

Antonio Lanat

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

106
papers

2,319
citations

26
h-index

45
g-index

111
ext. papers

2,788
ext. citations

3
avg. IF

5.05
L-index

| # | Paper | IF | Citations |
|-----|--|-----|-----------|
| 106 | SoC CMOS UWB Pulse Radar Sensor for Contactless Respiratory Rate Monitoring. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2011 , 5, 503-10 | 5.1 | 151 |
| 105 | cvxEDA: A Convex Optimization Approach to Electrodermal Activity Processing. <i>IEEE Transactions on Biomedical Engineering</i> , 2016 , 63, 797-804 | 5 | 145 |
| 104 | . <i>IEEE Transactions on Affective Computing</i> , 2012 , 3, 237-249 | 5.7 | 132 |
| 103 | . <i>IEEE Transactions on Affective Computing</i> , 2015 , 6, 385-394 | 5.7 | 108 |
| 102 | Complexity index from a personalized wearable monitoring system for assessing remission in mental health. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2015 , 19, 132-9 | 7.2 | 100 |
| 101 | Wearable monitoring for mood recognition in bipolar disorder based on history-dependent long-term heart rate variability analysis. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2014 , 18, 1623-35 | 7.3 | 99 |
| 100 | Revealing real-time emotional responses: a personalized assessment based on heartbeat dynamics. <i>Scientific Reports</i> , 2014 , 4, 4998 | 4.9 | 96 |
| 99 | . <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2015 , 16, 1505-1517 | 6.1 | 78 |
| 98 | Mood recognition in bipolar patients through the PSYCHE platform: preliminary evaluations and perspectives. <i>Artificial Intelligence in Medicine</i> , 2013 , 57, 49-58 | 7.4 | 71 |
| 97 | Comparative evaluation of susceptibility to motion artifact in different wearable systems for monitoring respiratory rate. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 2010 , 14, 378-86 | | 66 |
| 96 | Dominant Lyapunov exponent and approximate entropy in heart rate variability during emotional visual elicitation. <i>Frontiers in Neuroengineering</i> , 2012 , 5, 3 | | 61 |
| 95 | Electrodermal activity in bipolar patients during affective elicitation. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2014 , 18, 1865-73 | 7.2 | 60 |
| 94 | Characterization of depressive States in bipolar patients using wearable textile technology and instantaneous heart rate variability assessment. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2015 , 19, 263-74 | 7.2 | 48 |
| 93 | Oscillations of heart rate and respiration synchronize during affective visual stimulation. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 2012 , 16, 683-90 | | 46 |
| 92 | Mood states modulate complexity in heartbeat dynamics: A multiscale entropy analysis. <i>Europhysics Letters</i> , 2014 , 107, 18003 | 1.6 | 41 |
| 91 | A novel EDA glove based on textile-integrated electrodes for affective computing. <i>Medical and Biological Engineering and Computing</i> , 2012 , 50, 1163-72 | 3.1 | 41 |
| 90 | Robust multiple cardiac arrhythmia detection through bispectrum analysis. <i>Expert Systems With Applications</i> , 2011 , 38, 6798-6804 | 7.8 | 41 |

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| 89 | A multimodal transducer for cardiopulmonary activity monitoring in emergency. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 2010 , 14, 817-25 | | 41 |
| 88 | Speech analysis for mood state characterization in bipolar patients. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2012 , 2012, 2104-7 | 0.9 | 39 |
| 87 | Improving emotion recognition systems by embedding cardiorespiratory coupling. <i>Physiological Measurement</i> , 2013 , 34, 449-64 | 2.9 | 38 |
| 86 | Predicting Mood Changes in Bipolar Disorder through Heartbeat Nonlinear Dynamics. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2016 , 20, 1034-1043 | 7.2 | 35 |
| 85 | Point-process nonlinear autonomic assessment of depressive states in bipolar patients. <i>Methods of Information in Medicine</i> , 2014 , 53, 296-302 | 1.5 | 34 |
| 84 | Eye gaze patterns in emotional pictures. <i>Journal of Ambient Intelligence and Humanized Computing</i> , 2013 , 4, 705-715 | 3.7 | 33 |
| 83 | On the deconvolution analysis of electrodermal activity in bipolar patients. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2012 , 2012, 6691-4 | 0.9 | 30 |
| 82 | Design and preliminary affective characterization of a novel fabric-based tactile display 2014 , | | 28 |
| 81 | A nonlinear heartbeat dynamics model approach for personalized emotion recognition. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2013 , 2013, 2579-82 | 0.9 | 27 |
| 80 | Towards a smart glove: arousal recognition based on textile Electrodermal Response. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2010 , 2010, 3598-601 | 0.9 | 26 |
| 79 | Skin Admittance Measurement for Emotion Recognition: A Study over Frequency Sweep. <i>Electronics (Switzerland)</i> , 2016 , 5, 46 | 2.6 | 25 |
| 78 | A Novel Algorithm for Movement Artifact Removal in ECG Signals Acquired from Wearable Systems Applied to Horses. <i>PLoS ONE</i> , 2015 , 10, e0140783 | 3.7 | 24 |
| 77 | Can a Humanoid Face be Expressive? A Psychophysiological Investigation. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015 , 3, 64 | 5.8 | 23 |
| 76 | Feasibility Study and Design of a Wearable System-on-a-Chip Pulse Radar for Contactless Cardiopulmonary Monitoring. <i>International Journal of Telemedicine and Applications</i> , 2008 , 328597 | 2.6 | 22 |
| 75 | Inference of human affective states from psychophysiological measurements extracted under ecologically valid conditions. <i>Frontiers in Neuroscience</i> , 2014 , 8, 286 | 5.1 | 21 |
| 74 | Real-Time Discrimination of Multiple Cardiac Arrhythmias for Wearable Systems Based on Neural Networks 2008 , | | 18 |
| 73 | Wearable system-on-a-chip UWB radar for health care and its application to the safety improvement of emergency operators. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2007 , 2007, 2651-4 | | 18 |
| 72 | A Wearable System for the Evaluation of the Human-Horse Interaction: A Preliminary Study. <i>Electronics (Switzerland)</i> , 2016 , 5, 63 | 2.6 | 18 |

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| 71 | Assessment of sensing fire fighters uniforms for physiological parameter measurement in harsh environment. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 2012 , 16, 501-11 | | 15 |
| 70 | Electrodermal activity processing: a convex optimization approach. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2014 , 2014, 2290-3 | 0.9 | 15 |
| 69 | The social perceptual salience effect. <i>Journal of Experimental Psychology: Human Perception and Performance</i> , 2013 , 39, 62-74 | 2.6 | 15 |
| 68 | Eye tracking and pupil size variation as response to affective stimuli: a preliminary study 2011 , | | 14 |
| 67 | Emotional Transfer in Human-Horse Interaction: New Perspectives on Equine Assisted Interventions. <i>Animals</i> , 2019 , 9, | 3.1 | 14 |
| 66 | Inter- and Intra-Species Communication of Emotion: Chemosignals as the Neglected Medium. <i>Animals</i> , 2019 , 9, | 3.1 | 13 |
| 65 | Heartbeat Complexity Modulation in Bipolar Disorder during Daytime and Nighttime. <i>Scientific Reports</i> , 2017 , 7, 17920 | 4.9 | 13 |
| 64 | Characterizing psychological dimensions in non-pathological subjects through autonomic nervous system dynamics. <i>Frontiers in Computational Neuroscience</i> , 2015 , 9, 37 | 3.5 | 13 |
| 63 | Longitudinal monitoring of heartbeat dynamics predicts mood changes in bipolar patients: A pilot study. <i>Journal of Affective Disorders</i> , 2017 , 209, 30-38 | 6.6 | 12 |
| 62 | Validation of smart textile electrodes for electrocardiogram monitoring in free-moving horses. <i>Journal of Veterinary Behavior: Clinical Applications and Research</i> , 2017 , 17, 19-23 | 1.9 | 12 |
| 61 | Consistency and flexibility in solving spatial tasks: different horses show different cognitive styles. <i>Scientific Reports</i> , 2017 , 7, 16557 | 4.9 | 12 |
| 60 | A pattern recognition approach based on electrodermal response for pathological mood identification in bipolar disorders 2014 , | | 12 |
| 59 | XIM-engine 2014 , | | 11 |
| 58 | Comparitive study on photometric normalization algorithms for an innovative, robust and real-time eye gaze tracker. <i>Journal of Real-Time Image Processing</i> , 2013 , 8, 21-33 | 1.9 | 11 |
| 57 | High frequency poroelastic waves in hydrogels. <i>Journal of the Acoustical Society of America</i> , 2010 , 127, 1197-207 | 2.2 | 11 |
| 56 | Enabling technology for heart health wireless assistance 2010 , | | 11 |
| 55 | A tool for the real-time evaluation of ECG signal quality and activity: Application to submaximal treadmill test in horses. <i>Biomedical Signal Processing and Control</i> , 2020 , 56, 101666 | 4.9 | 11 |
| 54 | Electrodermal activity analysis during affective haptic elicitation. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 5777-80 | 0.9 | 10 |

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| 53 | Advanced interfaces to stem the data deluge in mixed reality 2013 , | | 10 |
| 52 | Acoustic waves in hydrogels: A bi-phasic model for ultrasound tissue-mimicking phantom. <i>Materials Science and Engineering C</i> , 2009 , 29, 899-907 | 8.3 | 10 |
| 51 | On the Role of Affective Properties in Hedonic and Discriminant Haptic Systems. <i>International Journal of Social Robotics</i> , 2017 , 9, 87-95 | 4 | 9 |
| 50 | An FPGA Based Arrhythmia Recognition System for Wearable Applications 2009 , | | 9 |
| 49 | Robotic Social Therapy on Children with Autism: Preliminary Evaluation through Multi-parametric Analysis 2012 , | | 9 |
| 48 | A Case for the Interspecies Transfer of Emotions: A Preliminary Investigation on How Humans Odors Modify Reactions of the Autonomic Nervous System in Horses. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2016 , 2016, 538-541 | 0.9 | 9 |
| 47 | Gender-specific velocity recognition of caress-like stimuli through nonlinear analysis of Heart Rate Variability. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 298-301 | 0.9 | 8 |
| 46 | Nonlinear Analysis of Eye-Tracking Information for Motor Imagery Assessments. <i>Frontiers in Neuroscience</i> , 2019 , 13, 1431 | 5.1 | 8 |
| 45 | Novel Spiking Neuron-Astrocyte Networks based on nonlinear transistor-like models of tripartite synapses. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2013 , 2013, 6559-62 | 0.9 | 8 |
| 44 | Sensors for Wearable Systems 2011 , 3-25 | | 8 |
| 43 | Quantitative heartbeat coupling measures in human-horse interaction. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2016 , 2016, 2696-2699 | 0.9 | 8 |
| 42 | Automatic recognition of pleasant content of odours through ElectroEncephaloGraphic activity analysis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2016 , 2016, 4519-4522 | 0.9 | 7 |
| 41 | A sensing architecture for empathetic data systems 2013 , | | 7 |
| 40 | Combining Electrodermal Activity and Speech Analysis towards a more Accurate Emotion Recognition System. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2019 , | 0.9 | 6 |
| 39 | The role of nonlinear coupling in Human-Horse Interaction: A preliminary study. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2017 , 2017, 1320-1323 | 0.9 | 6 |
| 38 | Wearable System-on-a-Chip Pulse Radar Sensors for the Health Care: System Overview 2007 , | | 6 |
| 37 | Brain Dynamics Induced by Pleasant/Unpleasant Tactile Stimuli Conveyed by Different Fabrics. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2019 , 23, 2417-2427 | 7.2 | 5 |
| 36 | Removing movement artifacts from equine ECG recordings acquired with textile electrodes. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 1955-8 | 0.9 | 5 |

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| 35 | EEG complexity drug-induced changes in disorders of consciousness: a preliminary report. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011 , 2011, 3724-7 | 0.9 | 5 |
| 34 | Inside the Interaction: Contact With Familiar Humans Modulates Heart Rate Variability in Horses. <i>Frontiers in Veterinary Science</i> , 2020 , 7, 582759 | 3.1 | 5 |
| 33 | Gender-specific automatic valence recognition of affective olfactory stimulation through the analysis of the electrodermal activity. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2016 , 2016, 399-402 | 0.9 | 4 |
| 32 | Predicting mood changes in bipolar disorder through heartbeat nonlinear dynamics: A preliminary study 2015 , | | 4 |
| 31 | Robotic Social Therapy on Children with Autism: Preliminary Evaluation through Multi-parametric Analysis 2012 , | | 4 |
| 30 | Smart textiles biotechnology for electrocardiogram monitoring in horses during exercise on treadmill: Validation tests. <i>Equine Veterinary Journal</i> , 2021 , 53, 373-378 | 2.4 | 4 |
| 29 | Advanced technology meets mental health: how smartphones, textile electronics, and signal processing can serve mental health monitoring, diagnosis, and treatment. <i>IEEE Pulse</i> , 2014 , 5, 56-9 | 0.7 | 3 |
| 28 | Causal brain-heart information transfer during visual emotional elicitation in healthy subjects: Preliminary evaluations and future perspectives. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2017 , 2017, 1559-1562 | 0.9 | 3 |
| 27 | Instantaneous Assessment of Hedonic Olfactory Perception Using Heartbeat Nonlinear Dynamics: a Preliminary Study 2017 , | | 3 |
| 26 | Electroencephalographic spectral correlates of caress-like affective haptic stimuli. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 4733-6 | 0.9 | 3 |
| 25 | Temporal trends of neuro-autonomic complexity during severe episodes of bipolar disorders. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2014 , 2014, 2948-51 | 0.9 | 3 |
| 24 | Quantitative EEG analysis in minimally conscious state patients during postural changes. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2013 , 2013, 6313-6 | 0.9 | 3 |
| 23 | Electrodermal Responses Through Textile Electrodes. <i>Research Journal of Textile and Apparel</i> , 2010 , 14, 81-88 | 1.1 | 3 |
| 22 | New Ultrasound-Based Wearable System for Cardiac Monitoring 2006 , | | 3 |
| 21 | Wearable system-on-a-chip radiometer for remote temperature sensing and its application to the safeguard of emergency operators. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2007 , 2007, 5716-9 | | 3 |
| 20 | Brain dynamics during emotion elicitation in healthy subjects: An EEG study 2015 , | | 2 |
| 19 | On the tridimensional estimation of the gaze point by a stereoscopic wearable eye tracker. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 2283-6 | 0.9 | 2 |
| 18 | Arousal recognition system based on heartbeat dynamics during auditory elicitation. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 6110-3 | 0.9 | 2 |

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| 17 | Maximal-radius multiscale entropy of cardiovascular variability: a promising biomarker of pathological mood states in bipolar disorders. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2014 , 2014, 6663-6 | 0.9 | 2 |
| 16 | Smart Textiles: Technology and Wireless System Network Applications. <i>Springer Series on Chemical Sensors and Biosensors</i> , 2012 , 127-158 | 2 | 2 |
| 15 | The contribution of the phase spectrum in automatic multiple cardiac arrhythmias recognition in wearable systems 2010 , | | 2 |
| 14 | Characterization of behavioral activation in non-pathological subjects through Heart Rate Variability monovariate and multivariate multiscale entropy analysis 2014 , | | 1 |
| 13 | Performance analysis and early validation of a bi-modal ultrasound transducer. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2006 , 2006, 1858-61 | | 1 |
| 12 | Poroelastic longitudinal wave equation for soft living tissues. <i>Journal of Biomechanics</i> , 2014 , 28, 29-37 | 0.3 | 1 |
| 11 | Linear and non linear measures of pupil size as a function of hypnotizability. <i>Scientific Reports</i> , 2021 , 11, 5196 | 4.9 | 1 |
| 10 | Rein Tension Signals Elicit Different Behavioral Responses When Comparing Bitted Bridle and Halter. <i>Frontiers in Veterinary Science</i> , 2021 , 8, 652015 | 3.1 | 1 |
| 9 | Multiscale Entropy Analysis of Heart Rate Variability in Neonatal Patients with and without Seizures. <i>Bioengineering</i> , 2021 , 8, | 5.3 | 1 |
| 8 | HRV analysis: a non-invasive approach to discriminate between newborns with and without seizures. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2021 , 2021, 52-55 | 0.9 | 0 |
| 7 | Automatic Detection of Epileptic Seizures in Neonatal Intensive Care Units Through EEG, ECG and Video Recordings: A Survey. <i>IEEE Access</i> , 2021 , 9, 138174-138191 | 3.5 | 0 |
| 6 | Interspecific two-dimensional visual discrimination of faces in horses (<i>Equus caballus</i>). <i>PLoS ONE</i> , 2021 , 16, e0247310 | 3.7 | 0 |
| 5 | A Generalized Linear Model for an ECG-based Neonatal Seizure Detector. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2021 , 2021, 471-474 | 0.9 | 0 |
| 4 | Guest Editorial Sensor Informatics for Managing Mental Health. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2016 , 20, 975-976 | 7.2 | |
| 3 | Monitoring voluntary blink magnitude through a wearable eye-tracking system: A preliminary study. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2017 , 2017, 1583-1586 | 0.9 | |
| 2 | Applications of Heartbeat Complexity Analysis to Depression and Bipolar Disorder 2017 , 345-374 | | |
| 1 | Real-time Evaluation of ECG Acquisition Systems through Signal Quality Assessment in Horses during Submaximal Treadmill Test. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2018 , 2018, 498-501 | 0.9 | |