Honored Papers 2016

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I would like to commend a number of papers published in Computers in Biology and Medicine journal in 2016. This has become a yearly event for the journal [1,2]. The papers to receive mention for honors status were selected as follows. I personally looked through all of the papers listed as published in Computers in Biology and Medicine in 2016 that appeared in the PubMed database. This consisted of over 300 papers. Original articles were selected for further analysis. The comments from all reviewers about each of these articles were then analyzed. Any paper with many highly positive comments from the reviewers, and few or no negative comments, were selected as candidates for honors.

Overall 80 of the more than 300 papers published in 2016 were thus selected as candidates for mention. The original reviewers were then contacted and asked to provide a grade for the paper or papers that they reviewed, along with any further comments. Grades that were received were tabulated for each candidate paper. The editorial board of Computers in Biology and Medicine was also contacted for comment, and they were requested to grade any of the papers for which they had expertise. All grades received were converted to a numerical score, and all grades for each paper were averaged. Papers with the highest averages (16 for this year) were awarded status as 'Esteemed Papers'. The remaining papers in approximately the top 10% of all papers published in the journal in 2016 (24 for this year) were awarded status as 'Meritorious Papers'. The honors list, 40 papers in total, is provided at the end of this article.

There were numerous highly enthusiastic comments for the papers awarded honors status in 2016. These included: 'of interest to a broad spectrum of the scientific community', 'well-written and ideas well-conceived', 'very interesting and rigorous methodology', 'high novelty', 'results have the potential for a very relevant impact', 'honor of the journal', 'top paper', the authors 'conducted considerable algorithm derivation and substantial experimental demonstration', 'beyond the state-of-the-art', 'excellent paper', and 'impressive demonstration'.

The journal is doing well in terms of number of submissions and rank. Currently it is averaging over 1500 submissions per year. The journal rank has increased in terms of eigenfactor score and impact factor. Furthermore, since the past month, submissions are now sent direct-to-editor. This means that as soon as the corresponding author submits an article, notification arrives to me by email. If I am online and working (much of the day) I will check and screen the submission, often within an hour of receiving it. If there are significant problems with it, for example in the areas of plagiarism, English grammar, and missing components, I will reject the paper outright, and the authors receive notification immediately. Approximately half of authors receive this type of response, often therefore, within 30 minutes of submitting their manuscript. If the manuscript passes my initial screening, I will invite reviewers right away. Candidate referees who accept to review have 3 weeks to turn in their review on time. Thus, the average turnaround time for papers rejected outright is now less than one day, and the average turnaround time for reviewed papers is about 3.5 weeks. Virtually all papers that are ultimately accepted for publication require

at least one revision, and quite often two revisions are needed. Typically, three or four reviewers comment on each paper. If the authors and reviewers are fast, and the manuscript requires only one revision, the manuscripts can go from initial submission to acceptance in as little as 1 month. This 1 month benchmark has been the case for only 1 paper so far, however. Typically, manuscripts that are ultimately accepted go from initial submission to acceptance in 2 - 4 months. Once a paper is accepted, it appears in PubMed about 2 weeks later.

We think that authors will continue to enjoy publishing in Computers in Biology and Medicine. We treat each submission as if it was our own. Although only about 1 in 5 manuscripts are now ultimately accepted for publication, all submissions are treated with high respect. All submissions which are rejected receive specific reasons for rejection, even if it is at the stage of my initial screening. For those papers that are rejected, if they are bioinformatics-related, or bioengineering but contain a significant content related to bioinformatics, and the paper can be substantially improved, I will invite the authors to revise it and send to our other journal, Informatics in Medicine Unlocked, also published by Elsevier. Although this journal is new, it is becoming known, and receiving substantially increasing numbers of submissions each year. Quite a few quality works have already been published in Informatics in Medicine Unlocked, which is open-access.

I would like to thank the many who contribute to the prestige of Computers in Biology and Medicine including the managing editors, associate editors, the regular editorial board, the many anonymous referees, the authors, and of course the many readers of the journal. With both print and online editions, it is easy to peruse Computers in Biology and Medicine each month to see the latest advances in biomedical engineering, computational biology, and bioinformatics.

Esteemed Papers – Computers in Biology and Medicine 2016

1. Calmet H, Gambaruto AM, Bates AJ, Vázquez M, Houzeaux G, Doorly DJ. Large-scale CFD simulations of the transitional and turbulent regime for the large human airways during rapid inhalation. Computers in Biology and Medicine. 2016 Feb 1;69:166-180. http://www.sciencedirect.com/science/article/pii/S0010482515003881

2. Asensio-Cubero J, Gan JQ, Palaniappan R. Multiresolution analysis over graphs for a motor imagery based online BCI game. Computers in Biology and Medicine. 2016 Jan 1;68:21-26. http://www.sciencedirect.com/science/article/pii/S0010482515003583

3. Carriou V, Boudaoud S, Laforet J, Ayachi FS. Fast generation model of high density surface EMG signals in a cylindrical conductor volume. Computers in Biology and Medicine. 2016 Jul 1;74:54-68. http://www.sciencedirect.com/science/article/pii/S001048251630107X

4. Lee YH, Chung CJ, Wang CW, Peng YT, Chang CH, Chen CH, Chen YN, Li CT. Computational comparison of three posterior lumbar interbody fusion techniques by using porous titanium interbody cages with 50% porosity. Computers in Biology and Medicine. 2016 Apr 1;71:35-45. http://www.sciencedirect.com/science/article/pii/S0010482516300142

5. Jurado I, Maestre JM, Velarde P, Ocampo-Martinez C, Fernandez I, Tejera BI, del Prado JR. Stock management in hospital pharmacy using chance-constrained model predictive control. Computers in Biology and Medicine. 2016 May 1;72:248-255.
http://www.sciencedirect.com/science/article/pii/S0010482515003790

6. Mirkes EM, Coats TJ, Levesley J, Gorban AN. Handling missing data in large healthcare dataset: A case study of unknown trauma outcomes. Computers in Biology and Medicine. 2016 Aug 1;75:203-216.
http://www.sciencedirect.com/science/article/pii/S0010482516301421

7. Muramatsu C, Hara T, Endo T, Fujita H. Breast mass classification on mammograms using radial local ternary patterns. Computers in Biology and Medicine. 2016 May 1;72:43-53.
http://www.sciencedirect.com/science/article/pii/S0010482516300610

8. Garbey M, Salmon R, Fikfak V, Clerc CO. Esophageal stent migration: Testing a few hypotheses with a simplified mathematical model. Computers in Biology and Medicine. 2016 Dec 1;79:259-265.
http://www.sciencedirect.com/science/article/pii/S0010482516302815

9. Calvert JS, Price DA, Chettipally UK, Barton CW, Feldman MD, Hoffman JL, Jay M, Das R. A computational approach to early sepsis detection. Computers in Biology and Medicine. 2016 Jul 1;74:69-73.
http://www.sciencedirect.com/science/article/pii/S0010482516301123

10. Yochum M, Laforêt J, Marque C. An electro-mechanical multiscale model of uterine pregnancy contraction. Computers in Biology and Medicine. 2016 Oct 1;77:182-194.
http://www.sciencedirect.com/science/article/pii/S0010482516301925

11. Politi MT, Ghigo A, Fernández JM, Khelifa I, Gaudric J, Fullana JM, Lagrée PY. The dicrotic notch analyzed by a numerical model. Computers in Biology and Medicine. 2016 May 1;72:54-64.
http://www.sciencedirect.com/science/article/pii/S0010482516300592

12. Acharya UR, Mookiah MR, Koh JE, Tan JH, Noronha K, Bhandary SV, Rao AK, Hagiwara Y, Chua CK, Laude A. Novel risk index for the identification of age-related macular degeneration using radon transform and DWT features. Computers in Biology and Medicine. 2016 Jun 1;73:131-140.
http://www.sciencedirect.com/science/article/pii/S0010482516300981

13. Sudeep PV, Niwas SI, Palanisamy P, Rajan J, Xiaojun Y, Wang X, Luo Y, Liu L. Enhancement and bias removal of optical coherence tomography images: An iterative approach with adaptive bilateral filtering. Computers in Biology and Medicine. 2016 Apr 1;71:97-107.
http://www.sciencedirect.com/science/article/pii/S0010482516300300

14. Saba L, Banchhor SK, Suri HS, Londhe ND, Araki T, Ikeda N, Viskovic K, Shafique S, Laird JR, Gupta A, Nicolaides A. Accurate cloud-based smart IMT measurement, its validation

and stroke risk stratification in carotid ultrasound: A web-based point-of-care tool for multicenter clinical trial. Computers in Biology and Medicine. 2016 Aug 1;75:217-234.
http://www.sciencedirect.com/science/article/pii/S0010482516301470

15. Magtibay K, Beheshti M, Foomany FH, Massé S, Lai PF, Zamiri N, Asta J, Nanthakumar K, Jaffray D, Krishnan S, Umapathy K. Feature-based MRI data fusion for cardiac arrhythmia studies. Computers in Biology and Medicine. 2016 May 1;72:13-21.
http://www.sciencedirect.com/science/article/pii/S001048251630035X

16. Blackledge MD, Collins DJ, Koh DM, Leach MO. Rapid development of image analysis research tools: Bridging the gap between researcher and clinician with pyOsiriX. Computers in Biology and Medicine. 2016 Feb 1;69:203-212.
http://www.sciencedirect.com/science/article/pii/S0010482515003868

Meritorious Papers – Computers in Biology and Medicine 2016

17. Fernandes SL, Bala GJ. Fusion of sparse representation and dictionary matching for identification of humans in uncontrolled environment. Computers in Biology and Medicine. 2016 Sep 1;76:215-237.
http://www.sciencedirect.com/science/article/pii/S0010482516301834

18. Sudarshan VK, Acharya UR, Ng EY, San Tan R, Chou SM, Ghista DN. An integrated index for automated detection of infarcted myocardium from cross-sectional echocardiograms using texton-based features (Part 1). Computers in Biology and Medicine. 2016 Apr 1;71:231-240.
http://www.sciencedirect.com/science/article/pii/S001048251630018X

19. Pouran B, Arbabi V, Weinans H, Zadpoor AA. Application of multiphysics models to efficient design of experiments of solute transport across articular cartilage. Computers in Biology and Medicine. 2016 Nov 1;78:91-96.
http://www.sciencedirect.com/science/article/pii/S0010482516302414

20. Tong X, Dong J, Shang Y, Inthavong K, Tu J. Effects of nasal drug delivery device and its orientation on sprayed particle deposition in a realistic human nasal cavity. Computers in Biology and Medicine. 2016 Oct 1;77:40-48.
http://www.sciencedirect.com/science/article/pii/S0010482516301937

21. Pouyan MB, Birjandtalab J, Nourani M, Pompeo MM. Automatic limb identification and sleeping parameters assessment for pressure ulcer prevention. Computers in Biology and Medicine. 2016 Aug 1;75:98-108.
http://www.sciencedirect.com/science/article/pii/S001048251630138X

22. Sudarshan VK, Acharya UR, Ng EY, San Tan R, Chou SM, Ghista DN. Data mining framework for identification of myocardial infarction stages in ultrasound: A hybrid feature extraction paradigm (PART 2). Computers in Biology and Medicine. 2016 Apr 1;71:241-251.
http://www.sciencedirect.com/science/article/pii/S0010482516300191

23. Maciá-Pérez F, Zambrano-Mendez L, Berna-Martínez JV, Sepúlveda-Lima R. Hardware design of the cortical-diencephalic centre of the lower urinary tract neuroregulator system. Computers in Biology and Medicine. 2016 Oct 1;77:156-172.
http://www.sciencedirect.com/science/article/pii/S0010482516302062

24. Seguí S, Drozdzal M, Pascual G, Radeva P, Malagelada C, Azpiroz F, Vitrià J. Generic feature learning for wireless capsule endoscopy analysis. Computers in Biology and Medicine. 2016 Dec 1;79:163-172.
http://www.sciencedirect.com/science/article/pii/S0010482516302712

25. Varanini M, Tartarisco G, Balocchi R, Macerata A, Pioggia G, Billeci L. A new method for QRS complex detection in multichannel ECG: Application to self-monitoring of fetal health. Computers in Biology and Medicine. 2016 Apr 13.
http://www.sciencedirect.com/science/article/pii/S001048251630097X

26. Schwen LO, Homeyer A, Schwier M, Dahmen U, Dirsch O, Schenk A, Kuepfer L, Preusser T, Schenk A. Zonated quantification of steatosis in an entire mouse liver. Computers in Biology and Medicine. 2016 Jun 1;73:108-118.
http://www.sciencedirect.com/science/article/pii/S0010482516300944

27. Gupta P, Sharma KK, Joshi SD. Fetal heart rate extraction from abdominal electrocardiograms through multivariate empirical mode decomposition. Computers in Biology and Medicine. 2016 Jan 1;68:121-136.
http://www.sciencedirect.com/science/article/pii/S0010482515003753

28. Fontoura CA, Castellani G, Mombach JC. The R implementation of the CRAN package PATHChange, a tool to study genetic pathway alterations in transcriptomic data. Computers in Biology and Medicine. 2016 Nov 1;78:76-80.
http://www.sciencedirect.com/science/article/pii/S0010482516302360

29. Ishibashi T, Takao H, Suzuki T, Yuki I, Kaku S, Kan I, Nishimura K, Suzuki T, Watanabe M, Karagiozov K, Murayama Y. Tailor-made shaping of microcatheters using three-dimensional printed vessel models for endovascular coil embolization. Computers in Biology and Medicine. 2016 Oct 1;77:59-63.
http://www.sciencedirect.com/science/article/pii/S0010482516301810

30. Farinella GM, Allegra D, Moltisanti M, Stanco F, Battiato S. Retrieval and classification of food images. Computers in Biology and Medicine. 2016 Oct 1;77:23-39.
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http://www.sciencedirect.com/science/article/pii/S0010482516302128

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http://www.sciencedirect.com/science/article/pii/S0010482516301032

33. Berton F, Cheriet F, Miron MC, Laporte C. Segmentation of the spinous process and its acoustic shadow in vertebral ultrasound images. Computers in Biology and Medicine. 2016 May 1;72:201-211.
http://www.sciencedirect.com/science/article/pii/S0010482516300725

34. Bradley RS, Withers PJ. Post-processing techniques for making reliable measurements from curve-skeletons. Computers in Biology and Medicine. 2016 May 1;72:120-131.
http://www.sciencedirect.com/science/article/pii/S0010482516300622

35. Barnes JP, Johnston PR. Application of robust generalised cross-validation to the inverse problem of electrocardiology. Computers in Biology and Medicine. 2016 Feb 1;69:213-225.
http://www.sciencedirect.com/science/article/pii/S0010482515004047

36. Wang Q, Davis DN, Ren J. Mining frequent biological sequences based on bitmap without candidate sequence generation. Computers in Biology and Medicine. 2016 Feb 1;69:152-157.
http://www.sciencedirect.com/science/article/pii/S0010482515004096

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http://www.sciencedirect.com/science/article/pii/S0010482516300403

38. Plourde SM, Marin Z, Smith ZR, Toner BC, Batchelder KA, Khalil A. Computational growth model of breast microcalcification clusters in simulated mammographic environments. Computers in Biology and Medicine. 2016 Sep 1;76:7-13.
http://www.sciencedirect.com/science/article/pii/S0010482516301585

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