

CONTACT INFORMATION	Assistant Professor Department of Computer Science Texas State University San Marcos, TX 78666, USA	<i>Mobile:</i> +1-682-552-4478 <i>Work:</i> +1-512-245-7509 <i>E-mail:</i> vmetsis@txstate.edu <i>Web:</i> cs.txstate.edu/~v_m137
RESEARCH INTERESTS	Machine Learning, Data Mining and Computer Vision with applications in Smart Health and Well-being: Analysis of human Physiological and Behavioral data, Smart Health Technology, Affective Computing, Computer Vision, Pervasive Computing, Computational Biology.	
TEACHING INTERESTS	Primary Interests: Machine Learning, Pattern Recognition, Data Mining, Computer Vision, Algorithms, Data Structures, Object Oriented Programming. Other Interests: Discrete Mathematics, Databases, Introductory Computer Science and Programming courses.	
EDUCATION	The University of Texas at Arlington, Arlington, TX	
	Ph.D. , Dept. of Computer Science and Engineering	Aug. 2007 – Dec. 2011
	<ul style="list-style-type: none"> • Dissertation Topic: <i>A Computational Framework for Human-Centered Multimodal Data Analysis</i> • Advisers: Prof. Fillia Makedon & Prof. Heng Huang • Area of Study: Computer Science - B.S. to Ph.D. program 	
	Athens University of Economics and Business, Athens, Greece	
	B.S. (with honors), Department of Informatics	Oct. 2001 – Sept. 2005
	<ul style="list-style-type: none"> • Grade: 8.64/10. Corresponding of <i>Summa cum Laude</i>. Highest grade in class in Fall 2005 semester graduation ceremony. • Major: in Computer Science • Minor: Information Systems and Management • Thesis topic: Supervised Learning methods for Spam E-mail filtering (work published at CEAS 2006: "Spam Filtering with Naive Bayes – Which Naive Bayes?") 	
ACADEMIC APPOINTMENTS	Assistant Professor	Aug. 2014 – present
	Dept. of Computer Science, Texas State University	
	<ul style="list-style-type: none"> • Supervisor: Professor & Chair Hongchi Shi 	
	Faculty Research Associate	Jan. 2012 – Aug. 2014
	Dept. of Computer Science and Engineering, University of Texas at Arlington	
	<ul style="list-style-type: none"> • Supervisor: Professor & Chair Fillia Makedon 	
	Graduate Research Assistant	Sep. 2007 – Dec. 2011
	Dept. of Computer Science and Engineering, University of Texas at Arlington	
	<ul style="list-style-type: none"> • Advisers: Prof. Fillia Makedon and Prof. Heng Huang • Conducted research for NSF funded projects: <ul style="list-style-type: none"> ◊ Development of a Next-Generation Multimodal Data Management Human-Sensing Instrument for Trustworthy Research Collaboration and Quality of Life Improvement (NSF-0923494, publications: [5], [8], [23], [25], [28], [30], [31]). 	

- ◇ A Novel Human Centric CPS to Improve Motor & Cognitive Assessment and Enable Adaptive Rehabilitation (NSF-1035913, publications: [4], [21], [22]).
- ◇ An Exploratory Pilot Project to Build an Intelligent Human-Computer Interface System for Neurological Disorder Assessment and Rehabilitation (NSF-1041637, publications: [20]).
- ◇ A Large-Scale Data Mining Framework for Genome-Wide Mapping of Multi-Modal Phenotypic Biomarkers and Outcome Prediction (NSF-1117965, publications: [6], [27], [36]).

Research Associate

Mar. 2006 – Aug. 2007

Institute of Informatics and Telecommunications, National Center for Scientific Research “Demokritos”, Greece

- Supervisor: Dr. Vangelis Karkaletsis
- Focus: Research and development for the purposes of the European Commission-funded project “Quality Labeling of Medical Web Content using Multilingual Information Extraction (MedIEQ)”

OTHER
PROFESSIONAL
APPOINTMENTS

The University of Texas at Arlington, Arlington, TX

Webmaster/Systems Administrator

Jun. 2008 – Aug. 2014

- Development, maintenance and Web support of the web infrastructure at the Department of Computer Science and Engineering, including the main CSE website and supporting sub-systems (<http://www.cse.uta.edu/>).

Athens University of Economics and Business, Athens, Greece

Webmaster

Feb. 2006 – Jun. 2007

- Development and Maintenance of the Web based remote learning platform: E-Class (<http://eclass.aueb.gr/>)

Systems Administrator

Feb. 2005 – Sep. 2005

- *Undergrad Internship*: System Administrator and Microsoft Advanced Software Administrator at the Computer Science Labs of AUEB.

TEACHING
EXPERIENCE

Texas State University, San Marcos, TX

Assistant Professor

- CS 3354 - Object Oriented Design and Programming **Fall 2016-17**
 - ◇ https://cs.txstate.edu/~v_m137/cs3354_fall2017
 - ◇ https://cs.txstate.edu/~v_m137/cs3354_fall2016
- CS5329 - Algorithm Design and Analysis **Fall 2016-17**
 - ◇ https://cs.txstate.edu/~v_m137/cs5329_fall2017
 - ◇ https://cs.txstate.edu/~v_m137/cs5329_fall2016
- CS4326/5326 - Human Factors of Computer Systems **Spring 2015-17**
 - ◇ https://cs.txstate.edu/~v_m137/cs4326_5326_spr2017
 - ◇ https://cs.txstate.edu/~v_m137/cs4326_5326_spr2016
 - ◇ https://cs.txstate.edu/~v_m137/cs4326_5326_spr2015
- CS 4354 - Object Oriented Design and Implementation **Fall 2014-15**
 - ◇ https://cs.txstate.edu/~v_m137/cs4354_fall2015
 - ◇ https://cs.txstate.edu/~v_m137/cs4354_fall2014
- CS 3358 - Data Structures **Fall 2015**
 - ◇ https://cs.txstate.edu/~v_m137/cs3358_fall2015

- CS 2308 - Foundations of Computer Science II Spring 2015
 ◊ https://cs.txstate.edu/~v_m137/s2308_spr2015

The University of Texas at Arlington, Arlington, TX

Adjunct Lecturer

- CSE 5311 - Design & Analysis of Algorithms Summer 2013 & Fall 2013
- CSE 2320 - Algorithms & Data Structures Summer 2010 & Fall 2013
- CSE 4391/6397 - CSE Study Abroad Program Summer 2012
- CSE 1311 - Introd. Programming for Engineers & Scientists Spring 2012

Teaching Assistant

- CSE 4391/6397 - CSE Study Abroad Program Summer 2011
- CSE5306 - Operating Systems II Fall 2008

RESEARCH
FUNDING

Co-Principal Investigator:

- NSF-1338930: "Planning Grant: I/UCRC for Assistive Technologies to Enhance Human Performance", 2013.
- NSF-1258500: "EAGER: An Exploratory Pilot Project to Build Human-Centric Physical Activity Monitoring Tools for Enhancing Rehabilitation Therapy Engagement and Assessment", 2012-2013.
- NSF-1329119: "Doctoral Consortium and Student-Author Travel for the PETRA 2013 Conference", 2013-2014.
- NSF-1238660: "Doctoral Consortium and Student-Author Travel for the PETRA 2012 Conference", 2012-2013.

Senior Investigator:

- NSF-1338118: "MRI Collaborative: Development of iRehab, an Intelligent Closed-Loop Instrument for Adaptive Rehabilitation", 2013-2016.

Participated in writing the proposal and conducted research for the following grants:

- NSF-CNS 0923494 MRI grant: \$754,622, 2009-2013
- NSF-CNS 1035913 CPS grant: \$682,001, 2010-2013
- NSF-IIS 1041637 HCC EAGER grant: \$152,053, 2010-2013
- NSF-IIS 1117965: III Grant: \$315,904, 2011-2014.

Conducted research for:

- European Commission-funded project MedIEQ, €1,290,098, 2006-2009

REFEREED
JOURNAL
PUBLICATIONS

- [1] K.K. Roudposhti, J. Dias, P. Peixoto, **V. Metsis**, and U. Nunes. A Multilevel Body Motion-based Human Activity Analysis Methodology. *IEEE Transactions on Cognitive and Developmental Systems* (2016).
- [2] A. H. Ngu, Anne HH, M. Gutierrez, **V. Metsis**, S. Nepal, and M. Z. Sheng. IoT Middleware: A Survey on Issues and Enabling technologies. *IEEE Internet of Things Journal* (2016).
- [3] **V. Metsis**, H. Huang and F. Makedon. DNA Copy Number Selection Using Robust Structured Sparsity-Inducing Norms. *IEEE Transactions on Computational Biology and Bioinformatics (IEEE-TCBB)*.

- [4] C. McMurrough, **V. Metsis**, D. Kosmopoulos, I. Maglogiannis and F. Makedon. A Dataset for Point of Gaze Detection using Head Poses and Eye Images. To appear in *Journal on Multimodal User Interfaces*, 2013.
- [5] **V. Metsis**, D. Kosmopoulos, V. Athitsos, and F. Makedon. Non-Invasive Analysis of Sleep Patterns via Multimodal Sensor Input. *Personal and Ubiquitous Computing (2012)*: 1-8. doi:0010.1007/s00779-012-0623-1
- [6] **V. Metsis**, H. Huang, O. C. Andronesi, F. Makedon, and A. Tzika. Heterogeneous data fusion for brain tumor classification", *Oncology reports*, 2012. doi:0010.3892/or.2012.1931
- [7] K. Dela Rosa, **V. Metsis**, and V. Athitsos. Boosted ranking models: a unifying framework for ranking predictions. *Knowledge and information systems* 30.3 (2012): 543-568. doi:0010.1007/s10115-011-0390-8
- [8] C. Doukas, **V. Metsis**, E. Becker, Z. Le, F. Makedon, and I. Maglogiannis. Digital cities of the future: Extending@ home assistive technologies for the elderly and the disabled. *Telematics and Informatics* 28, no. 3 (2011): 176-190. doi:0010.1016/j.bbr.2011.03.031

PEER-REVIEWED
CONFERENCE
PUBLICATIONS

- [9] A. Anderson, T. Hsiao, and **V. Metsis**. Classification of Emotional Arousal During Multimedia Exposure. In *the proceedings of the 10th International Conference on Pervasive Technologies Related to Assistive Environments (PETRA'17)*, Rhodes, Greece, June 2015.
- [10] H. Espiritu and **V. Metsis**. Automated Detection of Sleep Disorder-Related Events from Polysomnographic Data. In *Healthcare Informatics (ICHI), 2015 International Conference on*, pp. 562-569. IEEE, 2015.
- [11] **V. Metsis**, I. D. Schizas, and G. Marshall. Real-time subspace denoising of polysomnographic data. In *Proceedings of the 8th ACM International Conference on Pervasive Technologies Related to Assistive Environments*, p. 77. ACM, 2015.
- [12] A. Lioulemes, P. Sassaman, S. N. Gieser, V. Karkaletsis, F. Makedon, and **V. Metsis**. Self-managed patient-game interaction using the barrett WAM arm for motion analysis. In *Proceedings of the 8th ACM International Conference on Pervasive Technologies Related to Assistive Environments*, p. 34. ACM, 2015.
- [13] M. Papakostas, J. Staud, F. Makedon, and **V. Metsis**. Monitoring breathing activity and sleep patterns using multimodal non-invasive technologies. In *Proceedings of the 8th ACM International Conference on Pervasive Technologies Related to Assistive Environments*, p. 78. ACM, 2015.
- [14] D. Paulk, **V. Metsis**, C. McMurrough, and F. Makedon. A supervised learning approach for fast object recognition from RGB-D data. In *Proceedings of the 7th International Conference on Pervasive Technologies Related to Assistive Environments (PETRA '14)*.
- [15] S. Phan, A. Lioulemes, C. Lutterodt, F. Makedon, and **V. Metsis**. Guided physical therapy through the use of the Barrett WAM robotic arm. In *Haptic, Audio and Visual Environments and Games (HAVE), 2014 IEEE International Symposium on*, pp. 24-28. IEEE, 2014.
- [16] A. Lioulemes, G. Galatas, **V. Metsis**, G. L. Mariottini, and F. Makedon. Safety challenges in using AR.Drone to collaborate with humans in indoor environments. In *Proceedings of the 7th International Conference on Pervasive Technologies Related to Assistive Environments (PETRA '14)*.

- [17] S. N. Gieser, **V. Metsis**, and F. Makedon. Quantitative evaluation of the kinect skeleton tracker for physical rehabilitation exercises. In *Proceedings of the 7th International Conference on Pervasive Technologies Related to Assistive Environments (PETRA '14)*.
- [18] M. Gardner, **V. Metsis**, E. Becker and F. Makedon. Modeling the Effect of Attention Deficit in Game-Based Motor Ability Assessment of Cerebral Palsy Patients. In *the proceedings of the 6th Workshop on Affect and Behaviour Related Assistance, in PETRA 2013*.
- [19] A. Papangelis, R. Gatchel, **V. Metsis**, and F. Makedon. An adaptive dialogue system for assessing post traumatic stress disorder, In *Proceedings of the 6th International Conference on Pervasive Technologies Related to Assistive Environments (p. 49)*. ACM, 2013.
- [20] **V. Metsis**, P. Jangyodsuk, V. Athitsos, M. Iversen and Fillia Makedon. Computer Aided Rehabilitation for Patients with Rheumatoid Arthritis. To appear in: *Proceedings of CPS workshop, International Conference on Computing, Networking and Communications (ICNC) 2013*.
- [21] C. D. McMurrough, **V. Metsis**, J. Rich, and F. Makedon. An eye tracking dataset for point of gaze detection, In: *Proceedings of the Symposium on Eye Tracking Research and Applications, pp. 305-308*. ACM, 2012. doi:0010.1145/2168556.2168622
- [22] C. D. McMurrough, J. Rich, **V. Metsis**, A. Nguyen and F. Makedon. Low-cost head position tracking for gaze point estimation. In: *Proceedings of the 5th International Conference on Pervasive Technologies Related to Assistive Environments, p. 22*. ACM, 2012. doi:0010.1145/2413097.2413125
- [23] Z. Zhang, W. Liu, **V. Metsis**, and V. Athitsos. A Viewpoint-Independent Statistical Method for Fall Detection. In: *Proceedings of the International Conference on Pattern Recognition (ICPR)*. 2012.
- [24] **V. Metsis**, G. Galatas, A. Papangelis, D. Kosmopoulos, and F. Makedon. Recognition of sleep patterns using a bed pressure mat. In: *Proceedings of the 4th International Conference on Pervasive Technologies Related to Assistive Environments, p. 9*. ACM, 2011. doi:0010.1145/2141622.2141633
- [25] A. Papangelis, **V. Metsis**, J. Shawe-Taylor, and F. Makedon. Sensor placement and coordination via distributed multi-agent cooperative control. In: *Proceedings of the 3rd International Conference on Pervasive Technologies Related to Assistive Environments, p. 14*. ACM, 2010 doi:0010.1145/1839294.1839311
- [26] K. Park, Y. Lin, **V. Metsis**, Z. Le, and F. Makedon. Abnormal human behavioral pattern detection in assisted living environments. In: *Proceedings of the 3rd International Conference on Pervasive Technologies Related to Assistive Environments, p. 9*. ACM, 2010. doi:0010.1145/1839294.1839305
- [27] **V. Metsis**, H. Huang, F. Makedon, and A. Tzika. Heterogeneous Data Fusion to Type Brain Tumor Biopsies. In: *Proceedings of the 5th IFIP Conference on Artificial Intelligence Applications and Innovations (AIAI'2009), April 23-25, 2009, Thessaloniki, Greece, Springer, 2009, p. 233*. doi:0010.1007/978-1-4419-0221-4_28
- [28] R. Arora, **V. Metsis**, R. Zhang, and F. Makedon. Providing QoS in ontology centered context aware pervasive systems. In: *Proceedings of the 2nd International Conference on Pervasive Technologies Related to Assistive Environments, ACM, 2009, p. 8*. doi:0010.1145/1579114.1579122

- [29] I. Ahmad, R. Arora, D. White, **V. Metsis**, and R. Ingram. Energy-Constrained Scheduling of DAGs on Multiprocessors. In: *Proceedings of the International Conference on Contemporary Computing (IC3 2009)*, IIIT University, Noida, 2009. doi:0010.1007/978-3-642-03547-0_56
- [30] E. Becker, **V. Metsis**, R. Arora, J. Vinjumur, Y. Xu, and F. Makedon. SmartDrawer: RFID-based smart medicine drawer for assistive environments In: *Workshop on Affect and Behaviour Related Assistance in Support for the Elderly (ABRA 2009)*, *Proceedings of the 2nd International Conference on Pervasive Technologies Related to Assistive Environments*, ACM, 2009, p. 49. doi:0010.1145/1579114.1579163
- [31] **V. Metsis**, Z. Le, Y. Lei, and F. Makedon. Towards an evaluation framework for assistive environments" In: *Proceedings of the 1st international conference on Pervasive Technologies Related to Assistive Environments*, ACM, 2008, p. 12. doi:0010.1145/1389586.1389601
- [32] K. Stamatakis, **V. Metsis**, V. Karkaletsis, M. Ruzicka, V. Svatek, V. E.A. Cabrera, and M. Polla. Content collection for the labeling of health-related web content. In: *Proceedings of the 11th Conference on Artificial Intelligence in Medicine (AIME 07)*, LNAI 4594, pp. 341-345, 2007. Amsterdam, 7-11 July, 2007. doi:0010.1007/978-3-540-73599-1_46
- [33] D.V. Gonzales, M.A. Mayer, A. Leis, V. Karkaletsis, K. Stamatakis, **V. Metsis**, P. Nasikas, M. Labsky, M. Ruzicka, V. Svatek, F. Lopez-Ostenero, V. Peinado, E.A. Cabrera, T. Honkela, M. Polla. AQUA (Assisting Quality Assessment): a system based on Semantic web and information extraction technologies to support medical quality labelling agencies. In: *Proceedings of the 12th World Congress on the Internet in Medicine (Mednet 2007)*, Leipzig , Germany , October 7-10, 2007. [PDF]
- [34] **V. Metsis**, I. Androutsopoulos and G. Paliouras. Spam Filtering with Naive Bayes – Which Naive Bayes?. In: *Proceedings of the 3rd Conference on Email and Anti-Spam (CEAS 2006)*, Mountain View, CA, USA, 2006. [PDF]
- [35] V. Karkaletsis, K. Stamatakis, **V. Metsis**, V. Redoumi, D. Tsarouhas. Health-related Web Content: quality labelling mechanisms and the MedIEQ approach. In: *Proceedings of the 4th International Conference On Information Communication Technologies in Health, Samos 2006, Greece*. [PDF]
- CONFERENCE POSTERS [36] **V. Metsis**, O. C. Andronesi, H. Huang, M. N. Mindrinos, L. G. Rahme, F. Makedon, and A. A. Tzika. Combination of Sparse and Wrapper Feature Selection from Multi-Source Data for Accurate Brain Tumor Typing. In: *Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM) 19th Annual Meeting & Exhibition, 7-13 May 2011, Montreal, Canada*. [PDF]

PROFESSIONAL
ACTIVITIES

Conference Service

- Session Co-Chair: “Smart Rehabilitation Technologies” at Human-Computer Interaction International (HCII 2014).
- Organizing Committee at the International Conference on Pervasive Technologies Related to Assistive Environments (PETRA 2008-2014).
- Program Committee at the 5th International Conference on Pervasive Technologies Related to Assistive Environments (PETRA 2012-2014).
- Program Committee at the 16th PanHellenic Conference on Informatics (PCI '12).
- Program Committee at the Biotechnology and Bioinformatics Symposium (BIOT-2008)

Referee Service

- Journal of Machine Learning Research (JMLR)
- IEEE Transactions on Knowledge and Data Engineering (IEEE-TKDE)
- IEEE Transactions on Information Technology in Biomedicine (IEEE-TITB-EMBS)
- IEEE Transactions on Mobile Computing (IEEE-TMC)
- Springer Personal and Ubiquitous Computing
- Springer Universal Access in the Information Society
- Springer Artificial Intelligence Review
- Elsevier Journal of Systems and Software
- Elsevier Artificial Intelligence in Medicine (AIIM)
- Elsevier Computer Methods and Programs in Biomedicine
- Journal of Parallel and Distributed Computing
- Journal of Network and Computer Applications
- International Journal on Digital Libraries (ECDL)
- Health Informatics Journal
- International Conference on PErvasive Technologies Related to Assistive Environments (PETRA 2008-2012)
- 16th PanHellenic Conference on Informatics
- International Conference on Artificial Intelligence Applications and Innovations (AIAI)
- Symposium on Eye Tracking Research & Applications (ETRA 2012)
- Workshop on Artificial Intelligence Applications in Biomedicine (AIAB 2012)

Memberships

- Member of IEEE

SOFTWARE SKILLS

Computer Programming:

- Java, C, C++, C#, UNIX shell scripting, AWK, GNU make, SQL, Lisp, and others.

Numerical Analysis:

- MATLAB, R, Octave.

Systems Administration:

- *Operating Systems*: UNIX, Linux, Windows.
- *Servers*: Apache, IIS, MySQL, Postgresql, Tomcat, Glassfish, JBoss, MS SQL Server, SVN Subversion Server.

Development Platforms:

- Netbeans, Eclipse, Matlab, MS Visual Studio.

Web Development:

- HTML, JSF, PHP, ASP, JavaScript, XML, SOAP, RDF.

AWARDS

- PETRA Conference 2008-2011, NSF Student Travel Award
- Q-Invest Graduate Student Fellowship 2008
- Demokritos Research Fellow 2006-2007
- Honored talk at the B.Sc. graduation ceremony as the student with the highest GPA in the class (November 2005).