

### **Journal Papers**

- J25. V. Sakkalis, A. Roniotis, C. Farmaki, I. Karatzanis and K. Marias, "Translating predictive oncology research into clinical practice: An integrated framework for analyzing and modeling cancer from imaging data", *Applied Soft Computing* (under review).
- J24. D. Johnson, S. McKeever, J. Cooper, G. Stamatakis, D. Dionysiou, I. Lykouretzou, N. Graf, V. Sakkalis, K. Marias, Z. Wang, T.S. Deisboeck, "Dealing with Diversity in Computational Cancer Modelling", *Progress in Biophysics and Molecular Biology, Experimental and Computational Model Interactions in Bio-Research: State of the Art* (under review).
- J23. V. Sakkalis, T. Oikonomou, V. Tsiaras, M. Zervakis and I. Tollis, "Graph-theoretic indices of evaluating brain network Synchronization: Application in an alcoholism paradigm", *IEEE Trans. Biom. Eng.* (under submission).
- J22. V. Sakkalis, M. Andersson, V. Ntziachristos and K. Marias, "3D Multi-Modal Registration for Assessing Molecular Activity Changes in Time-Dependent Geometries", *IEEE Trans. Med. Imag.* (under submission).
- J21. V. Sakkalis, "Review of Advanced Techniques for the estimation of Brain Connectivity measured with EEG/ MEG", *Computers in Biology and Medicine* (accepted, to appear).
- J20. K. Marias, D. Dionysiou, V. Sakkalis, et al., "Clinically-Driven Design of Multiscale Cancer Models: the Contra Cancrum Project Paradigm", *J. R. Soc. Interface Focus*, (available online: DOI: 10.1098/rsfs.2010.0037).
- J19. A. Roniotis, V. Sakkalis, K. Marias, I. Karatzanis and M. Zervakis, "In-depth analysis and evaluation of diffusive glioma models", *IEEE Trans. Inf. Tech.* (accepted, to appear).
- J18. M. Zervakis, K. Michalopoulos, V. Iordanidou and V. Sakkalis, "Intertrial Coherence and Causal Interaction among Independent EEG Components", *Journal of Neuroscience Methods* (available online: DOI: 10.1016/j.jneumeth.2011.02.001).
- J17. V. Sakkalis, "Applied strategies towards EEG\_MEG biomarker identification in clinical and cognitive research", *Biomarkers in Medicine, future medicine*, Vol. 5, No. 1, pp. 93-105, 2011.
- J16. E. Christodoulou, V. Sakkalis, V. Tsiaras and Ioannis Tollis, "BrainNetVis: An open-access tool to effectively quantify and visualize brain networks", *Computational Intelligence & Neuroscience CIN*, vol. 2011, Article ID 747290, 12 pages, 2011. doi:10.1155/2011/747290.
- J15. V. Sakkalis, T. Cassar, M. Zervakis, C. D. Giurcăneanu, C. Bigan, S. Micheloyannis, K. P. Camilleri, S. G. Fabri, V. Tsiaras, E. Karakonstantaki and K. Michalopoulos, "A decision support framework for the discrimination of children with controlled epilepsy based on EEG analysis", *Journal of Neuroengineering and Rehabilitation*, Vol. 7, No. 24, 2010 (available online: DOI: 10.1186/1743-0003-7-24).
- J14. V. Sakkalis, V. Tsiaras and I. Tollis, "Graph Analysis and Visualization for Brain Function Characterization using EEG Data", *Journal of Healthcare Engineering*, Vol. 1, No. 3, pp. 435–460, 2010.
- J13. C. Farmaki, K. Marias, V. Sakkalis and N. Graf, "Spatially adaptive active contours: A semi-automatic tumor segmentation framework", *Int J Comput Assist Radiol Surg.*, Vol. 5, No. 4, pp. 369-84, 2010. [<http://www.springerlink.com/content/y747557m3p5mg748/>]
- J12. E. Skounakis, C. Farmaki, V. Sakkalis, A. Roniotis, K. Banitsas, N. Graf and K. Marias, "DoctorEye: A clinically driven multifunctional platform, for accurate processing of tumors in medical images", *Intelligent signal and image*

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- J11. A. Roniotis, K. Marias, V. Sakkalis and M. Zervakis, "Diffusive Modelling of Glioma Evolution: A review", Journal of Biomedical Science and Engineering, Scientific Research Publishing, Vol. 3, No. 5, pp. 501-508, 2010 (available online: DOI: 10.4236/jbise.2010.35070).
- J10. P.Y. Ktonas, S. Golemati, P. Xanthopoulos, V. Sakkalis, M. D. Ortigueira, H. Tsekou, M. Zervakis, T. Paparrigopoulos, T. Bonakis, N. Economou, P. Theodoropoulos, S. Papageorgiou, D. Vasilopoulos and C.R. Soldatos, "Time-frequency analysis methods to quantify the time-varying microstructure of sleep EEG spindles: Possibility for dementia biomarkers", Journal of Neuroscience Methods, Vol. 85, No. 1, pp. 133-142, 2009.
- J9. K. Lakiotaki, P. Delias, V. Sakkalis and N.F. Matsatsinis, "Multi-criteria Analysis: A fundamental step in User Profiling", Operational Research: An International Journal, Vol. 9, No. 1, pp. 3-16, 2009 (available online: DOI: 10.1007/s12351-008-0024-4).
- J8. V. Sakkalis, C.D. Giurcăneanu, P. Xanthopoulos, M. Zervakis, V. Tsiaras, Y. Yang, and S. Micheloyannis, "Assessment of linear and nonlinear synchronization measures for analyzing EEG in a mild epileptic paradigm", IEEE Trans. Inf. Tech., Vol. 13, No 4, pp. 433-441, 2009 (DOI: 10.1109/TITB.2008.923141).
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- J3. P. G. Simos, E. Papanikolaou, E. Sakkalis, and S. Micheloyannis, "Modulation of Gamma-Band Spectral Power by Cognitive Task Complexity", Brain Topography, Vol. 14, No. 3, pp. 191-196, Spring 2002.
- J2. G. Zacharakis, A. Zolindaki, V. Sakkalis, G. Filippidis, T.G. Papazoglou, D.D. Tsiftsis, E. Koumantakis, "In vitro optical characterization and discrimination of female breast tissue during near infrared femtosecond laser pulses propagation", Journal of Biomed. Opt., Vol. 6, No. 4, pp. 446-449, October 2001.
- J1. G. Zacharakis, A. Zolindaki, V. Sakkalis, G. Filippidis, E. Koumantakis, and T.G. Papazoglou, "Non-parametric characterization of human breast tissue by the Laguerre expansion of the kernels technique applied on propagating femtosecond laser pulses through biopsy samples", Appl. Phys. Lett., Vol. 74, No. 5, pp. 771-772, 1999.

### **Book Chapters**

- B6. V. Sakkalis and K. Marias, "EEG based biomarker identification using graph-theoretic concepts: Case study in alcoholism", Optimization and Data Analysis in Biomedical Informatics, American Mathematical Society (A.M.S., U.S.A.), Ed. by P. M. Pardalos T. Coleman and P. Xanthopoulos, 2011 (accepted, to appear).

- B5. K. Marias, V. Sakkalis, N. Graf, "A framework for multi-modal imaging biomarker extraction with application to brain MRI", *Data Mining for Biomarker Discovery*, Springer New York/Vienna, Ed. by P.M. Pardalos, P. Xanthopoulos and M. Zervakis, 2011 (accepted, to appear).
- B4. V. Sakkalis and M. Zervakis, "Methodological Framework for EEG Feature Selection based on spectral and temporal profiles", *Computational Neuroscience, Springer Optimization and Its Applications series*, Vol. 38, Ed. by Chaovalitwongse Wanpracha et al., ISBN: 978-0-387-88629-9, Springer New York/Vienna, 2010.
- B3. V. Sakkalis and M. Zervakis, "Linear and Nonlinear Synchronization Analysis and Visualization during Altered States of Consciousness", *Recent Advances in Biomedical Engineering*, Ed. by Ganesh R Naik, IN-TECH, Vienna, 2010, ISBN 978-953-307-004-9.  
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- B2. T. Oikonomou, V. Sakkalis, I. Tollis, and S. Micheloyannis, "Searching and Visualizing Brain Networks in Schizophrenia" in: *Biological and Medical Data Analysis, Lecture Notes in Computer Science*, Ed. by N. Maglaveras, I. Chouvarda, V. Koutkias and R. Brause, Vol. 4345, pp. 172-182, Springer Berlin/ Heidelberg, 2006, ISBN: 978-3-540-68063-5.  
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- B1. A. Kouroubali, V. Sakkalis, C. Chronaki, M. Tsiknakis, "eChallenges in the Implementation of eHealth Services Over a Hybrid Network Architecture: the case of eLearning" in: *Exploiting the Knowledge Economy: Issues, Applications, Case Studies*, Paul Cunningham and Miriam Cunningham (Eds), IOS Press 2006, ISBN: 1-58603-682-3.

### **Refereed Articles**

- A2. A. Roniotis, K. Marias, and V. Sakkalis, "Modelling the Growth of a Malignant Brain Tumour", *European Research Consortium for Informatics and Mathematics ERCIM News*, No. 81, pp. 21-22, 2010.
- A1. V. Sakkalis and I. Tollis, "Modelling the Pathophysiological Human Brain Function", *European Research Consortium for Informatics and Mathematics ERCIM News*, No. 69, pp. 13-14, 2007.

### **Other Articles**

- OA2. V. Sakkalis, "Genes: Modern Prophets in a Health Record!" - In Greek: "Σύγχρονοι προφήτες στους φακέλους υγείας!", *The Economist (Kathimerini)*, Section: "Genomic Information Management", No. 65, pp. 20-22, June, 25, 2009.
- OA1. V. Sakkalis, "Wireless Biosensors: Do we hold fate in our hands?" - In Greek: "Μπορούμε να κρατήσουμε τη μοίρα στα χέρια μας;", *The Economist (Kathimerini)*, Section: "Wireless Future", No. 43, pp. 18-19, September, 27, 2007.

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- C48. K. Marias, G. Stamatakis, D. Dionysiou, V. Sakkalis, S. Sfakianakis and M. Tsiknakis, "Computational Services for *in silico* Oncology: Experiences and Research Challenges", 7th GRACM International Congress on Computational Mechanics, Athens, 30 June – 2 July 2011 (to appear).
- C47. C. Farmaki, K. Mavrigiannakis, K. Marias, M. Zervakis, and V. Sakkalis, "Assessment of Automated Brain Structures Segmentation based on the Mean-shift Algorithm Application in Brain Tumor", *Information Technology Applications in Biomedicine (IEEE-ITAB 2010)*, Corfu, Greece, November 3-5, 2010.

- C46. G. Stamatakos, D. Dionysiou, S. Giatili, E. Kolokotroni, E. Georgiadi, A. Roniotis, V. Sakkalis, et al., "ContraCancrum at the project level: The ContraCancrum Oncosimulation: Integrating Biomechanisms Across Scales in the Clinical Context", 4th International Advanced Research Workshop on In Silico Oncology and Cancer Investigation, Athens, Greece, September 8-9, 2010.  
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- C45. J. Zepp, N. Graf, E. Skounakis, R. Bohle, E. Meese, H. Stenzhorn, Y.-J. Kim, C. Farmaki, V. Sakkalis, W. Reith, G. Stamatakos, and K. Marias, "Tumor Segmentation: The impact of standardized signal intensity histograms in glioblastoma", 4th International Advanced Research Workshop on In Silico Oncology and Cancer Investigation, Athens, Greece, September 8-9, 2010.  
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- C39. K. Marias, V. Sakkalis, et al., "ContraCancrum: Clinically Oriented Translational Cancer Multilevel Modelling", International VPH Conferences (VPH2010), Brussels, Belgium, September 30-October 1, 2010.
- C38. A. Roniotis, V. Sakkalis, G. Stamatakos, M. Zervakis, and K. Marias, "Glioma diffusive modeling: Calculating diffusion coefficients from atlases with proportional tissue information", 4th International Advanced Research Workshop on In Silico Oncology and Cancer Investigation, Athens, Greece, September 8-9, 2010.  
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- C37. V. Sakkalis, K. Marias, A. Roniotis, and E. Skounakis "Translating cancer research into clinical practice: A framework for analyzing and modeling cancer from imaging data", 9<sup>th</sup> International Conference on Intelligent Systems Design and Applications (ISDA 2009), Pisa, Italy, November 30-December 2, 2009.
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- C1. Κ. Γεωργίου, Ν. Δαλαμάγκας, Π. Καραβίτη, Β. Σακκαλής, Ε. Τριανταφύλλου, Γ. Νεοφώτιστος, "Πειραματισμός με τη χρήση του Παγκοσμίου ιστού στα πλαίσια του μαθήματος 'Διαφορικές Εξισώσεις Ι' του Φυσικού Τμήματος του Πανεπιστημίου Κρήτης", Πρακτικά της 1ης Παγκρήτιας Ημερίδας Καθηγητών Πληροφορικής "Η Πληροφορική στην Εκπαίδευση", Ηράκλειο 1996.