

Jiung-yao Huang (黃俊堯)



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Born on July 1st, 1961

Educational Background

- **Ph.D., 1993/07~1989/01**, Department of Electrical and Computer Engineering, University of Massachusetts at Amherst, MA, USA.
- **Master, 1988/06~1986/09**, Department of Computer Science, National Tsing-Hua University, Hsing-Chu, Taiwan.
- **B.S., 1983/06 ~ 1979/09**, Department of Applied Mathematics, National Chung-Hsing University, Tai-Chung, Taiwan.

Biography

Jiung-yao Huang is a Professor in Department of Computer Science and Information Engineering at National Taipei University, San Shia, New Taipei City, Taiwan. He earned his PhD degree in Electrical and Computer Engineering from the University of Massachusetts at Amherst in 1993. Prior to receiving his MS degree in Computer Science from Tsing-Hua University, Taiwan, 1988, he was graduated from the Department of Applied Mathematics at Chung-Hsing University, Taiwan, in 1983.

Due to the broad range of his academic background, his research interests include Pervasive Computing, Augmented Reality, Virtual Reality, 3D Computer Graphics, 3D Graphics on Mobile Device, Networked Virtual Reality, and system design and integration. Dr. Huang's industrial working experiences include the following:

- Funded by Institute of Occupational Safety & Health(IOSH), Council Of Labor Affairs, Ministry of Administration Affairs, Taiwan, in 1998 to 2000, he led a research team to implement the computer system for three different types of crane simulators for training, including a three-axes mobile crane motion simulator, a six-axes surrounding screen mobile crane motion simulator and an immersive fixed crane simulator.
- Funded by Cycling and Health Industrial Research Development Center, Taiwan, in 1999, he led a team to design a VR system for the fitness bicycle.
- Funded by Joint Exercise and Training Center, Ministry of Defense, Taiwan, in 2001, he designed and implemented a training cockpit with surrounding display.
- Funded by Integrated Assessment Office, Ministry of National Defense, Taiwan, in 2005, he led a student to redesign and porting an underwater tactical training system from mixture of Linux, Windows and FoxPro platforms into a single platform of Microsoft Windows system.

- Funded by TECO Group Research Institute, TECO Electric & Machinery Co., Ltd., between July 2008 and December 2008, he received a project of porting Linux kernel to a dual core SOC chip.
- Funded by Wei-Dar Electricity Co. Ltd. from 2009 to 2010, he led students to design an optical touch technology for big screen display.
- Funded by Institute for Information Industry, Taiwan, in 2009, he led a team to design an Augmented Reality browser for tourism.
- Funded by Institute for Information Industry (III), Taiwan, in 2009, he helped III to develop a multi-precisions messages coordination through multi-resolution interest management for networked virtual environment.
- Funded by Heyixen Co. Ltd. between Jan. 2010 and April 2010, he led a team to implement a Digitalize HIS Medical Record System.

Research Interests

Pervasive Computing, Augmented Reality, Virtual Reality, 3D Computer Graphics, 3D Graphics on Mobile Device, Networked Virtual Reality

Current Positions

- **Professor**, Department of Computer Science and Information Engineering, National Taipei University, Aug. 2008 – Present.

Employment History

- **Department Head**, Department of Computer Science and Information Engineering, National Taipei University, Aug. 2009 – July. 2012.
- **Visiting Professor**, Institute of Visual Informatics, Universiti Kebangsaan Malaysia, The National University of Malaysia, 9th Nov. ~ 13th Nov. 2011.
- **Visiting Professor**, CUTE Center, National University of Singapore, July 2011~August 2011.
- **Chief Executive Officer**, Preparatory Office of Industry-University Cooperation Center, National Taipei University, Oct. 2008 –July 2009.
- **Section Chief**, Secretary Office, National Taipei University, Oct. 2008 – July 2009.
- **Professor**, Department of Computer Science and Information Engineering, National Taipei University, Jan. 2008 – Present.
- **Secretary of College**, College of Electrical Engineering and Computer Science, National Taipei University, Nov. 2007/11 – July 2008.
- **Assoc. Professor**, Department of Computer Science and Information Engineering, National Taipei University, Feb. 2006 – Jan. 2008.
- **Section Chief of Administrative**, Computer center, National Taipei University, Feb. 2006 – Oct. 2007.
- **Assoc. Professor**, Department of Communications Engineering, National Chung Cheng University, Aug. 2003 – Jan. 2006.

- **Professor** of Department of Computer Science and Information Engineering, Tamkang Univ., Aug. 2002 – Present.
- **Assoc. Professor** of Department of Computer Science and Information Engineering, Tamkang Univ., Aug. 1993 – July 2002.
- **Executive Editor**, TamKang Journal of Science and Engineering, Tamkang Univ., Aug. 2001 – July 2003.
- **Director**, Advanced Digital Research Laboratory, Tamkang University, Taiwan, August 2001 – July 2003.
- **Director**, Cham-Pion Incubator Center, Tamkang University, Taiwan, January 1998 – July 1999.
- **Research Assistant**, Department of Electrical and Computer Engineering, University of Massachusetts at Amherst, MA, USA, January 1989 -- January 1991.
- **Teaching Assistant**, Department of Electrical and Computer Engineering, University of Massachusetts at Amherst, MA, USA, January 1991 -- August 1993.

Industrial Activities

- **Review Committee**, Mobile Device Resource Center-ITSA(行動終端應用資源中心-資訊軟體人才培育推廣計畫), MOE, National Taipei University of Technology, 2013 & 2014.
- **Review Committee**, Germination Program(萌芽計畫), National Cheng Kung University, 2013.
- **Review Committee**, Go Incubation Board for Startup and Acceleration Firms (GISA, 創櫃申請案), Gre Tai Securities Market(GTSM, 財團法人中華民國證券櫃檯買賣中心), 2013.
- **Review Committee**, Industrial Technology Innovation Center Program(鼓勵國內企業在台設立研發中心計畫), Industry Technology Development Program, Ministry of Economic Affairs(經濟部技術處業界科專), 2013.
- **Consultant of 3D Theater Display Mechanism**, Jia-Tai engineering consultancy firms, Aug. 2007 – Dec. 2007.
- **Consultant**, National Defense Integrated Inspection Institute “National Army Module Simulation & Chess-Soldier Project Development Guideline” Senior Modification Group, November 2004 — July 2005.
- **Consultant**, ICE Technology Company, Dec. 2002 – Dec. 2003.
- **Consultant**, The First Division of Chung-Shan Institute of Science & Technology, Feb. 2002 – Dec. 2002.
- **Project Consultant**, National Defence Chess-Soldier & Module Simulation Center, October 2001 – May 2002.
- **Review Committee**, Public Construction Commission, the Executive Yuan, January 1999 – July 2003.
- **Review Committee**, Project of developing hydraulic and electronic six degree-of-freedom motion platform, Department of Industry Technology, Ministry of Economic Affairs, July 1999 - June 2000.

- **Review Committee**, Industry Technology Development Program, Department of Industry Technology, Ministry of Economic Affairs, Taiwan, December 1997 – December 2000.
- **Project Examine Committee**, Institute of Transportation, Ministry of Transportation and Communication, Taiwan, December 1998 – December 2000.
- **Member of Arbitrate Committee for Arcade Game Machine**, Department of Commerce, Ministry of Economic Affairs, Taiwan, August 1997 -- July 1998.
- **Project Consultant**, “Development and application of Imaging and Graphical techniques, the second year of the five years project”, Institute of Information Industry, Taiwan, July 1996 – June 1997.

Grants and Contracts

I. Integrated Projects:

As Principal Investigator

1. “Sub-project II: Research of Video Texture and Adaptive UI for Mobile Augmented Reality in Cloud Environment” (NTD\$ 692,000), Funded by National Science Council, contract no. MOST 103-2221-E-305 -010, Integrated by Tamkang University, August 2014 - July 2015.
2. “Sub-project I: Research and Design of SD-MAR System Architecture under 4G BMS Environment(II)” (NTD\$ 693,000), Funded by National Science Council, contract no. NSC102-2221-E-305 -014, Integrated by National Chung Cheng University, August 2013 - July 2014.
3. “Sub-project I: Research and Design of SD-MAR System Architecture under 4G BMS Environment” (NTD\$ 770,000), Funded by National Science Council, contract no. NSC101-2221-E-305 -001, Integrated by National Chung Cheng University, August 2012 - July 2013.
4. “Sub-project 1: Big Screen Optics Touching Technique, Joint Project of R&D Master Program” (NTD\$ 463,900), Funded by Wei-Dar Electricity Co. Ltd., Integrated by National Taipei University, June 2009 - February 2010.
5. “Research & Design of A Wearable Supersonic Scanning Assistance System(II)” (NTD\$ 606,000), Funded by National Science Council, contract no. NSC95-2221-E-305-007, August 2006 - July 2007.
6. “Sub-project III: The Research and Design of Wearable Supersonic Screening Aid system - Diagnose Breast Supersonic & Tumor Section System on Personal Computer” (NTD\$ 624,000), Funded by National Science Council, contract no. NSC94-2213-E-305-0075, Integrated by National Chung Cheng University, August 2005 - July 2006.
7. “Communication Scientific Improvement Program – Improvement of Pervasive Computing Course” (NTD\$ 1,250,000), Funded by the Ministry of Educational Bureau, Integrated by National Chung Cheng University. January - December 2005.
8. “Sub-project 2: Study of Adopting Virtual Reality Technique to Multi-Languages Tutoring; Apply Network Technologies to Multi-Languages Virtual Classroom Tutoring System- Taking French as an Example - The 3rd Year.” (NTD\$ 305,000), Funded by Ministry of Educational Bureau, Integrated by Tamkang University. September 2003 - August 2004.

9. “Sub-project 2: Study of Adopting Virtual Reality Technique to Multi-Languages Tutoring; Apply Network Technologies to Multi-Languages Virtual Classroom Tutoring System- Taking French as an Example - The 2nd Year.” (NTD\$ 611,000), Funded by Ministry of Educational Bureau, Integrated by Tamkang University. September 2002 - August 2003.
10. “Sub-project 2: Study of Adopting Virtual Reality Technique to Multi-Languages Tutoring; Apply Network Technologies to Multi-Languages Virtual Classroom Tutoring System- Taking French as an Example - The 1st Year.” (NTD\$ 531,000), Funded by Ministry of Educational Bureau, Integrated by Tamkang University. September 2001 - August 2002.
11. “Study and Design a VR System for The Fitness Bicycle.” (NTD\$ 1,100,000), Funded by Ministry of Economical Affairs, Integrated by Bicycle Industrial Research Development Center, July 1999 - June 2000.
12. “Developing and manufacturing the commercial product system of mobile crane and overhead crane – Project 2 : System integration of simulating training system and design of multimedia training software.” (NTD\$ 500,000), Funded by Institute of Occupational Safety & Health, Council Of Labor Affairs, Ministry of Administration Affairs, contract no. IOSH89-S131; Integrated by Taichung Precision Manufacturing Company, August 1999 - May 2000.
13. “Developing and manufacturing the commercial product system of mobile crane and overhead crane – Project 2 : Design of commercializable computer system for simulating training system.” (NTD\$ 600,000), Funded by Institute of Occupational Safety & Health, Council Of Labor Affairs, Ministry of Administration Affairs, contract no. IOSH88-S131; Integrated by National Cheng Kung University, August 1998 - May 1999.
14. “Design and Research of Multiple Participants Virtual Environment – Using Tank Simulator as the Example.” (NTD\$ 340,000) Funded by the Army; Integrated by Chung Chi Computer Corp., December 1996 - July 1997.
15. “Development of the Flight Simulator with Building in DIS Protocol – Project 2 : Design and Implementation of the Computer System for the DIS Building in Flight Simulator Based upon Personal Computer.” (NTD\$ 909,300) Funded by National Science Council, contract no. NSC85-2212-E-032-010; Integrated by Tamkang University, August 1995 - July 1996.

As Co-Investigator

1. “Research of Video Texture Technology for Cloud Computing of Mobile Augmented Reality” (NTD\$ 566,000) Funded by National Science Council, , contract no. NSC102-2221-E-606-009-, Integrated by Tamkang University, August 2013 - July 2014.
2. “Exploration on Smart Device-based Mobile Augmented Reality (SD-MAR) Technology and Applications for 4G Broadband Mobile Systems_the Main Project and Sub-project I: The QoS and Network Performance Evaluation/Analysis of SP-MAR Applications under 4G BMS Environment(II) (在 4G 寬頻行動系統環境下，以智慧型裝置為平台之行動擴增實境技術和應用之探討－總計畫暨子計畫三探討在 4G BMS 環境下所研發 SD-MAR 應用之 QoS 和網路效能評估/分析(II))” (NTD\$ 1,041,000) Funded by National Science Council, , contract no. NSC102-2221-E-009-105, Integrated by National Chiao Tung University, August 2013 - July 2014.
3. “Exploration on Smart Device-based Mobile Augmented Reality (SD-MAR) Technology and Applications for 4G Broadband Mobile Systems_the Main Project and Sub-project I: The QoS

and Network Performance Evaluation/Analysis of SP-MAR Applications under 4G BMS Environment(在 4G 寬頻行動系統環境下，以智慧型裝置為平台之行動擴增實境技術和應用之探討－總計畫暨子計畫三探討在 4G BMS 環境下所研發 SD-MAR 應用之 QoS 和網路效能評估/分析)” (NTD\$ 1,606,000) Funded by National Science Council, , contract no. NSC1101-2221-E-009-043, Integrated by National Chiao Tung University, August 2012 - July 2013.

4. “Breast Supersonic and Tumor Section Diagnosis System Based on Personal Computer—Major Project (1/2)” (NTD\$ 939,000) Funded by National Science Council, Integrated by National Chung Cheng University, August 2005 - July 2006.
5. “Development of the Flight Simulator with Building in DIS Protocol – Project 1 : Study and Design of DIS-based Network Environment” (NTD\$ 198,400) Funded by National Science Council, contract no. NSC85-2212-E-032-004; Integrated by Tam Kang University, August 1995 - July 1996

II. Individual Projects:

As Principal Investigator

1. “Smart Live-View Navigation Technology”, (NTD\$ 559,000) Funded by National Science Council, contract no. NSC100-2221-E-305 -005, August 2011 - July 2012.
2. “Perception Badge”, (NTD\$3,075,100) Founded by CUTE center, National University of Singapore, Singapore, January 2010 – July 2011.
3. “Evaluation of Upgrading Tactical Training System(戰術教練儀研改評估)”, (NTD\$ 959,000) Funded by National Science Council, contract no. NSC99-2623-E-305-001-D, August 2009 - July 2010.
4. “Digitalize HIS Medical Record System(HIS 病歷電子化)”, (NTD\$ 252,100) Funded by Heyixen Co. Ltd., Jan. 2010 - April 2010.
5. “The Research and Design of Context-Aware Mobile Augmented Reality System(3rd year of three-year project) - Research of Multiplayer Mobile Mixed Reality Environment”, (NTD\$ 853,000) Funded by National Science Council, contract no. NSC98-2221-E-305-008, August 2009 - July 2010.
6. “Research of Applying Augmented Reality Techniques to Touring Environment.” (NTD\$ 1,000,000) Funded by Institute for Information Industry, February 2009 - November 2009.
7. “Linux Kernel Porting to a SOC Chip.” (NTD\$ 300,000) Funded by TECO Group Research Institute, TECO Electric & Machinery Co., Ltd., July 2008 - December 2008.
8. “The Research and Design of Context-Aware Mobil Augmented Reality System (The 2nd year of three-year project.” (NTD\$ 547,000) Funded by National Science Council, contract no. NSC97-2221-E-305-008, August 2008 - July 2009.

9. "Design and Implement an Emergency Response Modules." (NTD\$ 500,000) Funded by Institute of Occupational Safety & Health, Council Of Labor Affairs, Ministry of Administration Affairs. August 2008 - December 2008.
10. "The Research and Design of Context-Aware Mobil Augmented Reality System (The 1st year of three-year project)." (NTD\$553,000) Funded by National Science Council, contract no.: NSC96-2221-E-305-009, August 2007 - July 2008
11. "Design and Implementation of Run-Time Infrastructure(RTI) Platform." (NTD\$ 1,400,000) Funded by Chung Shan Institute of Science & Technology, June 2006 - November 2006.
12. "Research of Distributed Interactive Simulation on MilNet." (NTD\$ 704,000) Funded by National Science Council, contract no.: NSC 95-2623-7-305 -002 -D, January 2006 - December 2006.
13. "Analyze and Sketch the Infrastructure of the Synthetic Battlefield." (NTD\$ 594,000) Funded by Integrated Assessment Office, Ministry of National Defense. May 2005 - November 2005.
14. "Research of the real-time service under the HLA specification." (NTD\$ 700,000) Funded by National Science Council, contract no. NSC94-2623-7-194-002, January 2005 - December 2005
15. "The study of dynamically scene management on the massive online players networked virtual environment." (NTD\$ 904,200) Funded by National Science Council, contract no. NSC93-2213-E-194-022, August 2004 - July 2005
16. "Research of the integrated modeling and simulation training environment based upon HLA specification." (NTD\$ 685,000) Funded by Joint Exercise and Training Center, Ministry of National Defense, February 2004 - November 2004
17. "Research of the distance training exercise using military wargaming software." (NTD\$ 650,000) Funded by Joint Exercise and Training Center, Ministry of National Defense. July 2003 - November 2003.
18. "Study of Integrated Architecture of heterogeneous wargaming systems." (NTD\$ 540,000) Funded by Integrated Assessment Office, Ministry of National Defense. July 2003 - November 2003.
19. "Research of the time synchronization issue in the Networked Virtual Environment." (NTD\$ 519,600) Funded by National Science Council, contract no. NSC92-2213-E-194-045, August 2003 - July 2004
20. "Study of multi-precisions messages coordination through multi-resolution interest management." (NTD\$ 850,000) Funded by Institute for Information Industry, April 2003 - December 2003.
21. "Research and Analysis of the C4ISR System Model and Simulation." (NTD\$ 573,000) Funded by National Science Council, contract no. NSC92-2623-7-032-001, January 2003 - December 2003.

22. "Study of the avatar migration problem among the cluster of servers for the Networked Virtual Reality system." (NTD\$ 694,500) Funded by National Science Council, contract no. NSC91-2213-E-032-001, August 2002 - July 2003
23. "Study of Integrating Decision Support Systems using HLA Specification." (NTD\$ 600,000) Funded by Integrated Assessment Office, Ministry of National Defense. July 2002- December 2002.
24. "Research of Timing Management Technique for Computer Wargaming System under HLA Environment." (NTD\$ 495,000) Funded by National Science Council, contract no. NSC91-2623-7-032-003, January 2002 - December 2002
25. "Study of the synchronization mechanism for the CAVE system on a PC Cluster." (NTD\$ 699,800) Funded by National Science Council, contract no. NSC90-2213-E-032-015, August 2001 - July 2002
26. "The Forerunning Study of Synthetic Simulating Environment for Maneuvering Exercise." (NTD\$ 830,000) Funded by Integrated Assessment Office, Ministry of National Defense. July 2001 - November 2001.
27. "Study and Design of the Class Library for the HLA War Gaming Federate." (NTD\$ 510,000) Funded by National Science Council, contract no. NSC90-2623-7-032-003, January 2001 - December 2001.
28. "Design of the Server Cluster for the Scalable Networked Virtual Environment." (NTD\$ 631,700) Funded by National Science Council, contract no. NSC89-2213-E-032-040, August 2000 - July 2001
29. "Study and design of a real-time communication mechanism for the multicomputer-based high-fidelity virtual reality system" (NTD\$ 568,100) Funded by National Science Council, contract no. NSC89-2213-E-032-017, August 1999 - July 2000
30. "Apply the High Level Architecture of USA to Construct the R.O.C. Navy Warfare Simulation Environment" (NTD\$ 415,800) Funded by National Science Council, contract no. NSC88-2623-D-032-003, July 1998 - June 1999
31. "Research on Synchronization Problem between Geometry-based VR and Panoramic VR"(NTD\$ 470,600) Funded by National Science Council, contract no. NSC88-2213-E-032-010, August 1998 - July 1999
32. "Study of Display Consistency Problem between Geometry-based and Image-based VR System" (NTD\$ 600,000) Funded by Institute for Information Industry, September 1998 - July 1999
33. "Operation of Cham Pion Incubator Center" (NTD\$ 2,000,000) Funded by Small and Medium Enterprise Administration, Ministry of Economical Affairs, August 1998 - July 1999.
34. "Study and Design of the Spatial Culling Techniques for the Multiple Participants Virtual World", (NTD\$ 582,000) Funded by Institute for Information Industry, October 1997 - June 1998

35. "Establishment of Cham Pion Incubator Center" (NTD\$ 3,000,000) Funded by Small and Medium Enterprise Administration, Ministry of Economical Affairs, August 1997 - July 1998.
36. "Survey of Military Training Systems and Its Related Technology"(NTD\$ 400,000) Funded by Army, March 1997 - July 1997.
37. "Research & Implement of Distributed Interactive Simulation on Internet" (NTD\$ 500,000) Funded by Information and Communications Research Laboratories G3-86034, Industrial Technology Research Institute, July 1996 - June 1997
38. "Design & Implement of an interface between WWW and 3D real time interactive system"(NTD\$ 500,000) Funded by Information and Communications Research Laboratories K4-85038, Industrial Technology Research Institute, July 1995 - June 1996

As Co-Investigator

1. "Design of the Virtual Reality Module for on-site Emergency Response" (NTD\$ 870,000) Funded by Institute of Occupational Safety & Health, Council Of Labor Affairs, Ministry of Administration Affairs, May 2009 - November 2009
2. "Study of Joint Training of Synthetic Warfare(JTSW) for wargaming system and tank simulator" (NTD\$ 869,500) Funded by National Science Council, contract no. NSC89-2623-D-001-001, July 1999 - June 2000
3. "The Implementation of On-line Examination Banking System" (NTD\$ 791,450) Funded by Institute for Information Industry, September 1997 - June 1998
4. "Design and Implementation of the DIS Network System" (NTD\$ 377,000) Funded by National Science Council, contract no. NSC86-2212-E-032-004, August 1996 - July 1997

III. Senior Student's NSC Research Project

1. "Time Machine of Scenic Browser based on AR Technique(景點導覽之時光機器)", (NTD\$ 47,000) Funded by National Science Council, contract no. NSC 101-2815-C-305-012-E, July 2012- February 2013.
2. "Study of Interaction Between Paper Map and 3D Geographic Data by Augmented Reality Technique(以擴增實境技術整合紙地圖與地理空間之互動)", (NTD\$ 47,000) Funded by National Science Council, contract no. NSC99-2815-C-305-009-E, July 2010- February 2011.
3. "The Application of Augmented Reality on Puzzle Game using Parallel Tracking and Mapping Technique", (NTD\$ 47,000) Funded by National Science Council, contract no. NSC98-2815-C305-003-E, July 2009- February 2010.
4. "Wearable 3D Game System", (NTD\$ 47,000) Funded by National Science Council, contract no. NSC97-2815-C305-004-E, July 2008- February 2009.

Patents and Inventions:

- **Jiung-Yao Huang** and Ji-Ling Wu, "3D Digital Data Glove and its Control System", New invention, Patent number 082797, Taiwan. Patent valid period between Dec. 21, 1996 ~ Jun. 26, 2015.
- **Jiung-Yao Huang**, Jia-Lin Chang, Ai-Jye Lee, "Multi-user 3D Virtual Reality Interaction System Utilizing Protocol Data Units for Data Communication Among WWW Server and Clients", USA Patent Invention Register Series No: 6,226,6698 B1. Patent valid period between Dec. 1998 ~ Dec. 2018.
- **Jiung-Yao Huang**, "A Method and Mechanism to Translate Parallel Port into Game Port", New invention, Patent number 084680, Taiwan. Patent valid period between Mar. 01, 1997 ~ Aug. 30, 2016.
- **Jiung-Yao Huang**, Jia-Lin Chang and Ai-Jieh Lee, "A Multi-user Interoperation System over the Web Environment". New invention, Patent number 101891, Taiwan. Patent valid period between Mar. 21, 1999 ~ Dec. 18, 2017.
- **Jiung-Yao Huang** and Jia-Lin Chang, "3D Real-Time Database System". New invention, Patent number 126451, Taiwan. Patent valid period between Jan. 21, 2001 ~ Jan. 29, 2016.
- **Jiung-Yao Huang** "A Method and Device to Synchronize Networked Computers through Serial Ports", New invention, Patent number 153129, Taiwan. Patent valid period between Mar. 21, 2002 ~ Oct. 19, 2020. (Funded by Board of Laborer in Executive Yuan, Taiwan, under contract no. IOSH89-S131)
- **Jiung-Yao Huang** and Hua-Sheng Bai, "A Display Synchronization Method for the Multi-Screens Virtual Reality", New invention, Patent number 187907, Taiwan. Patent valid period between Oct. 01, 2003 ~ Mar. 24, 2022. (Funded by National Science Council, Taiwan, under contract no. NSC90-2213-E-032-015)

Publications

Journal Papers

International Journal

- 1 **Jiung-yao Huang** and Chung-Hsien Tsai, "A Mobile Augmented Reality Learning Platform for Local Culture Course", submitted to Journal of Educational Technology & Society, 2nd Oct. 2014. **(SCI, EI)**
- 2 **Jiung-yao Huang**, Chung-Hsien Tsai, Shing-Tsaan Huang, "Next Generation of GPS Navigation System", Communication of ACM, Volume 55 Issue 3, March 2012, pp.85-93. **(SCI, EI) (Impact Factor=2.511@2012)**
- 3 **Jiung-yao Huang**, Huan-Chao Keh, Wai Shu-Shen, Ji-jen Wu, and Chung-Hsien Tsai, "Research of Place-based 3D Augmented Community-Taking The 3D Virtual Campus as an Example", Journal of Computers, Vol 6, No 5, May 2011, pp.705-712. **(EI)**
- 4 M.C. Tung, **Jiung-Yao Huang**, H.C. Keh, S.S. Wai, "The Initiative of Distance e-Training System for Advanced Military Education in Taiwan". Tamkang Journal of Science and Engineering – An International Journal, Vol. 12, No. 4, 2009, pp.489-498. **(EI)**
- 5 M.C. Tung, **Jiung-Yao Huang**, H.C. Keh, S.S. Wai, "Design of Distance Learning Course for Advanced Military Education - Taking Join Operation Course as an Example", Computers &

- Education, An International Journal, Elsevier, Vol. 53, Issue 3, November 2009, pp. 653-666. **(SSCI, SCI, EI) (Impact Factor=2.775@2012)**
- 6 **Jiung-Yao Huang**, Ming-Chih Tung, Huan-Chao Keh, Ji-jen Wu, Kun-Hang Lee, Chung-Hsien Tsai, “A 3D Campus on the Internet – A Networked Mixed Reality Environment”, Transactions on Edutainment II, LNCS 5660, Springer, 2009, pp. 282–298. **(EI)**
 - 7 H.C. Keh, **Jiung-Yao Huang**, K.M. Wang, L. Hui, S.S. Wai, and J.J. Wu, “Distance-Learning for Advanced Military Education-Using Wargame Simulation Course as an Example”, International Journal of Distance Education Technologies, Vol. 6, No. 4, 2008, pp.50-61. **(EI)**
 - 8 **Jiung-Yao Huang**, C.H. Tsai, “A Wearable Computing Environment For The Security Of A Large-Scale Factory”, J.A. Jacko (ed.): *Human-Computer Interaction – Interaction Platforms and Techniques*, Lecture Notes in Computer Science, LNCS 4551, July 2007, pp.1113-1122. **(EI)**
 - 9 **Jiung-Yao Huang**, “Design of the Decision Support System for the Joint Training Simulation”, The Journal of Defense Modeling and Simulation, SCS, Vol. 4, No. 1, Jan. 2007, pp.43-53.
 - 10 **Jiung-Yao Huang**, M. C. Tung, K. M. Wang, and M. C. Lee, “Smart Time Management – The Unified Time Management Mechanism”, COMPUTER STANDARDS & INTERFACES, Elsevier Science, Volume 27, Issue 2, April 2005, pp. 149-161. **(EI, SCD)(Impact Factor=0.978@2012)**
 - 11 **Jiung-Yao Huang**, H.C. Lu, H. Lin, and K.W. Shu, “Design a PC-CAVE Environment by Using the Parallel Rendering Approach”, D.K. Baik(ed) : *Systems Modeling and Simulation: Theory and Applications*, Lecture Notes in Computer Science, Volume 3398, Feb 2005, Pages 578 - 588. **(EI)**
 - 12 **Jiung-Yao Huang**, M. C. Tung, H. Lin, and M. C. Lee, “An Approach for Unified Time Management Mechanism for HLA”, Simulation: Transactions of the Society for Modeling and Simulation International, Volume 81, Issue 1, January 2005, pp.45 - 56. (Funded by National Science Council, Taiwan, under contract no. NSC91-2623-7-032-003) **(SCI, EI)(Impact Factor=0.692@2012)**
 - 13 **Jiung-Yao Huang**, M.C. Tung, K.M. Wang, and M.C. Lee, “A User Interface for the Visual-Impairment”, Displays, Elsevier Science, Vol. 25, Issue 4, October 2004, pp. 151-157. **(EI, SCD) (Impact Factor=1.101@2012)**
 - 14 **Jiung-Yao Huang**, Kuei Min Wang, and Kuan-Wen Hsu, “The Frame Synchronization Mechanism for the Multi-Rendering Surrounding Display Environment”, Displays, Elsevier Science, Vol. 25, Issue 2, August 2004, pp.89-98.(Funded by National Science Council, Taiwan, under contract no. NSC90-2213-E-032-015) **(EI, SCD) (Impact Factor=1.101@2012)**
 - 15 **Jiung-Yao Huang**, “An Omni-Directional Stroll-based Virtual Reality Interface and Its Application on Overhead Crane Training”, IEEE Transactions on Multimedia, Vol. 5, Issue 1, March 2003, pp.39-51.(Funded by The Board of Laborer in Executive Yuan, Taiwan, under contract no. IOSH89-S131)**(EI, SCD) (Impact Factor=1.754@2012)**
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Honors and Awards

- “Manufacturing Application Award” & “ Open Source Masterpiece”, 2009 National University Embedded System Design Competition; Advising Professor, Topic: Mobile Campus Live Platform, 2009.
- 2001 School Year Research Incentive, Tamkang University, 2001
- 2000 School Year Research Incentive, Tamkang University, 2000
- Superior Research Incentive, National Science Council (NSC), 1998
- The Best Award, Fifth Pacific Conference on Computer Graphics and Applications, 1997.

Membership in Professional Societies

- IEEE (The Institute of Electrical and Electronics Engineers), Voting member, January 1990 – Today.
- ACM (Association for Computing Machinery), Voting member, January 1990 – 2012.
- IPPR(Image Processing & Pattern Recognition Society)(中華民國影像處理與圖形識別學會), R.O.C., Member, August 1996 - Today.
- TACC(Taiwan Association of Cloud Computing)(台灣雲端計算學會), Member, January 2013 - Today.
- Institute of Information & Computing Machinery, Member, January 1999 - Today.
- Taiwan Smart Living Space Association, Member, 2009 - Today.
- AIDE(Advanced Interactive Digital Entertainment) Association, Chairman, October 2010 – September 2012.
- The Society for Computer Simulation, Member, January 1996 – 2000.
- itSMA (IT-enabled Service Management Association), AR Special Internet Group (ART SIG), Organizer, 2009 - 2011.

Other Professional Activities

A. Keynotes

1. “Historical Time Tunnel - An AR-based Local Culture Learning Platform”, The 1st International Visual Informatics Seminar 2012, Malaysia, 12th Dec. ~ 13th Dec. 2012.
2. “Omniguider: A Live-View Navigator and Real World Browser”, The 2nd International Visual Informatics Conference 2011, Malaysia, 9th Nov. ~ 13th Nov. 2011.

3. “Omniguider: A Live-View Navigator and Real World Browser”, Defence, Science & Research (DSR 2011) Conference, Singapore, 3rd Aug. ~ 5th Aug. 2011.

B. Editors of Journals

1. Associate Editor, ACM Computer in Entertainment, (2010 ~ 2012)
2. Executive Editor, Tamkang Journal of Science and Engineering, (2001~2003)

C. Reviewer of Journals and Transactions

1. ACM Computer in Entertainment
2. IEEE Transactions on Computers
3. Journal of Defense Modeling and Simulation
4. IEEE Transactions on Multimedia
5. IEEE Transactions on Mobile Computing
6. International Journal of Human Computer Studies (IJHCS)
7. Journal of Information Science and Engineering(JISE)
8. IEEE Internet Computing Magazine
9. Tamkang Journal of Science and Engineering

D. Committee Member of Academic Institute or Workshop

1. Publication Co-Chair, Second International Symposium of Chinese CHI 2014, April 2014.
2. Program Committee, Defence, Science & Research (DSR 2011) Conference, Singapore, Aug. 2011.
3. Research Demo Co-Chair, IEEE VR2010, Singapore, March 2011.
4. Technical Program Committee (TPC) for the 2010 Workshop on Digital Content, Digital Life and Human Computer Interaction, ICS 2010, Taipei, Taiwan, Dec. 2010.
5. Program Committee, iCube2010, Tainan, Taipei, Taiwan, Dec. 2010.
6. General Co-Chair, ACM NetGames 2010, Taipei, Taiwan, Nov. 2010.
7. Local Organization Co-Chair, ACM ACE2010, Taipei, Taiwan, Nov. 2010.

8. Program Committee, Computer Graphic Workshop 2010, HsinChu, Taiwan, July 2010.
9. Program Committee Member, The 3rd International Workshop on Peer-to-Peer Networked Virtual Environments, Shenzhen, China, 2009
10. Workshop Co-chair, National Computer Symposium, Taipei, Taiwan, November 2009
11. Program Committee Member, The 2nd International Workshop on Peer-to-Peer Networked Virtual Environments, Victoria, AUSTRALIA, Dec. 8-10, 2008
12. Track coordinator, Track Title: Virtual Reality and Simulation, 2006 Winter Simulation Conference, Monterey, CA, USA, Dec. 3-7, 2006.