

CURRICULUM VITAE

PERSONAL INFORMATION

Name : A/Prof.Dr. Supot Nitsuwat
Academic Position : Assistant Professor (Level 8)
Address : Department of Mathematics, Faculty of Applied Science,
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Date of Birth : October 11, 1958
Place of Birth : Nakhornsawan, Thailand
Nationality : Thai

ACADEMIC QUALIFICATIONS

Education :

1998 – 2001 Doctor of Philosophy (Computer Science and Engineering), The University of
 New South Wales, Sydney, NSW, Australia
 Dissertation : Motion-based Video Segmentation Using Fuzzy
 Clustering and Statistical Classification Techniques
 1985 – 1987 Master of Science in Applied Mathematics, Mahidol University, Thailand
 1977 – 1980 Bachelor of Science in Mathematics-Physics, Ramkramheang University, Thailand

EMPLOYMENT RECORDS

From Mth/year	To Mth/year	Organization	Position	Responsibilities
1982	1997	Department of Mathematics, Faculty of Applied Science, King Mongkut' s Institute of Technology North Bangkok	Lecturer	Teaching/Conducting Research on Computing Mathematics
1998	2003	Department of Computer Education, Faculty of Technical Education, King Mongkut' s Institute of Technology North Bangkok	Assistant Professor	Teaching/Conducting Research on Multimedia Technology

2004	2011	Faculty of Information Technology, King Mongkut' s University of Technology North Bangkok	Assistant Professor, Associate Dean	Teaching/Conducting Research on Multimedia Technology, Administration Affairs
2012	Present	Department of Mathematics, Faculty of Applied Science, King Mongkut' s University of Technology North Bangkok	Assistant Professor	Teaching/Conducting Research on Meta-heuristic optimization, Fuzzy set and logic, Multimedia Technology

AREAS OF RESEARCH

- 1) Digital Image and Video Processing
- 2) Pattern Recognition (Biometrics)
- 3) Meta-heuristic Optimization Techniques

PUBLISHED RESEARCH PAPERS

- 1) Thongchai Surinwarangkoon, Supot Nitsuwat, and Elvin J. Moore, "Traffic Sign Recognition System for Roadside Images in Poor Condition," *International Journal of Machine Learning and Computing* vol. 3, no. 1, pp. 121-126, 2013.
- 2) Sompong Valuvanathorn, Mao Lin Huang and Supot Nitsuwat, "**Multi-Feature Face Recognition Based on 2D- PCA**", *The Era of Interactive Media*, Springer, pp. 65-75, 2013.
- 3) Kuntpong Woraratpanya , Surachet Julakananusat , Supot Nitsuwat , Ruttikorn Varakulsiripunth, "**3D Object Model Retrieval Using Enhanced Elevation Descriptor**", 1st International Symposium on Technology for Sustainability (ISTS 2011) , January 26-29, 2012 , Bangkok, Thailand, 2012.
- 4) Sompong Valuvanathorn, Mao Lin Huang and Supot Nitsuwat, "**Multi-Feature Face Recognition based on PSO-SVM**", *IEEE Xplore Digital Library*, pp. 140-145, 2012
- 5) Nitsuwat, S., and Pao-in, W., "**Development of ICD-10-TM Ontology for a Semi-automated Morbidity Coding System in Thailand**", *Methods Inf Med.* 2012; 51(6):519-28. doi: 10.3414/ME11-02-0024. Aug 31, 2012.
- 6) Valuvanathorn, S., Nitsuwat, S., and Huang, M.L., "Multi-Feature Face Recognition Based on 2D-PCA and SVM," *Journal: The Era of Interactive Media*, DOI 10.1007/978-1-4614-3501-36, # Springer Science + Business Media, New York, To be published on 2012.
- 7) Surinwarangkoon, T., Nitsuwat, S., and Moore, E. J., "**Traffic Sign Recognition by Color Segmentation and Neural Network**", *Proceedings of SPIE, Fourth International Conference on Machine Vision (ICMV 2011)*, Vol. 8350, Singapore, 2011.

- 8) Klongklaew, R. and Nitsuwat, S., “**Partially Occluded Face Recognition Based on Component’s Features,**” Proceeding of the 7th National Conference on Computer and Information Technology (NCCIT2011), pp.386-391, Bangkok, 2011.
- 9) Sukhum, K., Nitsuwat, S. and Haruechaiyasak, C., “**Opinion Detection in Thai Political News Columns Based on Subjectivity Analysis**”, The 7th International Conference on Computing and Information Technology, IC2IT2011, pp.27-31, Bangkok, 2011.
- 10) Santiittikul, P., Nitsuwat, S., and Yimman, S. “**ECG Monitoring System**”, Proceeding of the 6th National Conference on Computer and Information Technology (NCCIT2010), pp.73-78, Bangkok, 2010.
- 11) Jinanusilpasat, R. and Nitsuwat, S. “**Data mining using Association Rule for Bancassurance Customer**”, Proceeding of the 6th National Conference on Computer and Information Technology (NCCIT2010), pp.225-230, Bangkok, 2010.
- 12) Valuvanathorn, S. and Nitsuwat, S. “**Global and Local Face Feature Extraction for Face Recognition based on Geometrical Model**”, Proceeding of the 6th National Conference on Computer and Information Technology (NCCIT2010), pp.653-658, Bangkok, 2010.
- 13) Maleerat Sodanil, Supot Nitsuwat, Choochart Haruechaiyasak. “**Improving ASR for Continuous Thai Words Using ANN/HMM**”, IICS – 2010.
- 14) Sodanil, M., Nitsuwat, S., and Haruechaiyasak, C. “**Voicing Feature Detection for Thai Speech Recognition,**” Proceeding of the 5th National Conference on Computer and Information Technology (NCCIT2009), ISSN 974-19-3309-9, pp.657-660, 2009.
- 15) Thuy, K. P. and Nitsuwat, S. “**Using Data Warehouse and Decision Support System Techniques to Support Decision Making Process in Education Management,**” Proceeding of the 5th National Conference on Computer and Information Technology (NCCIT2009), ISSN 974-19-3309-9, pp.594-598, 2009.
- 16) Tangchitsomkit A. and Nitsuwat, S. “**A Development of Artificial Intelligence System for the Fighting Games Using Length Learning Technique**”, Proceeding of the 4th National Conference on Computer and Information Technology (NCCIT2008), Bangkok, ISSN 974-19-3296-2, pp.15-19, 2008.
- 17) Sodanil, M. and Nitsuwat, S. “**A model for Thai G2P/P2G Using Training Speech Recognition on Text**”, Proceeding of the 4th National Conference on Computer and Information Technology (NCCIT2008), Bangkok, ISSN 974-19-3296-2, pp.11-14, 2008.
- 18) Duong Van Hieu, Supot Nitsuwat: Image Preprocessing and Trajectory Feature Extraction based on Hidden Markov Models for Sign Language Recognition. SNPD 2008: 501-506.,2008.
- 19) Sompong, C. and Nitsuwat, S. “**Face Detection on Color Image Using Skin Color Modeland Mathematical morphology,**” (In Thai), Journal of Information Technology, ISSN 1685-8573, Vol.3(5), pp. 17-23, 2007.
- 20) Nitsuwat, S. “**Fuzzy Sets II – Operations of Fuzzy Sets and Fuzzy Functions,**” (In Thai), Journal of Information Technology, ISSN 1685-8573, Vol.2(3), pp. 80-85, 2006.

- 21) Surinta, O. and Nitsuwat, S. "**Handwritten Thai Character Recognition using Fourier Descriptors and Robust-C Prototype**," Proceeding of the 1st National Conference on Computer and Information Technology (NCCIT2005), Bangkok, ISSN 974-19-3226-4, pp.116-120, 2005.
- 22) Nitsuwat, S. "**Fuzzy Sets I - Definition and Membership Functions**," (In Thai), Journal of Information Technology, ISSN 1685-8573, Vol.1(1), pp. 57-64, 2004.
- 23) Kamnerdsiri, S., Limmaneeprasert, P., and Nitsuwat, S. "**Insertion of Description in Thai Drawing Using Blind Watermarking**" (In Thai), Journal of Information Technology, ISSN 1685-8573, Vol.1(1), pp. 28-35, 2004.
- 24) Nitsuwat, S. "**Innovation of Watermarking in Medical Image**," The 9th National Computer Science and Engineering Conference (NCSEC 2005), Bangkok, Thailand, October 2003.
- 25) Nitsuwat, S. "**Security in CAI Materials by Embedding Digital Watermarks**," Informing Science and IT Education Conference (InSITE2003), Finland, 24-27 June, 2003.
- 26) Sourayaviset, K. Limmaneeprasert, P., and Nitsuwat, S. "**Recognition of Handwritten Thai Number using Fuzzy C-means Clustering**" (In Thai), Journal of Computer Education, ISSN 1685-4578, Vol. 1(1), pp. 8-13, 2002.
- 27) Nitsuwat, S. "**Digital Watermarking**" (In Thai), Journal of Computer Education, ISSN 0857-5452, Vol.44 (Oct.-Dec.), pp.11-16, 2002.
- 28) Inrut, J., Yuanghirun, P., Paludkong, S., Nitsuwat, S., and Limmaneeprasert, P. "**Thai Word Segmentation using Combination of Forward and Backward Longest Matching Techniques**," Proceedings of the 2001 International Symposium on Communications and Information Technology, pp. 37-40, Chiangmai, Thailand, 2001.
- 29) Jin, J. S., Nitsuwat, S., and Xia, J. L. "**Motion-based Visual Object Extraction in Video**," Proceedings of the 5th Joint Conference on Information Sciences, Vol. II, pp. 681-684, Atlantic City, New Jersey, USA, 2000.
- 30) Nitsuwat, S., Jin, J. S. and Hudson, H. M. "**Motion-based Video Segmentation using Fuzzy Clustering and Classical Mixture Model**," Proceedings of the International Conference on Image Processing (ICIP' 2000), Vol. I, pp.300-303, Vancouver, BC, CANADA, 2000.

RESEARCH PROJECTS

1. Visual and Audio Features Extraction for Content-based Image and Video Analysis, Sponsored by KMITNB Research Fund, 2001
2. Embedding Digital Watermark in CAI Materials, Sponsored by KMITNB Research Fund, 2002
3. Thai Sign Language Recognition using Fuzzy Hidden Markov Models, Sponsored by KMITNB Research Fund, 2005
4. The Talking Person Recognition System from Video Sequence, Sponsored by KMITNB Research Fund, 2010

5. การสร้างคำอธิบายลักษณะใบหน้าในมิติทัศนโดยใช้ฟuzzyซ็อนโทโลจี Type-2, สนับสนุนทุนวิจัยโดย คณะเทคโนโลยีสารสนเทศ, มจพ, 2553-2554.
6. Visible and Near-Infrared Imagery Face Recognition using Modular Neural Network and Type-2 Fuzzy Inference System, Sponsored by KMITNB Research Fund, 2011-2012.
7. การตรวจสอบและยืนยันบุคคลด้วยภาพและเสียงโดยใช้ระบบชาญฉลาดที่ปรับตัวเองได้ (Audio/Visual-based Person identification and Verification Using Evolving Intelligent Systems), งบประมาณประจำปีงบประมาณ พ.ศ. 2556 ตามมติคณะรัฐมนตรี, สำนักงานคณะกรรมการวิจัยแห่งชาติ, 2556-2557.

AREAS OF TEACHING

Bachelor Degree :

- 1) Advanced Computer Programming (C#.Net, Java)
- 2) Computer Graphics (Using OpenGL+Maya)
- 3) Digital Image Processing (Using Matlab, OpenCV, Aforge.Net, Accord.Net, ImageJ)
- 4) Calculus I, II
- 5) Differential Equations
- 6) Matrix and Vectors

Master/Ph.D. Degree :

- 1) Fuzzy Sets and Systems
- 2) Numerical Optimization Techniques
- 3) Meta-heuristic Optimization
- 4) Advanced Computer Graphics (Using OpenGL+Maya)

COMPUTER EXPERIENCES

- 1) Operating System :- Mac OS X, Windows, Linux
- 2) Programming :- C/C++ (VC++.Net), C#.Net, Java, PHP, ASP.Net and Matlab
- 3) Database :- MS Access, MS SQL2012
- 4) Graphics :- Adobe Photoshop, Adobe Premiere, Adobe After Effects, Maya
- 5) Audio Editor : Adobe Audition (CoolEdit Pro)

BUSINESS EXPERIENCES

- 1) Nitsuwat S., Head of The Project Management Team, Project:- 1) develop vocational standards, occupational standards, and professional qualification for job positions in ICT industry, 2) Establish Competency Test Centers in Expectation of AEC, Thailand Professional Qualification Institute, 2013-2014.