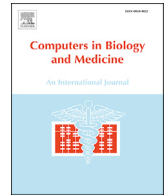Contents lists available at ScienceDirect

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Honored papers 2017

ABSTRACT

The following editorial provides information concerning papers published in Computers in Biology and Medicine journal during 2017. Specifically, those papers on which have been bestowed honored status are listed.

At the beginning of each year, we evaluate the papers published in Computers in Biology and Medicine (CBM) journal during the prior year, for purposes of bestowing honors. Below you will find a list of esteemed and meritorious papers that were published in CBM during 2017. The editorial board and I developed this list according to the high quality and significant degree of interest in the work. Initially, a few months into 2018, I looked for all papers published in 2017 that were cited at least 4 times in Google Scholar. Papers published late in the year would still have a number of months to be cited, since they were available online for several months before being officially published. From this list, the editorial board and myself decided those high quality papers in which we would like to call attention as honored papers. My particular congratulations to the authors of these exemplary studies.

Indeed, through the superb work of the authors, reviewers, and editorial board, CBM has become more prestigious during the past year. I would like to thank all authors, not just those of the honored papers, for contributing very nice work, as published in the journal during the past year. In 2017 we received about 1550 submissions, and approximately 300 papers were published. Thus, the acceptance rate is less than 1 in 5. All manuscripts are initially screened by me, and I reject more than half outright, usually within an hour of receiving them. I look at English grammar, plagiarism, form, and quality. Manuscripts sent for review are turned around usually within 3–4 weeks. Upon revision, notice of acceptance is often within 2 weeks. After acceptance, the time to PubMed appearance is 5–14 days. Thus, the authors are often happy with the process and speed of evaluation.

Rejected articles quite frequently are referred to our related journal, Informatics in Medicine Unlocked (IMU). It is easier to publish in this journal (approximately 1/2 of manuscripts are eventually accepted). Although primarily the topics are bioinformatics and related disciplines, satisfactory papers in the field of biomedical engineering may also be accepted for publication in IMU.

Lastly, I would like to thank the readers of both the print and online versions of CBM. A number of authors pay the expense to have color figures in the print version of their manuscript. This makes for pleasant reading. It is suggested that a subscription to the print version of the manuscript, as well as the online version, may be of interest to many. We believe that the work published in the journal, both biological and medical, will be of interest, and invite you to peruse the journal, including those articles cited in the honored papers list. Moreover, previously honored paper can be found in prior issues of the journal [1–3].

Edward J Ciaccio

1. Esteemed papers

A deep convolutional neural network model to classify heartbeats, Acharya UR, Oh SL, Hagiwara Y, Tan JH, Adam M, Gertych A, Tan RS, Comput Biol Med. 2017 Oct 1; 89:389–396.

Classification of teeth in cone-beam CT using deep convolutional neural network, Miki Y, Muramatsu C, Hayashi T, Zhou X, Hara T, Katsumata A, Fujita H, Comput Biol Med. 2017 Jan 1; 80:24–29.

A novel algorithm to detect glaucoma risk using texton and local configuration pattern features extracted from fundus images, Acharya UR, Bhat S, Koh JEW, Bhandary SV, Adeli H, Comput Biol Med. 2017 Sep 1; 88:72–83.

Automated diabetic macular edema (DME) grading system using DWT, DCT features and maculopathy index, Acharya UR, Mookiah MRK, Koh JEW, Tan JH, Bhandary SV, Rao AK, Hagiwara Y, Chua CK, Laude A, Comput Biol Med. 2017 May 1; 84:59–68.

Comparing humans and deep learning performance for grading AMD: A study in using universal deep features and transfer learning for automated AMD analysis, Burlina P, Pacheco KD, Joshi N, Freund DE, Bressler NM, Comput Biol Med. 2017 Mar 1; 82:80–86.

Automatic feature learning using multichannel ROI based on deep structured algorithms for computerized lung cancer diagnosis, Sun W, Zheng B, Qian W, Comput Biol Med. 2017 Oct 1; 89:530–539.

Automated seizure detection using limited-channel EEG and non-linear dimension reduction, Birjandtalab J, Baran Pouyan M, Cogan D, Nourani M, Harvey J, Comput Biol Med. 2017 Mar 1; 82:49–58.

Two-phase deep convolutional neural network for reducing class skewness in histopathological images based breast cancer detection, Wahab N, Khan A, Lee YS, Comput Biol Med. 2017 Jun 1; 85:86–97.

Algorithm based on the short-term Rényi entropy and IF estimation for noisy EEG signals analysis, Lerga J, Saulig N, Mozetič V, Comput Biol Med. 2017 Jan 1; 80:1–13.

Artificial Neural Networks as a powerful numerical tool to classify specific features of a tooth based on 3D scan data, Raith S, Vogel EP, Anees N, Keul C, Güth JF, Edelhoff D, Fischer H, Comput Biol Med. 2017 Jan 1; 80:65–76.

Automated detection of premature delivery using empirical mode and wavelet packet decomposition techniques with uterine electromyogram signals, Acharya UR, Sudarshan VK, Rong SQ, Tan Z, Lim CM, Koh JE, Nayak S, Bhandary SV, Comput Biol Med. 2017 Jun 1; 85:33–42.

Monitoring of autonomic response to sociocognitive tasks during treatment in children with autism spectrum disorders by wearable technologies: A feasibility study, Di Palma S, Tonacci A, Narzisi A, Domenici C, Pioggia G, Muratori F, Billeci L; MICHELANGELO study group, Comput Biol Med. 2017 Jun 1; 85:143–152.

2. Meritorious papers

Deep convolutional neural network for the automated detection and diagnosis of seizure using EEG signals, Acharya UR, Oh SL, Hagiwara Y, Tan JH, Adeli H, Comput Biol Med. 2017 Sep 27. pii: S0010-4825(17)30315-3.

Iterative variational mode decomposition based automated detection of glaucoma using fundus images, Maheshwari S, Pachori RB, Kanhangad V, Bhandary SV, Acharya UR, Comput Biol Med. 2017 Sep 1; 88:142–149.

Estimating bradykinesia severity in Parkinson's disease by analysing gait through a waist-worn sensor, Samà A, Pérez-López C, Rodríguez-Martín D, Català A, Moreno-Aróstegui JM, Cabestany J, de Mingo E, Rodríguez-Molinero A, Comput Biol Med. 2017 May 1; 84:114–123.

Assessment of advanced glycated end product accumulation in skin using auto fluorescence multispectral imaging, Larsson M, Favilla R, Strömberg T, Comput Biol Med. 2017 Jun 1; 85:106–111.

Classification of Alzheimer's disease and prediction of mild cognitive impairment-to-Alzheimer's conversion from structural magnetic resource imaging using feature ranking and a genetic algorithm, Beheshti I, Demirel H, Matsuda H; Alzheimer's Disease Neuroimaging Initiative, Comput Biol Med. 2017 Apr 1; 83:109–119.

An integrative framework for 3D cobb angle measurement on CT images, Huo X, Tan JQ, Qian J, Cheng L, Jing JH, Shao K, Li BN, Comput Biol Med. 2017 Mar 1; 82:111–118.

A multi-resolution approach for spinal metastasis detection using deep Siamese neural networks, Wang J, Fang Z, Lang N, Yuan H, Su MY, Baldi P, Comput Biol Med. 2017 May 1; 84:137–146.

Computationally efficient analysis of particle transport and deposition in a human whole-lung-airway model. Part II: Dry powder inhaler application, Kolanjiyil AV, Kleinstreuer C, Sadikot RT, Comput Biol Med. 2017 May 1; 84:247–253.

A new method for QRS complex detection in multichannel ECG: Application to self-monitoring of fetal health, Varanini M, Tartarisco G, Balocchi R, Macerata A, Pioggia G, Billeci L, Comput Biol Med. 2017 Jun 1; 85:125–134.

Using discrete multi-physics for detailed exploration of hydrodynamics in an in vitro colon system, Alexiadis A, Stamatopoulos K, Wen W, Batchelor HK, Bakalis S, Barigou M, Simmons MJ, Comput Biol Med. 2017 Feb 1; 81:188–198.

Multiclass cancer classification using a feature subset-based ensemble from microRNA expression profiles, Piao Y, Piao M, Ryu KH, Comput Biol Med. 2017 Jan 1; 80:39–44.

Local gray level S-curve transformation–A generalized contrast enhancement technique for medical images, Gandhamal A, Talbar S, Gajre S, Hani AF, Kumar D, Comput Biol Med. 2017 Apr 1; 83:120–133.

Nonsubsampled rotated complex wavelet transform (NSRCxWT) for medical image fusion related to clinical aspects in neurocysticercosis, Chavan SS, Mahajan A, Talbar SN, Desai S, Thakur M, D'cruz A, Comput Biol Med. 2017 Feb 1; 81:64–78.

Optimizing the location of ambulances in Tijuana, Mexico, Dibene JC, Maldonado Y, Vera C, de Oliveira M, Trujillo L, Schütze O, Comput Biol Med. 2017 Jan 1; 80:107–115.

An interactive medical image segmentation framework using iterative refinement, Kalshetti P, Bundele M, Rahangdale P, Jangra D, Chattopadhyay C, Harit G, Elhence A, Comput Biol Med. 2017 Apr 1; 83:22–33.

Derivation of respiration rate from ambulatory ECG and PPG using ensemble empirical mode decomposition: Comparison and fusion, Orphanidou C, Comput Biol Med. 2017 Feb 1; 81:45–54.

Wrapper-based gene selection with Markov blanket, Wang A, An N, Yang J, Chen G, Li L, Alterovitz G, Comput Biol Med. 2017 Feb 1; 81:11–23.

Gold-standard for computer-assisted morphological sperm analysis, Chang V, Garcia A, Hitschfeld N, Härtel S, Comput Biol Med. 2017 Apr 1; 83:143–150.

Phase change heat transfer during cryosurgery of lung cancer using hyperbolic heat conduction model, Kumar A, Kumar S, Katiyar VK, Telles S, Comput Biol Med. 2017 May 1; 84:20–29.

Custom FPGA processing for real-time fetal ECG extraction and identification, orti E, Koliopoulos D, Matraxia M, Danese G, Leporati F, Comput Biol Med. 2017 Jan 1; 80:30–38.

Joint multiple fully connected convolutional neural network with extreme learning machine for hepatocellular carcinoma nuclei grading, Li S, Jiang H, Pang W, Comput Biol Med. 2017 May 1; 84:156–167.

Mathematical modeling of diphtheria transmission in Thailand, Sornbundit K, Triampo W, Modchang C, Comput Biol Med. 2017 Aug 1; 87:162–168.

Monitoring infants by automatic video processing: A unified approach to motion analysis, Cattani L, Alinovi D, Ferrari G, Raheli R, Pavlidis E, Spagnoli C, Pisani F, Comput Biol Med. 2017 Jan 1; 80:158–165.

Optimal feature selection using a modified differential evolution algorithm and its effectiveness for prediction of heart disease, Vivekanandan T, Sriman Narayana Iyengar NC, Comput Biol Med. 2017 Nov 1; 90:125–136.

Gap-free segmentation of vascular networks with automatic image processing pipeline, Hsu CY, Ghaffari M, Alaraj A, Flannery M, Zhou XJ, Linninger A, Comput Biol Med. 2017 Mar 1; 82:29–39.

Conflicts of interest

The author has no conflicts of interest.

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