Casanova J., de Santos Sierra, D., Mendizabal Vázquez I., Bailador G. Sánchez Ávila C., [gb2suMOD: A MultiMODal biometric video database using visible and IR light](#). Aceptado para publicación en Information Fusion.
- 2.** de Santos-Sierra D., Sendiña-Nadal I., Leyva I., Almendra J.A., Ayali A., Anava S., Sánchez-Ávila C. and Boccaletti S., [Graph-based unsupervised segmentation algorithm for cultured neuronal networks' structure characterization and modeling](#), *Cytometry Part A, Special Issue: Image-Based Systems Biology*, vol. 87, no. 6, pp.: 513?523, June 2015.
- 3.** Rodríguez González A.B., Wilby M., Vinagre Díaz J.J.; Sánchez Ávila C., [Modeling and Detecting Aggressiveness from Driving Signals](#), *IEEE Trans. on Intelligent Transportation Systems*, vol. 15, no. 4, pp.: 1419-1428, 2014.
- 4.** Rodríguez-Luján I., Bailador G., Sánchez-Ávila C., Herrero A., Vidal-de-Miguel G., [Analysis of pattern recognition and dimensionality reduction techniques for odor biometrics](#), *Knowledge-Based Systems*, vol. 52, pp.: 279-289, November 2013.
- 5.** Guerra Casanova G., Sánchez Ávila C., Bailador del Pozo G. and de Santos Sierra A., [A Sequence Alignment Approach Applied to a Mobile Authentication Technique Based on Gestures](#), *International Journal of Pattern Recognition and Artificial Intelligence*, vol. 27, no. 4, 1356006 (16 pages), 2013. ISSN: 0218-0014, World Scientific, Singapore.
- 6.** Bailador del Pozo G., Sánchez Ávila C., de Santos Sierra A. and Guerra Casanova G., [Speed-independent gait identification for mobile devices](#), *International Journal of Pattern Recognition and Artificial Intelligence*, vol. 26, no. 8, 1260013 (13 pages), 2012. ISSN: 0218-0014, World Scientific, Singapore.
- 7.** Guerra Casanova G., Sánchez Ávila C., de Santos Sierra A. and Bailador del Pozo G., [Authentication in mobile devices through hand gesture recognition](#), *International Journal of Information Security*, vol. 11, no. 2, pp. 65-83, 2012. ISSN: 1615-5262, Springer-Verlag, Germany.

**8.** de Santos Sierra A., Sánchez Ávila C., Guerra Casanova J., Bailador del Pozo G., [Gaussian Multiscale Aggregation applied to Segmentation in Hand Biometrics, Sensors](#) (Special Issue "Hand-Based Biometrics Sensors and Systems"), vol. 11, no. 12, pp.: 11141-11156, 2011. ISSN: 1424-8220, MDPI AG, Switzerland.

**9.** de Santos Sierra A., Sánchez Ávila C., Bailador del Pozo G. and Guerra Casanova J., [Unconstrained and Contactless Hand Geometry Biometrics, Sensors](#) (Special Issue "Hand-Based Biometrics Sensors and Systems"), vol. 11, no. 11, pp.: 10143-10164, 2011. ISSN: 1424-8220, MDPI AG, Switzerland.

**10.** de Santos Sierra A., Sánchez Ávila C., Mendaza Ormaza A., and Guerra Casanova J., [An approach to hand biometrics in mobile devices, Signal Image and Video Processing](#) (Special Issue on Unconstrained Biometrics: Advances and Trends), vol. 5, pp.: 469-475, 2011. ISSN: 1863-1703, Springer, England.

**11.** Guerra Casanova J., Sánchez Ávila C., de Santos Sierra A. and Bailador del Pozo G., [Score optimization and template updating in a biometric technique for authentication in mobiles based on gestures](#), Journal of Systems and Software, vol. 84, no. 11, pp.: 2013-2021, 2011. ISSN: 0164-1212, Elsevier Science Ltd., North-Holland.

**12.** Bailador del Pozo G., Sánchez Ávila C., Guerra Casanova J. and de Santos Sierra A., [Analysis of pattern recognition techniques for in-air signature biometrics](#), Pattern Recognition, vol. 44, no. 10-11, pp.: 2468-2478, 2011. ISSN: 0031-3203, Elsevier Science Ltd., England.

**13.** de Santos Sierra A., Sánchez Ávila C., Guerra Casanova J, Bailador del Pozo G. & Jara Vera V., [A stress detection system based on physiological signals and fuzzy logic](#), IEEE Transactions on Industrial Electronics, vol. 58, no. 10, pp.: 4847-4865, 2011. ISSN: 0278-0046, IEEE-Inst. Electrical Electronics Engineers Inc., USA.

**14.** Orue AB., Fernandez V., Alvarez G., Pastor G., Romera M, Montoya F. Sanchez-Ávila C. and Shujun Li., [Breaking a SC-CNN-based Chaotic Masking Secure Communication System](#), International Journal of Bifurcation and Chaos, vol. 19, no. 4, pp.: 1329-1338, 2009. ISSN: 0218-1274, World Scientific Publishing Ltd., Singapur.

**15.** Sánchez-Ávila C. & Sánchez-Reillo, R., [Two Different Approaches for Iris Recognition using Gabor Filters and Multiscale Zero-Crossing Representation](#), Pattern Recognition, vol. 38, pp.: 231-240, 2005. ISSN: 0031-3203, Pergamon-Elsevier Science Ltd., North-Holland.

- 16.** Sánchez-Ávila C. & Sánchez-Reíllo, R. A wavelet-based method for solving discrete first-kind Fredholm equations with piecewise constant solutions, International Journal for Numerical Method in Engineering, vol. 57, no. 4, pp.: 577-598, 2003. ISSN: 0029-5981, John Wiley and Sons Ltd, UK.
- 17.** Sánchez-Reíllo R., López-Ongil C., Entrena-Montes L. & Sánchez-Ávila C., Information Technology Security using Cryptography, IEEE Aerospace and Electronic Systems Magazine, vol. 18, no. 6, pp.: 21-24, 2003. ISSN: 0885-8985, IEEE-Inst. Electrical Electronics Engineers Inc., USA.
- 18.** Sánchez-Reíllo R., Mengibar-Pozo, L. & Sánchez-Ávila C., Microprocessor Smart Cards with Fingerprint User Authentication, IEEE Aerospace and Electronic Systems Magazine, vol. 18, no. 3, pp.: 22-24, 2003. ISSN: 0885-8985, IEEE-Inst. Electrical Electronics Engineers Inc., USA.
- 19.** Sánchez-Ávila C., Wavelet Domain Signal Deconvolution with Singularity-Preserving Regularization, Mathematics and Computers in Simulation, vol. 61, pp.: 165-176, 2003. ISSN: 0378-4754, Elsevier Science Bv., North-Holland
- 20.** Sánchez-Ávila C., Sánchez-Reíllo R. & de Martín-Roche D., Iris-based Biometric Recognition using Dyadic Wavelet Transform, IEEE Aerospace and Electronic Systems Magazine, vol. 17, no. 10, pp.: 3-6, 2002. ISSN: 0885-8985, IEEE-Inst. Electrical Electronics Engineers Inc., USA.
- 21.** Sánchez Reíllo R. & Sánchez-Ávila C., Fingerprint Verification Using Smart Cards for Access Control Systems, IEEE Aerospace and Electronic Systems Magazine, vol. 17, no. 9, pp.: 12-15, 2002. ISSN: 0885-8985, IEEE-Inst. Electrical Electronics Engineers Inc., USA.
- 22.** Sánchez Ávila C., A Nonlinear Adaptive Wavelet-Based Method for Spiky Deconvolution, Nonlinear Analysis, Theory, Methods & Applications, vol. 47, pp.: 4937-4948, 2001. ISSN: 0362-546X, Pergamon-Elsevier Science Ltd., North-Holland.
- 23.** Sánchez-Reíllo R., Sánchez Ávila C. & González-Marcos A.P., Biometric Identification through Hand Geometry Measurements, IEEE Trans. Pattern Analysis and Machine Intelligence, vol. 22, pp.: 1168-1171, 2000. ISSN: 0162-8828, IEEE Computer Society, USA.

- 24.** Sánchez-Ávila C., García-Moreno J.A., [An Adaptive LSQR Algorithm for Computing Discontinuous Solutions in Deconvolution Problems](#), Mathematics and Computers in Simulation, vol. 50, pp.: 323- 329, 1999. ISSN: 0378-4754, Elsevier Science Bv, North-Holland.
- 25.** Sánchez-Ávila C., [Behavior of Nonlinear POCS Higher Order Algorithms in the Deconvolution Problem](#), Nonlinear Analysis, Theory, Methods & Applications, vol. 30, pp.: 4909-4914, 1997. ISSN: 0362-546X, Pergamon-Elsevier Science Ltd., UK.
- 26.** Sánchez Ávila C., Figueiras Vidal A.R., [New POCS Algorithms for Regularization of Inverse Problems](#), Journal of Computational and Applied Mathematics, vol. 72, pp.: 21-39, 1996. ISSN: 0377-0427, Elsevier Science Bv., North-Holland.
- 27.** Sánchez-Ávila, C. & Arriaga-Gómez, F., Convergence of an Adaptive Regularized Method for a Class of Ill-Posed Problems, Zeitschrift für Angewandte Mathematik und Mechanik, vol. 76, pp.: 517-518, 1996. ISSN: 0946-8463, Akademie Verlag, Germany.
- 28.** Sánchez-Ávila, C. & Lorenzo-Mena, M.G., [Sequence Reconstruction from Phase or Magnitude: Regularized Methods](#), Zeitschrift für Angewandte Mathematik und Mechanik, vol. 76, pp.: 439-440, 1996. ISSN: 0946-8463, Akademie Verlag, Germany.
- 29.** Sánchez Ávila C., [An Adaptive Regularized Method for Deconvolution of Signals with Edges by Convex Projections](#), IEEE Transactions on Signal Processing, vol. 42, pp.: 1849-1851, 1994. ISSN: 1053-587X, IEEE-Inst. Electrical Electronics Engineers Inc., USA.
- 30.** Gayoso Martínez, V., Hernández Fernández, F., Hernández Encinas, L., & Sánchez Ávila C., [Analysis of ECIES and other Cryptosystems based on Elliptic Curves](#), International Journal of Information Assurance and Security, vol. 6, pp.: 1-9, 2011. ISSN: 1554-1010, Dynamic Publishers Inc., USA.
- 31.** Gayoso Martínez, V., Hernández Encinas, L., & Sánchez Ávila C., [A survey of the elliptic curve integrated encryption scheme](#), Journal of Computer Science and Engineering, vol. 2, no. 2, pp.: 7-13, 2010. ISSN: 2043-9091, Computer Sciences of Iran, Iran.
- 32.** Gayoso Martínez, V., Hernández Encinas L. and Sánchez Ávila C., [Elliptic curve cryptography. Java platform implementations](#), International Journal on Information

Technologies & Security, vol. 4, pp.: 65-72, 2009. ISSN: 1313-8251, Union of Scientist in Bulgaria, Bulgaria.

**33.** de Miguel de Santos M., Sánchez-Ávila C. & Sánchez-Reíllo, R., [Elliptic Curve Cryptography Applications, Upgrade \(The European Journal for the Informatics Professional\)](#), vol. 6, pp.: 25-29, 2004. ISSN: 1684-5285, Digital Journal of CEPIS (Council of European Professional Informatics Societies).

**34.** de Miguel de Santos M, Sánchez Ávila C., Sánchez Reíllo R., [Aplicaciones de la Criptografía de Curva Elíptica](#), Novática, vol. 172, pp.: 24-27, 2004. ISSN: 0211-2124, ATI (Asociación de Técnicos de Informática), España.

## CAPITULOS EN LIBROS /

## BOOK CHAPTERS

**1.** de Santos Sierra A., Sánchez Avila, C., Guerra Casanova J., and Bailador del Pozo G., A Comparative Evaluation of Gaussian Multiscale Aggregation for Hand Biometrics, E-Business and Telecommunications, M.S. Obaidat, J.L. Sevillano, J. Filipe (Eds.), Springer Berlin Heidelberg, Communications in Computer and Information Science, Vol. 314, pp. 388-399, 2012. ISBN: 978-3-642-35754-1.

**2.** Bailador del Pozo G., Sánchez Ávila C., Guerra Casanova J. and de Santos Sierra A., Analysis of pattern recognition techniques for in-air signature biometrics, in Celebrating the Breadth of Biometrics Research - Virtual Issue, K. W. Bowyer (ed.), 11 págs. Versión online (2014), versión impresa (a partir de Abril de 2015). Selección de los 25 mejores artículos en investigación biométrica publicados en los últimos años. Este capítulo corresponde a la publicación con el mismo título en Pattern Recognition, vol. 44, no. 10-11, pp.: 2468-2478, 2011.

**3.** de Santos Sierra A., Sánchez Avila, C., Guerra Casanova J., and Bailador del Pozo G., Real-time Stress Detection by means of Physiological Signals, Advanced Biometric Technologies, Jucheng Yang and Girija Chetty (Eds.), INTECH, Open Access Publisher, pp.: 23-44, 2011. ISBN: 978-953-307-488-7.

**4.** Guerra Casanova J., Sánchez Ávila C., Bailador del Pozo G. De Santos Sierra A., Application of LCS algorithm to authenticate users within their mobile phone through in-air signatures, Advanced Biometric Technologies, Girija Chetty and Jucheng Yang (Eds.), INTECH, Open Access Publisher, pp.: 265-280, 2011. ISBN: 978-953-307-487-0.

**5.** de Santos Sierra A., Sánchez Ávila C., Guerra Casanova J. and Mendaza Ormaza A., Hand Biometrics in mobile devices, Recent Application in Biometrics, Girija Chetty and Jucheng Yang (Eds.), INTECH, Open Access Publisher, pp.: 367-382, 2011. ISBN: 978-953-307-487-0.

**6.** Guerra Casanova J., Sánchez Ávila C., Jara Vera V., de Santos Sierra, Bailador del Pozo G., Architectures to Implement In-Air Signature Mobile Authentication to Increase the Security of ECommerce Applications and Opinion of End Users, Digital Enterprise and Information Systems, CCIS 194, E. Ariwa and E. El-Qawasmeh (Eds.), Springer-Verlag Berlin Heidelberg, pp.: 478-492, 2011. ISBN: 978-3-642-22602-1.

**7.** de Santos Sierra A., Sánchez Ávila C., Guerra Casanova J. and Bailador del Pozo G., Invariant Hand Biometrics Feature Extraction, Biometric Recognition, Z. Sun, J. Lai, X. Chen, T. Tan (Eds.), LNCS 7098, Springer-Verlag Berlin Heidelberg, pp. 108-115, 2011. ISBN: 978-3-642-25448-2.

**8.** Gayoso Martínez V., Hernández Encinas L. and Sánchez Ávila C., Java Card implementation of the Elliptic Curve Integrated Encryption Scheme using prime and binary finite fields, Computational Intelligence in Security for Information Systems, A. Herrero and E. Corchado (Eds.), LNCS 6694, Springer-Verlag Berlin Heidelberg, pp. 160-167, 2011. ISBN: 978-3-642-21322-9.

**9.** Guerra Casanova J., Sánchez Ávila C, de Santos Sierra A. Bailador del Pozo G., Jara Vera V., A Real-Time In-Air Signature Biometric Technique Using a Mobile Device Embedding an Accelerometer, Networked Digital Technologies, F. Zavoral et al. (Eds.), Springer-Verlag Berlin Heidelberg, pp. 497-503, 2010. ISBN: 978-3-642-14291-8.

**10.** García-Casarrubios Muñoz A., Sánchez Ávila C., de Santos Sierra A., Guerra Casanova J., A Mobile-oriented Hand Segmentation algorithm based on Fuzzy Multiscale Aggregation. Advances in Visual Computing, LNCS 6453, Springer-Verlag Berlin Heidelberg, pp. 479-488, 2010. ISBN: 978-3-642-17288-5. 4.6 Contribuciones a Congresos y Jornadas Científicas 37

**11.** Sánchez-Ávila C., Identificación biométrica de personas: un paso más en seguridad, Una Década del Instituto de Física Aplicada, 1995-2005, P. Corredor Guillén y F. J. Gutiérrez Monreal (Eds.), Instituto de Física Aplicada, Consejo Superior de Investigaciones Científicas, pp.: 149-156, 2007. ISBN: 978-84-612-1440-2.

- 12.** Sánchez-Ávila C. y Sánchez-Reíllo, R., Iris y Retina, Tecnologías biométricas aplicadas a la seguridad, M. Tapiador Mateos y J.A. Sigüenza Pizarro (Coord.), Ra-Ma, pp.: 113-142, 2005. ISBN: 84-7897-636-1.
- 13.** de Miguel de Santos M., Sánchez-Ávila C. y Sánchez-Reíllo, R., Elliptic Curve Cryptography Applications, Avances en Criptología y Seguridad de la Información, B. Ramos Álvarez y A. Ribagorda Garnacho (Dir.), Diaz de Santos, pp. 55-62, 2004. ISBN: 84-7978-650-7.
- 14.** Sánchez-Reíllo, R. & Sánchez-Avila C., Iris Recognition with Low Template Size, Audio- and VideoBased Biometric Person Authentication, J. Bigun and F. Smeraldi (Eds.), , LNCS 2091, Springer Verlag, pp.: 324-329, 2001. ISBN: 3-540-42216-1.
- 15.** Sánchez-Reíllo, R. & Sánchez-Avila C., RBF Neural Networks for Hand-Based Biometric Recognition, Audio- and Video-Based Biometric Person Authentication, J. Bigun and F. Smeraldi (Eds.), LNCS 2091, Springer Verlag, pp.: 330-335, 2001. ISBN: 3-540-42216-1.
- 16.** Sánchez-Reíllo, R., Sánchez-Avila C. & González-Marcos A.P., Identificación biométrica mediante mano e iris, Criptología y Seguridad de la Información, P. Caballero y C. Hernández (Coord.), Ra-Ma, pp.: 201-210, 2000. ISBN: 84-7897-431-8.
- 17.** Sánchez-Reíllo, R., Sánchez-Avila C. & González-Marcos A.P., Multiresolution Analysis and Geometric Measures for Biometric Identification Systems, Secure Networking-CQRE, R. Baumgart (Ed.), LNCS 1740, Springer Verlag, pp. 251-258, 1999. ISBN: 3-540-66800-4.

