

Curriculum Vitae

Mau-Tsuen Yang

Professor

Department of Computer Science & Information Engineering
National Dong Hwa University, Hualien, Taiwan

Degree : Ph.D., Computer Science & Engineering,
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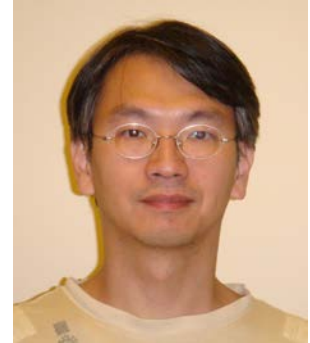
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楊茂村

Research Interest : Computer Vision, Augmented Reality, Learning Technology



■ Research

(A) Journal Papers

1. Y. Shih, M. T. Yang, & Y. Cheng. 2016. Vision-based Learning Status Monitoring on Live Facial Video, *Journal of Electronic Science and Technology*. (EI)
2. M. T. Yang & J. Zheng. 2015. On-road Collision Warning Based on Multiple FOE Segmentation Using a Dashboard Camera, *IEEE Transactions on Vehicular Technology*, 64(11), 4974-4984, November. (SCI, IF=2.243/2.631, TELECOMMUNICATIONS, Rank=14/82=17%)
3. M. T. Yang, & S. Huang. 2014. Appearance-based Multimodal Human Tracking and Identification for Healthcare in the Digital Home, *Sensors*, 14(8), 14253-14277, August. (SCI, IF=2.033/2.437, INSTRUMENTS & INSTRUMENTATION, Rank=12/56=19%, Cited:0/2)
4. M.T. Yang & Y. Chiu. 2014. Note-Taking for 3D Curricular Contents using Markerless Augmented Reality, *Interacting with Computers*, 26(4), 321-333, July. (SCI & SSCI, IF=0.889/1.64, COMPUTER SCIENCE, CYBERNETICS, Rank=15/22=68%, Cited:0/1)
5. M.T. Yang & W. Liao. 2014. Computer-Assisted Culture Learning in an Online Augmented Reality Environment based on Free-Hand Gesture Interaction, *IEEE Transactions on Learning Technologies*, 7(2), 107-117, April. (SCI & SSCI, IF=1.129/1.608, EDUCATION & EDUCATIONAL RESEARCH, Rank=78/231=33%)
6. M. T. Yang & M. Chuang. 2013. Fall Risk Assessment and Early-Warning for Toddler Behaviors at Home, *Sensors*, 13(12), 16985-17005, December. (SCI, IF=2.033/2.437, INSTRUMENTS & INSTRUMENTATION, Rank=12/56=19%, Cited:1/2)
7. M.T. Yang, R. Jhang, & J. Hou. 2013. Traffic Flow Estimation and Vehicle Type Classification using Vision-based Spatial-Temporal Profile Analysis, *IET Computer Vision*, 7(5), 394-404. (SCI, IF=0.573/0.938, ENGINEERING, ELECTRICAL & ELECTRONIC,

Rank=200/257=77.0%, Cited:1/5)

8. M.T. Yang & Z. You. 2013. Vision-based Hypothesis Integration for Inner and Outer Lip Contour Detection, *International Journal of Innovative Computing Information and Control*, 9(8), 3159-3172. (SCI, IF=1.667/1.797, 2010) (EI, 2011~)
9. M.T. Yang, Z. You, & Y. Shih. 2009. Lip Contour Extraction for Language Learning in VEC3D, *Machine Vision and Applications*, 21(1), 33-41, Nov. (SCI, IF=1.272/1.401).
10. C. Chiang, J. Wu, M.T. Yang, & W. Tai. 2009. Independent query refinement and feature re-weighting using positive and negative examples for content-based image retrieval, *Multimedia Tools and Applications*, 41(1), 27-53. (SCI, IF=1.331/1.403, Cited:0/2).
11. M.T. Yang, K. Lo, C. Chiang, & W. Tai. 2008. Moving Cast Shadow Detection by Exploiting Multiple Cues, *IET Image Processing*, 2(2), 95-104, April (SCI, IF=0.86/1.048, Cited:2/24).
12. Y. Shih & M.T. Yang. 2008. A Collaborative Virtual Environment for Situated Language Learning Using VEC3D, *Educational Technology & Society*, 11(1), 56-68 (SSCI, IF=1.104/1.472, Cited:3/23).
13. Y. Zeng, C. Tan, W. Tai, M.T. Yang, C. Chiang & C. Chang. 2007. A Momentum-Based Deformation System for Granular Material, *Computer Animation and Virtual Worlds*, 18(4-5), 289-300. (SCI, IF=0.548/0.531, Cited:0/4)
14. Y. Shih, Y. Lin & M.T. Yang. 2007. The Development of an Online Virtual English Classroom: VEC3D, *Journal of Information Technology and Applications, Special Issue on Computer and Network Technologies in Education*, 2(2), 61-68, September. (ISSN 1991-1424)
15. T. Gandhi, M.T. Yang, R. Kasturi, O. Camps, L. Coraor & J. McCandless. 2006. Performance Characterization of the Dynamic Programming Obstacle Detection Algorithm, *IEEE Transactions on Image Processing*, 15(5), 1202-1214, May. (SCI, IF=3.735/4.786, Cited:1/7)
16. G. Wang, M.T. Yang, C. Chiang & W. Tai. 2006. A Talking Face Driven by Voice Using Hidden Markov Model, *Journal of Information Science and Engineering*, 22, 1059-1075, September. (SCI, IF=0.392/0.428, Cited:1/2)
17. M.T. Yang, S. Wang & Y. Lin. 2005. A Multimodal Fusion System for People Detection and Tracking, *International Journal of Imaging Systems and Technology*, 15(2), 131-142. (SCI, IF=0.571/0.894, Cited:2/9)
18. C. Hsu, W. Tai, C. Chiang & M.T. Yang. 2005. Exploiting Hardware-accelerated Occlusion Queries for Visibility Culling, *IEICE Transactions on Information and Systems*, E88-A(7), 2007-2014, July. (SCI, IF=0.236/0.234)
19. C. Chiang, W. Dai, M.T. Yang, Y. Huang & C. Huang. 2003. A Novel Method for Detecting Lips, Eyes and Faces in Real Time, *Real-Time Imaging*, 9(4), 277-287. (SCI, IF=2.270/1.287, Cited:2/41)
20. M.T. Yang, R. Kasturi & A. Sivasubramaniam. 2003. A Pipeline-based Approach for Scheduling Video Processing Algorithms on NOW, *IEEE Transactions on Parallel and Distributed Systems*, 14, 119-130, January. (SCI, IF=2.661/2.749, Cited:0/17)
21. T. Gandhi, M.T. Yang, R. Kasturi, O. Camps & L. Coraor. 2003. Detection of Obstacles in the Flight Path of an Aircraft, *IEEE Transactions on Aerospace and Electronic Systems*, 39(1), 176-191, January. (SCI, IF=1.672/2.053, Cited:1/28)
22. M.T. Yang, T. Gandhi, R. Kasturi, L. Coraor, O. Camps & J. McCandless. 2002. Real-Time Implementation of Obstacle Detection Algorithms on a Datacube MaxPCI Architecture, *Real-Time Imaging*, 8(2), 157-172. (SCI, IF=2.270/1.287, Cited:1/2)

(B) Conference Papers

1. M.T. Yang & Y. Shih, 2017. E-Learning with Natural User Interface, *International Conference on Education, Psychology, and Learning (ICEPL)*, August, Sapporo, Japan.
2. M.T. Yang & Y. Shih, 2016. Interacting with 3D Curricular Contents using Free-Hand Gestures, *International Society for Technology in Education (ISTE)*, June, Denver, Colorado, U.S.A.

3. M.T. Yang & Y. Shih, 2015. Workplace Cultural Learning using Augmented Reality and Computer Vision, *World Conference on Cooperative & Work-Integrated Education*, August, Kyoto, Japan.
4. M.T. Yang, 2014. Virtual English Classroom with Augmented Reality for Cultural and Language Learning, *International Asia TEFL Conference*, August, Kuching, Malaysia.
5. Y. Chiu & M.T. Yang, 2013. 3D Note-Taking using Markerless Augmented Reality in e-Learning, *Computer Vision, Graphics, and Image Processing*. August, Taiwan.
6. M.T. Yang, W. Liao, & Y. Shih, 2013. VECAR: Virtual English Classroom using Markerless Augmented Reality with Intuitive Gesture Interaction, *International Conference on Advanced Learning Technologies*, July, Beijing, China.
7. Y. Shih, M.T. Yang, & F. Yang, 2013. Street-View Panorama for Cultural Learning: Implementation and Curriculum Design, *International Conference on Advanced Learning Technologies*, July, Beijing, China.
8. Y. Chiu & M.T. Yang, 2012. Virtual Multiple-Perspective Display using Pyramidal or Conical Showcase, *International Computer Symposium*, Springer-Verlag in series of Smart Innovation, Systems and Technologies, *Advances in Intelligent Systems & Applications*, 2, 431-438, December. (ISSN 2190-3018)
9. M.T. Yang, W. Liao, F. Yang, & Y. Shih, 2012. An online language learning system empowered with AR interface and street view panorama, *International Conference on e-Learning*, June, Hong Kong.
10. M.T. Yang, Y. Cheng, & Y. Shih, 2011. Facial Expression Recognition for Learning Status Analysis, *Human-Computer Interaction*, Part IV, *Lecture Notes in Computer Science*, 6764, 131-138. (EI, ISSN 0302-9743)
11. C. Wang, Y. Liou, Y. Lee, M.T. Yang, 2011. Baby Ball Growth Plan – Implementing 3D MAZE Using OpenGL and ARToolkit, *Symposium on Digital Life Technologies*, July, Taiwan.
12. M.T. Yang, Z. You, and Y. Shih. 2010. Lip Contour Extraction by Combining Simple Classifiers using AdaBoost Algorithm, *International Conference on Mass Data Analysis of Images and Signals*, July, Berlin, Germany.
13. Y. Shih & M.T. Yang. 2010. Linking Web 2.0 and 3D virtual reality for language learning: Design and implementation. *International Network Conference*, July, Heidelberg, Germany.
14. Y. Shih & M.T. Yang, 2008. Language Learning through Multimodal Communication in VEC3D, *National Educational Computing Conference*, June, San Antonio, TX, U.S.A.
15. Y. Shih, M.T. Yang, Z. You, & R. Lin, 2007. Animated language tutors. APEC Cyber Academy *International Conference on ICT and English Learning*, 88-99, March, Tainan, Taiwan.
16. M.T. Yang, S. Huang, K. Lo, W. Tai, & C. Chiang. 2006. Exploiting Spatial-Temporal Coherence in the Construction of Multiple Perspective Videos, *Pacific-Rim Symposium on Image and Video Technology*, Hsinchu, Taiwan, *Lecture Notes in Computer Science*, 4319, 1303-1313, December. (EI, ISSN 0302-9743)
17. K. Lo, M.T. Yang, & R. Lin. 2006. Shadow Removal for Foreground Segmentation, *Pacific-Rim Symposium on Image and Video Technology*, Hsinchu, Taiwan, *Lecture Notes in Computer Science*, 4319, 342-352, December. (EI, ISSN 0302-9743)
18. K. Lo & M.T. Yang, 2006. Shadow Detection by Integrating Multiple Features, *International Conference on Pattern Recognition*. August, Hong Kong.
19. Y. Lin, Y. Shih, & M.T. Yang, 2005. VEC3D: A 3-D Virtual English Classroom for Second Language Learning, *The 5th IEEE International Conference on Advanced Learning Technologies*, July, Kaohsiung, Taiwan.
20. Y. Shih, M.T. Yang, & Y. Lin, 2005. The Potential of Using Synchronous Interactive 3D Virtual Technologies to Support the Development of Strategic Competence: Towards Autonomy in Virtual Communication, *EuroCALL*, August, Cracow, Poland.
21. Y. Shih, M.T. Yang, & Y. Lin, 2005. Building Synchronous Interactive 3D Virtual Worlds to Promote ESL Learner' Discourse Competence, *Japan Association for Language Teaching*

- CALL, June, Shiga, Japan.
22. M.T. Yang, Y. Liang, & Y. Shih, 2004. A Smart Sampling Strategy for 3D Reconstruction using Panorama Arrays, *Computer Vision, Graphics, and Image Processing*. August, Hualien, Taiwan.
 23. Y. Shih, C. Chen, & M.T. Yang, 2004. Challenges and Opportunities in Moving to Synchronous Interactive 3D Virtual Worlds, *Computer Vision, Graphics, and Image Processing*. August, Hualien, Taiwan.
 24. M.T. Yang, Y. Shih, & S. Wang, 2004. People Tracking by Integrating Multiple Features, *International Conference on Pattern Recognition*. August, Cambridge, U.K.
 25. H. Hsieh, W. Tai, C. Chiang, & M.T. Yang. 2004. Flexible and Interactive Crack-like Patterns Presentation on 3D Objects, *International Symposium on Computer and Information Sciences*, Antalya, Turkey, *Lecture Notes in Computer Science*, no. 3280, pp. 90-99, October.
 26. M.T. Yang & C.W. Liu, 2003. Active Object Movie, *Computer Graphics Workshop*. Hualien, Taiwan.
 27. M.T. Yang, R. Kasturi, & A. Sivasubramaniam. 2001. An Automatic Scheduler for Real-time Vision Applications, *International Parallel and Distributed Processing Symposium*. April, San Francisco, CA, U.S.A.
 28. T. Gandhi, M.T. Yang, R. Kasturi, O. Camps, & L. Coraor. 2000. Detection of Obstacles in the Flight Path of an Aircraft, *IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, p. 304-311, vol. 2. June, Hilton Head Island, South Carolina, U.S.A.
 29. M.T. Yang, T. Gandhi, R. Kasturi, L. Coraor, O. Camps, & J. McCandless. 2000. Capturing, Recording, and Processing of High Resolution Digital Images for Real-time Applications, *IEEE National Aerospace and Electronics Conference*, p. 595-601. October, Dayton, OH, U.S.A.

(C) Magazine or Book Chapter

1. J. Zheng, & M.T. Yang. 2013. Vision-based Collision Prediction for Ground Vehicles, *Image and Recognition*, 19(3), 26-42, September. (ISSN 2074-6903)

(D) Research Projects

Time	Project Title	Role	Budget	Sponsor
2008.08~2011.07	Using 3D Virtual English Classroom with Multimodal Interaction to Promote Language Learning(II)	Co-PI	1,770,000	NSC 97-2511-S-259-002-MY3
2008.08~2011.07	Vision-based Surveillance at Digital Home	PI	1,827,000	NSC 97-2221-E-259-012-MY3
2011.08~2012.07	Web2.0 Immersed 3D Virtual English Classroom	Co-PI	507,000	NSC 100-2511-S-259-003
2011.08~2012.07	Vision-based Lip Contour Detection and Tracking	PI	379,000	NSC 100-2221-E-259-037
2012.08~2013.07	Human Action Recognition from Multiple Viewpoints	PI	446,000	NSC 101-2221-E-259-033
2013.08~2014.07	Registration, Interaction, Demonstration, and Application of Augmented Reality	PI	693,000	NSC 102-2221-E-259-027
2013.08~2014.07	Interactive English Classroom	Co-PI	426,000	NSC 102-2511-S-259-011
2014.08~2015.07	Vision-based Surveillance and Early-warning for Elderly Healthcare at Home	PI	693,000	MOST 103-2221-E-259 -028
2014.08~2016.07	Interactive English Classroom (II)	Co-PI	475,000	MOST 103-2511-S-259 -003 -MY2

2015.08~2017.07	Natural User Interface Combining Computer Vision and Augmented Reality	PI	1,461,000	MOST 104-2221-E-259 -023 -MY2
2017.06~2018.05	Innovative Technologies and Applications of Mixed Realities for Advancing Digital Green Economy in Eastern Taiwan	Co-PI	4,000,000	MOST 106-3114-E-259-001
2017.08~2018.07	Vision-based Interactive Gestures Recognition and Applications	PI	504,000	MOST 106-2221-E-259-024



■ Teaching

(E) Courses

Time	Course Name	# of Students
2011 Fall	Computer Vision (Undergraduate)	61
2011 Fall	Image-based Rendering (Graduate)	16
2012 Spring	Computer Organization & Assembly Language (Graduate)	63
2012 Spring	Advanced Computer Vision (Graduate)	17
2012 Fall	Introduction to Virtual Reality (Undergraduate)	62
2012 Fall	Virtual Reality (Graduate)	22
2013 Spring	Computer Organization & Assembly Language (Undergraduate)	54
2013 Spring	Computer Organization & Assembly Language (Undergraduate) (Instructed by English)	4
2013 Spring	Advanced Computer Vision (Graduate)	11
2013 Fall	Introduction to Computers (Undergraduate)	69
2013 Fall	Image-based Rendering (Graduate)	19
2014 Spring	Computer Organization & Assembly Language (Undergraduate)	48
2014 Spring	Computer Organization & Assembly Language (Undergraduate) (Instructed by English)	6
2014 Fall	Advanced Computer Vision (Graduate)	23
2014 Fall	Computer Vision (Undergraduate)	28
2015 Spring	Computer Organization & Assembly Language (Undergraduate)	58
2015 Spring	Computer Organization & Assembly Language (Undergraduate) (Instructed by English)	8
2016 Fall	Introduction to Virtual Reality (Undergraduate)	79
2016 Fall	Virtual Reality (Graduate)	27
2017 Spring	Computer Organization & Assembly Language (Undergraduate)	59
2017 Spring	Computer Organization & Assembly Language (Undergraduate) (Instructed by English)	28
2017 Fall	Advanced Computer Vision (Graduate)	55
2017 Fall	Computer Vision (Undergraduate)	14

(F) Graduate Students

Time	Master	Ph.D.	Graduation	
			Master	Ph.D.
2011	3	0	3	0
2012	3	0	3	0
2013	3	0	3	0
2014	3	0	3	0
2015	3	0	3	0
2016	3	0	0	0
2017	2	0	0	0



■ Academic Services

Time	Service Title
2010	International Conference on Grid and Pervasive Computing 2010, Taiwan, Registration Chair
2010	International Conference on Pattern Recognition (ICPR), Turkey, Technical Committee Referee
2010	NSC Research Project Reviewer
2011	NSC Undergraduate Research Project Reviewer
2011	NSC Research Project Reviewer
2012	International Computer Symposium (ICS), Taiwan, Registration Chair
2012	International Computer Symposium (ICS), Taiwan, Workshop Co-chair
2012	NSC Undergraduate Research Project Reviewer
2013	CVGIP 2013, Taiwan, Program Committee
2013	NSC Research Project Reviewer
2013	Department of IM, Special Topic Referee
2014	International Conference on Pattern Recognition (ICPR), Sweden, Technical Committee Referee
2014	STUST faculty promotion reviewer
2014	International Conference on Circuits and Systems, India, Program Committee.
2015	MOST Research Project Reviewer
2016	International Conference on Pattern Recognition (ICPR), Mexico, Technical Committee Referee
2016	Taiwan Academic Network Conference (TANET), Program Committee.
2017	National Computer Symposium (NCS), Workshop Co-Chair

Journal Reviewer (2010~present)	IEEE Transactions on Information Technology in Biomedicine (SCI) IEEE Transactions on Biomedical Engineering (SCI) IEEE Transactions on Learning Technologies (SCI) IEEE Transactions on Intelligent Transportation System (SCI) IEEE Access (SCI) ACM Transactions on Intelligent Systems and Technology (SCI) Journal of Visual Communication and Image Representation (SCI) Image and Vision Computing (SCI) Machine Vision Applications (SCI) Optics and Lasers in Engineering (SCI) Sensors (SCI) IET Image Processing (SCI) IET Computer Vision (SCI) IET Intelligent Transport System (SCI) Interactive Learning Environments (SCI) Visual Computer (SCI) Computer Animation and Virtual Worlds (SCI) Future Generation Computer Systems (SCI) Journal on Multimodal User Interfaces (SCI) Journal of Information System and Engineering (SCI) Journal of System Architecture (SCI) Journal of Internet Technology (SCI) Science China Information Sciences (SCI) Computer and Education (SCI & SSCI) Educational Technology and Society (SSCI) International Journal of Computers and Applications (EI)
Conference Reviewer (2010~present)	IEEE Computer Society Conference on Computer Vision and Pattern Recognition IEEE International Conference on Pattern Recognition IEEE International Conference on Image Processing Vision Interface Pacific Graphics Pacific-Rim Symposium on Image and Video Technology Computer Vision, Graphics, Image Processing International Conference on Grid and Pervasive Computing International Computer Symposium National Computer Symposium



■ Awards

Time	Award Title
2005	College of Science and Engineering Teaching Award
2005	National Dong Hwa University Teaching Award
2008	College of Science and Engineering Teaching and Service Award
2009	College of Science and Engineering Teaching Award
2012	College of Science and Engineering Teaching Award
2015	College of Science and Engineering Teaching Award