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Associate Professor

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Jun. 15, 2017

Wei-Ta Chu received the B.S. and M.S. degrees in Computer Science from National Chi Nan University, Taiwan, in 2000 and 2002, and received the Ph.D. degree in Computer Science from National Taiwan University, Taiwan, in 2006. He is now an Associate Professor in the Department of Computer Science and Information Engineering, National Chung Cheng University, Taiwan. His research interests include digital content analysis, multimedia indexing, digital signal process, and pattern recognition.

He won the Best Full Technical Paper Award in ACM Multimedia 2006. He was awarded the Distinguished Alumni Award presented by National Chi Nan University in 2014, Best GOLD Member Award presented by IEEE Tainan Section in 2013, the K. T. Li Young Researcher Award presented by Institute of Information & Computing Machinery in 2012, and the Young Faculty Awards presented by National Chung Cheng University in 2011. His advised master students received several thesis awards from Institute of Information & Computing Machinery and the Chinese Institute of Electrical Engineering. He was a visiting professor at Nagoya University from January to March 2017, and a visiting scholar at Digital Video & Multimedia Laboratory, Columbia University, from July to August 2008. He is an associate editor of IEICE Transactions on Information and Systems since 2016. He serves as Publication Co-Chair of International Computer Symposium 2016, Publication Co-Chair of IEEE International Conference on Visual Communications and Image Processing 2018, and Program Co-Chair of International Conference on Multimedia Modelling 2020.

Contents

1. Personal Information	4
2. Education.....	4
3. Academic Employment	4
4. Course Taught	5
5. Research Interests.....	6
6. Honors & Awards.....	6
7. Research Grants.....	7
7.1 Research Project Grants	8
7.2 Education Reform Project Grants.....	9
7.3 International Cooperation Project Grants	9
7.4 Travel Grants.....	10
8. Paper Reviewing.....	10
8.1 International Conferences.....	10
8.2 International Journals	11
8.3 Local Conferences	12
9. Professional Memberships.....	13
10. Journal Editorships	13
11. Technical Program Committee Member	14
12. Conference Organization and Chairing	15
13. Talks	16
14. Publications	18
14.1 PhD Dissertation.....	18
14.2 Master Thesis	18
14.3 Journal Papers.....	18
14.4 Book Chapters	20
14.5 International Conferences	21

14.6	Local Conferences	27
14.7	Demonstration	28
14.8	Others	28
15.	System Development and Online Demo	28
16.	Student Advised	29
16.1	PhD Students	29
16.2	Master Students	29
16.3	Undergraduate Students.....	32
16.4	Interns	32
17.	Professional Services.....	32
18.	Oral Defense Committee Member.....	33
18.1	Doctoral Dissertations	33
18.2	Master Theses.....	33

1. Personal Information

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2. Education

Sep. 2002~ Jun. 2006 **Ph.D.** **Computer Science and Information Engineering**
National Taiwan University, Taipei, Taiwan, R.O.C
Ph.D. Dissertation: *Semantics-based Content Analysis and Organization in Movies and Sports Videos*
Advisor: Prof. Ja-Ling Wu

Sep. 2000~ Jun. 2002 **M.S.** **Computer Science and Information Engineering**
National Chi Nan University, Nantou, Taiwan, R.O.C.
Master Thesis: *Exploring Computed Synchronization and its Applications for Navigated Hypermedia Documents*
Advisor: Prof. Heng-Yow Chen

Sep. 1996~ Jun. 2000 **B.S.** **Computer Science and Information Engineering**
National Chi Nan University, Nantou, Taiwan, R.O.C.

3. Academic Employment

Aug. 2017~ **Professor**
Dept. of Computer Science and Information Engineering
National Chung Cheng University, Chiayi, Taiwan, R.O.C.

Aug. 2012~Jul. 2017 **Associate Professor**

- Dept. of Computer Science and Information Engineering
National Chung Cheng University, Chiayi, Taiwan, R.O.C.
- Aug. 2013~Jul. 2016 **Director**
Research Liaison Division, Office of Research and
Development, National Chung Cheng University
(中正大學研究發展處建教合作組組長)
- Aug. 2015~Jan. 2016 **Director**
Academic Development Division, Office of Research and
Development, National Chung Cheng University
(中正大學研究發展處學術發展組組長)
- Aug. 2007~Jul. 2012 **Assistant Professor**
Dept. of Computer Science and Information Engineering
National Chung Cheng University, Chiayi, Taiwan, R.O.C.
- Jul. 2008~Aug. 2008 **Visiting Scholar**
Digital Video and Multimedia Laboratory
Columbia University, New York, USA
- Jul. 2006~Jul. 2007 **Postdoctoral Fellow**
Grad. Institute of Computer Science and Information
Engineering
National Taiwan University, Taipei, Taiwan, R.O.C.
- Aug. 2006~Jul. 2007 **Adjunct Assistant Professor**
Dept. of Teaching Chinese as a Second Language,
Chung Yuan Christian University, Chungli, Taiwan, R.O.C.
- Feb. 2004~Jan. 2005 **Teaching Assistant**
Dept. of Computer Science and Information Engineering
National Taiwan University, Taipei, Taiwan, R.O.C.
- Feb. 2000~Jun. 2002 **Teaching Assistant**
Dept. of Computer Science and Information Engineering
National Chi Nan University, Nantou, Taiwan, R.O.C.

4. Course Taught

- Probability: fall 2017, fall 2016
- Statistics: spring 2017, spring 2016
- Introduction to Optimization: spring 2017, spring 2016, spring 2015, spring 2014, spring 2013, spring 2012

- Multimedia Content Analysis: fall 2017, fall 2016, fall 2015, fall 2014, fall 2012, fall 2011, fall 2010, fall 2009, fall 2008, fall 2007
- Computer Project (II): spring 2014, fall 2013
- Special Topics on Computer Science (I)(III)(V): spring 2014, fall 2013
- Visual Quality Assessment: fall 2013
- Engineering Mathematics: fall 2015, fall 2014, fall 2013, fall 2012
- Introduction to Multimedia System: spring 2011, spring 2010, spring 2009, spring 2008
- Fundamentals of Digital Signal Processing: spring 2013, spring 2012, spring 2011, spring 2010, spring 2009, spring 2008
- Linear Algebra: fall 2011, fall 2010, fall 2009, fall 2008, fall 2007
- Chinese Information Processing: spring 2006 (Chung Yuan Christian Univ.)
- Introduction to Information System and Network: fall 2006 (Chung Yuan Christian Univ.)

5. Research Interests

Multimedia information retrieval, multimedia big data, deep learning, multimedia systems, digital signal processing, and pattern recognition.

6. Honors & Awards

- | | |
|-----------|---|
| 2016~2018 | Outstanding Young Scholar Award, Ministry of Science and Technology of Taiwan (科技部優秀年輕學者研究計畫) |
| 2014 | Advisor of Excellent Master Thesis Award, Institute of Information & Computing Machinery (指導游家祥同學獲中華民國資訊學碩士論文獎佳作) |
| 2014 | Outstanding Alumni Award, National Chi Nan University (國立暨南國際大學傑出校友) |
| 2013 | IEEE Tainan Section Best GOLD Member Award |
| 2013 | Advisor of Excellent Master Thesis Award, Institute of Information & Computing Machinery (指導張豐麒同學獲中華民國資訊學碩士論文獎佳作) |
| 2013 | Excellent Work Award, Y.S. Foundation (指導蕭凡凱、林思岑、陳弘毅) |

- 同學獲第十屆育秀盃創意獎軟體應用類佳作)
- 2012 K. T. Li Young Researcher Award (李國鼎青年研究獎)
- 2012 Young Researcher Award, National Chung Cheng University (國立中正大學青年學者獎)
- 2011 Advisor of Excellent Master Thesis Award, Institute of Information & Computing Machinery (指導曾聖鈞同學獲中華民國資訊學碩士論文獎佳作)
- 2009 Advisor of Master Thesis Award, The Chinese Institute of Electrical Engineering (指導林家弘同學獲中國電機工程學會青年論文獎 第二名)
- 2008 Best PhD Thesis Award, Chinese Image Processing and Pattern Recognition Society (中華民國影像處理與圖形識別學會第一屆博士最佳論文獎 優等)
- 2008 The Exploration Research Award, Pan Wen Yuan Foundation (潘文淵文教基金會考察研究獎)
- 2007 Excellent paper award of the 20th Computer Vision, Graphics, and Image Processing Conference (佳作論文獎)
- 2006 Best technical full paper award, ACM Multimedia Conference
- 48 papers were accepted among 292 full paper submissions (16% acceptance ratio), 3 among these 48 papers were selected as best paper candidates, and only 1 paper was awarded as the best technical full paper.
- 2006 Best Ph.D. Thesis Award from Institute of Information & Computing Machinery (中華民國資訊學會博士論文優等獎)
- Only one Ph.D. thesis in computer science was awarded every year.
- 2006 Excellent work of the 1st Acer Long-term Smile Contest (第一屆龍騰微笑競賽佳作)
- Only 5 among 147 works are awarded
- 2004 IEEE Best Student Paper Award of Consumer Electronics Society - Taipei Chapter and Signal Processing Society - Taipei Chapter.
- 2001 Chung Hwa Rotary Educational Foundation Scholarship (中華扶輪獎學金)
- 2000 全國大專專題競賽佳作

7. Research Grants

7.1 Research Project Grants

Duration	Work	Project Name
Aug. 2016~ Jul. 2018	主持人	Analyzing visual styles in images based on deep learning 基於深度學習分析影像的視覺風格 科技部(MOST 105-2628-E-194 -001-MY2) (優秀年輕學者研究計畫)
Jul. 2017~ Feb. 2018	指導教授	Sketch recognition using deep learning 科技部(MOST 106-2813-C-194-042-E)
Aug. 2014~ Jul. 2017	主持人	Employing the wisdom of crowd to intelligent multimedia analysis 應用群眾智能於智慧型多媒體分析 科技部(MOST 103-2221-E-194-207-MY3)
Jul. 2016~ Feb. 2017	指導教授	海報視覺資訊與電影資料庫之關聯性分析 科技部(MOST 105-2815-C-194-039-E)
Aug. 2015~ Jul. 2016	主持人	Automatic food image captioning and multilingual menu generation 自動生成食物影像文字描述與多語菜單 科技部(MOST 104-2221-E-194-014)
Apr. 2015~ Sep. 2015	共同主持 人	犯罪防治巨量資料應用研究推動之先期規劃計畫－犯罪防治巨量 資料應用研究推動之先期規劃計畫 科技部(MOST 104-2420-H-194-007)
Apr. 2015~ Sep. 2015	共同主持 人	巨量資料於地震防減災之分析應用－巨量資料於地震防減災之分 析應用 科技部(MOST 104-2119-M-194-003-)
Aug. 2012~ Jul. 2014	主持人	Correlation analysis, retrieval, and privacy preserving of social media 社群媒體之關聯性分析、檢索與隱私保護 國科會(NSC 101-2221-E-194-005-MY2)
Jul. 2012~ Aug. 2013	主持人	Vehicle detection software for car driving videos 行車記錄器影片中的車輛偵測軟體 工研院
Jul. 2012~ Feb. 2013	指導教授	Image and video analysis based on aesthetics framework 基於美學架構之影像及影片美學分析 國科會(NSC 101-2815-C-194-018-E)
Aug. 2011~ Jul. 2014	共同主持 人	網宇實體之社交社群智慧研究 國科會(NSC 100-2221-E-194-027-MY3)
Aug. 2011~ Jul. 2012	主持人	Mining repetitive patterns in images and its applications 影像中的重複性結構探勘與其應用 國科會(NSC 100-2221-E-194-061-)
Nov. 2010~ Dec. 2011	主持人	Investigation and test of video clustering 影片分群機制研究與測試

		工研院
Aug. 2010~ Jul. 2011	主持人	Video and audio content copy detection 視訊與音訊內容複製偵測 國科會(NSC 99-2221-E-194-036-)
Aug. 2009~ Jul. 2010	主持人	Face clustering and annotation in consumer multimedia content 消費性多媒體內容中的人臉分群與標註 國科會(NSC 98-2221-E-194-056-)
Jun. 2009~ Mar. 2010	主持人	Software for video copy detection 視訊複製偵測軟體 工研院
Dec. 2008~ Aug. 2009	主持人	Investigation of automatic representative photo selection and smart thumbnail 自動化代表性照片選取與智慧型縮圖處理流程方法與技術分析使用報告 工研院
Aug. 2008~ Jul. 2009	主持人	Organization and presentation system for travel experience 旅遊經驗之組織與呈現系統 國科會(NSC 97-2221-E-194-050-)
Oct. 2007~ Jul. 2008	主持人	On using association rule mining in sports event detection 應用關聯法則探勘於運動事件偵測 國科會(NSC 96-2218-E-194-005-)
Jan. 2008~ Jun. 2008	協同主持 人	Survey and Design of Analysis/Presentation Modules in Intelligent Digital Frame 智慧型數位相框中的分析與呈現模組之探討與設計 群璨電腦有限公司

7.2 Education Reform Project Grants

Duration	Work	Project Name
Mar. 2009~ Feb. 2010	課程編撰	教育部資通訊科技人才培育先導型計畫 車載資通訊
Mar. 2009~ Feb. 2010	授課教師	教育部資通訊重點領域課程推廣計畫 課程名稱：多媒體系統
Sep. 2007~ Dec.2007	協同主持人	2007年惠普科技高等教育教學改善計畫

7.3 International Cooperation Project Grants

Duration	Work	Project Name
Jul. 2014	主持人	短訪計畫(邀請國際科技人士短期訪問) – 名古屋大學 Ichiro Ide 教授 (MOST 103-2912-I-194 -520)
Feb. 2014	主持人	台灣奧地利雙邊大規模跨媒體事件探勘研討會 (Taiwan-Austria Joint Symposium on Large-Scale Cross-Media Event Mining)

7.4 Travel Grants

9th ACM International Workshop on Multimedia Information Retrieval, Augsburg, Germany, Sep. 2007. NSC Travel Grant

8. Paper Reviewing

8.1 International Conferences

ACCV Workshop on Computer Vision Technologies for Smart Vehicle – 2016
ACM International Conference on Internet Multimedia Computing and Service – 2013
ACM International Conference on Multimedia Retrieval – 2012, 2013, 2015, 2016, 2017
ACM Multimedia Conference – 2007, 2012, 2013, 2014, 2016, 2017
ACM Multimedia Systems Conference – 2015, 2017
ACM SIGGRAPH Asia – 2009
Asia-Pacific Signal and Information Processing Association Annual Summit and Conference – 2013, 2015
Conference on Technologies and Applications of Artificial Intelligence – 2013, 2014, 2016
Asian Conference on Computer Vision – 2009
IEEE International Conference on Computer Vision – 2017
IEEE International Conference on Image Processing – 2015, 2016
IEEE International Conference on Multimedia & Expo – 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017
IEEE International Conference on Pattern Recognition – 2012, 2016
IEEE International Symposium on Circuits and Systems – 2005, 2008, 2013
IEEE International Symposium on Multimedia – 2016
IEEE International Workshop on Mobile Multimedia Computing – 2014, 2015, 2016

IEEE International Conference on Visual Communications and Image Processing Conference – 2011, 2012, 2013, 2014, 2015, 2016, 2017
IEEE Pacific Visualization – 2010
IEEE Visual Analytics Science and Technology – 2014
International ACM Workshop on Crowdsourcing for Multimedia – 2014, 2015
International Computer Symposium – 2016
International Conference on Advances in Multimedia – 2012, 2013, 2014, 2015, 2016
International Conference on Communications and Electronics – 2014
International Conference on Cyber-Enabled Distributed Computing and Knowledge Discovery – 2010
International Congress on Image and Signal Processing – 2010, 2012, 2013, 2014
International Conference on Internet Multimedia Computing and Service – 2013, 2014, 2015
International Conference on Multimedia Modeling – 2010, 2012, 2013, 2015, 2016, 2017
International Conference on Network-Based Information Systems – 2010
International Conference on Pattern Recognition – 2014
International Conference on Soft Computing and Pattern Recognition – 2010
International Symposium on Pervasive Systems, Algorithms, and Networks – 2017
International Wireless Internet Conference – 2010
International Workshop on Cooking and Eating Activities – 2015, 2016, 2017
National Conference on Multimedia Technology – 2016
Pacific Conference on Computer Graphics and Applications – 2008, 2013
Pacific-Rim Conference on Multimedia – 2013, 2014, 2015, 2016
Pacific-Rim Symposium on Image and Video Technology – 2010, 2013, 2015
The International Conference on Advanced Technologies for Communications – 2014

8.2 International Journals

ACM Transactions on Embedded Computing Systems – 2012
ACM Transactions on Intelligent Systems and Technology – 2015
ACM Transactions on Multimedia Computing, Communications, and Applications – 2010, 2014, 2015
Advances in Multimedia – 2011
Applied Computational Intelligence and Soft Computing – 2014
Computers & Graphics – 2013
Computer Vision and Image Understanding – 2015
EURASIP Journal on Advances in Signal Processing – 2009, 2010
EURASIP Journal on Audio, Speech, and Music Processing – 2011

IEEE Communications Magazine – 2006
IEEE Multimedia – 2010, 2012, 2013, 2017
IEEE Transactions on Biomedical Circuits and Systems – 2017
IEEE Transactions on Circuits and Systems for Video Technology – 2008, 2010, 2011, 2012, 2013, 2014, 2017
IEEE Transactions on Human-Machine Systems – 2015
IEEE Transactions on Image Processing – 2009, 2010, 2011, 2013
IEEE Transactions on Information Theory in Biomedicine – 2009
IEEE Transactions on Knowledge and Data Engineering – 2010, 2015, 2016
IEEE Transactions on Multimedia – 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016
IEEE Transactions on Systems, Man, and Cybernetics -- Part C: Applications and Reviews – 2010
IEEE Journal of Biomedical and Health Informatics – 2016
IEICE Transactions on Information and Systems – 2011, 2014, 2015
Image and Vision Computing – 2015
Information Sciences – 2013, 2014
International Journal of Multimedia Information Retrieval – 2013
International Journal of Semantic Web and Information Systems – 2017
Journal of Information Science and Engineering – 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015
Journal of Multimedia – 2010, 2011
Journal of Multimodal User Interfaces – 2013
Journal of Signal and Information Processing – 2010, 2011
Journal of Visual Communication and Image Representation – 2007, 2008, 2012, 2013, 2014, 2015
Machine Vision and Applications – 2013, 2014, 2016
Multimedia Systems – 2009, 2014, 2016
Multimedia Tools and Applications – 2014, 2015, 2016, 2017
Neurocomputing – 2010, 2011, 2012, 2014, 2015, 2017
Signal, Image and Video Processing – 2013, 2014
WSEAS Transactions on Signal Processing – 2011

8.3 Local Conferences

台灣軟體工程研討會 – 2017
全國電信研討會暨春季消息理論與通訊研討會 – 2017
彰雲嘉大學校院聯盟學術研討會 – 2015
National Symposium on Telecommunications (全國電信研討會) – 2011, 2012
Conference on Technologies and Applications of Artificial Intelligence (TAAI) – 2011,

2012, 2013, 2014

Conference on Computer Vision, Graphics, and Image Processing (電腦視覺、圖學暨影像處理研討會) – 2011, 2012, 2014, 2015

National Computer Symposium (全國計算機會議) – 2009, 2013

Workshop on Consumer Electronics (民生電子研討會) – 2010

9. Professional Memberships

- 2015.09~present: Life Member, Asia-Pacific Signal and Information Processing Association (APSIPA)
- 2016.07~present: Life Member, 台灣電機電子工程學會 (Taiwan Institute of Electrical and Electronic Engineering)
- 2012.08~present : Life Member, 中華民國資訊學會 (Institute of Information & Computing Machinery).
- 2009~present : Member, 中國電機工程學會 (The Chinese Institute of Electrical Engineering)
- 2009~present : Member, 中華民國影像處理與圖形識別學會 (Chinese Image Processing and Pattern Recognition Society)
- 2009~present : Voting member, IEEE Multimedia Communications Technical Committee
- 2008~present : Member, ACM (Association for Computing Machinery)
- 2017~present : Senior Member, IEEE (Institute of Electrical and Electronics Engineers)
- 2007~2017 : Member, IEEE (Institute of Electrical and Electronics Engineers)
- 2004.01~2006.12 : Student member, IEEE (Institute of Electrical and Electronics Engineers)
- 2006.06~2012.07 : Member, 中華民國資訊學會 (Institute of Information & Computing Machinery)

10. Journal Editorships

- Associate Editor, IEICE Transactions on Information and Systems, 2016~2020
- Editorial Board Member, *Journal of Signal and Information Processing*, Scientific Research Publishing Inc., USA, (<http://www.scirp.org/journal/jsip/>),

Aug. 2010~present

11. Technical Program Committee Member

ACM International Conference on Internet Multimedia Computing and Service – 2013

ACM International Conference on Multimedia Retrieval – 2012, 2013, 2015, 2016, 2017

ACM Multimedia Conference – 2007, 2012, 2013, 2014, 2016, 2017

IEEE International Conference on Computer Vision – 2017

IEEE International Conference on Image Processing – 2015, 2016, 2017

IEEE International Conference on Multimedia & Expo – 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017

IEEE International Symposium on Consumer Electronics – 2013

IEEE International Symposium on Multimedia – 2016

IEEE International Workshop on Mobile Multimedia Computing – 2014, 2015, 2016

IEEE International Conference on Visual Communications and Image Processing Conference – 2011, 2012, 2013, 2014, 2015, 2016, 2017

International Conference on Communications and Electronics – 2014

International Congress on Image and Signal Processing – 2010, 2012, 2013, 2014

International Conference on Internet Multimedia Computing and Service – 2013, 2014, 2015

International Conference on Multimedia Modeling – 2012, 2013, 2015, 2016, 2017

International Conference on Pattern Recognition – 2014, 2016

International Workshop on Cooking and Eating Activities – 2015, 2016, 2017

IPPR Conference on Computer Vision, Graphics, and Image Processing – 2012, 2013

National Computer Symposium, Workshop on Image and Pattern Recognition – 2013

Pacific-Rim Conference on Multimedia – 2013, 2014, 2016

Pacific-Rim Symposium on Image and Video Technology – 2010, 2013, 2015

The Conference on Technologies and Applications of Artificial Intelligence – 2011, 2012, 2013, 2014, 2015, 2016

The International Conference on Advances in Multimedia – 2012, 2013, 2014, 2015

The International Conference on Advanced Technologies for Communications – 2014

The Annual International Wireless Internet Conference – 2010

The International Conference on Network-Based Information Systems – 2010

The International Conference on Complex, Intelligent, and Software Intensive Systems – 2010

12. Conference Organization and Chairing

- Program Co-Chair, International Conference on Multimedia Modelling, 2020.
- Publication Co-Chair, IEEE International Conference on Visual Communications and Image Processing, 2018.
- Organizer, International Workshop on Multimedia Artworks Analysis, 2017. (in conjunction with ICME 2017)
- Session chair, ACM International Conference on Multimedia Retrieval, 2017. (Multimedia Applications)
- Publication Co-Chair, International Computer Symposium, 2016.
- Organizer, International Workshop on Multimedia Artworks Analysis, 2016. (in conjunction with ICME 2016)
- Organizer, International Workshop on Mobile Media Big Data Analytics and Application, 2016. (in conjunction with BigMM 2016)
- Special Session Organizer, IPPR Conference on Computer Vision, Graphics, and Image Processing, 2016. (*Deep Learning for Multimedia*)
- Organizer, 彰雲嘉大學校院聯盟學術研討會, 2015.
- Special Session Organizer, International Conference on Multimedia Modelling Conference, 2016. (*Semantics Discovery from Multimedia Big Data*)
- Special Session Organizer, Pacific-Rim Conference on Multimedia, 2015. (*Geospatial and Temporal Social Multimedia Analysis*)
- Session chair, International ACM Workshop on Crowdsourcing for Multimedia, 2014. (Crowdworkers' Motivation)
- Organizer, France Taiwan Multimedia Workshop, 2014.
- Organizer, Taiwan-Austria Joint Seminar on Large-Scale Cross-Media Event Mining, 2014.
- Session chair, Asia-Pacific Signal and Information Processing Association Annual Summit and Conference, 2013. (*Multimedia Signal Processing and Applications*)
- Workshop Organizer, ACM International Workshop on Crowdsourcing for Multimedia, 2013. (in conjunction with ACM Multimedia 2013)
- Organizer, Taiwan-Austria Joint Seminar on Intelligent Multimedia Technologies, 2013.
- Special Session Organizer, International Conference on Multimedia Modeling, 2013. (*Multimedia Retrieval and Management with Human Factors*)

- Workshop Organizer, ACM International Workshop on Crowdsourcing for Multimedia, 2012. (in conjunction with ACM Multimedia 2012)
- 籌備委員, AI Forum, 2012.
- Session chair, The 24th IPPR Conference on Computer Vision, Graphics, and Image Processing, 2011. (IPPR 博士論文獎)
- 會務委員, The 24th IPPR Conference on Computer Vision, Graphics, and Image Processing, 2011.
- Session chair, International Conference on Multimedia Modeling, 2011. (*Multimedia Indexing and Mining*)
- Session chair, The 4th Pacific-Rim Symposium on Image and Video Technology, 2010. (*Detection, Recognition, and Image Retrieval & Social Media Content Mining*)
- Session chair, The 22th IPPR Conference on Computer Vision, Graphics, and Image Processing, 2009. (*Scene Analysis*)

13. Talks

- *On the Road towards Intelligent Multimedia Content Analysis*, Appier Corporation, May 2017.
- *Computational Manga Analysis: Face Detection, Style Classification, and Manga Composition*, NEC Corporation, Japan, Mar. 2017.
- *Computational Manga Analysis: Face Detection, Style Classification, and Manga Composition*, Nagoya University, Japan, Mar. 2017.
- *Computational Manga Analysis: Face Detection, Style Classification, and Manga Composition*, Osaka University, Japan, Mar. 2017.
- *Computational Manga Analysis: Face Detection, Style Classification, and Manga Composition*, Osaka Prefecture University, Japan, Mar. 2017.
- *Computational Manga Analysis: Face Detection, Style Classification, and Manga Composition*, Toyohashi University of Technology, Japan, Feb. 2017.
- *Computational Manga Analysis: Face Detection, Style Classification, and Manga Composition*, National Institute of Advanced Industrial Science and Technology, Japan, Feb. 2017.
- *Computational Manga Analysis: Face Detection, Style Classification, and Manga Composition*, National Institute of Informatics, Japan, Feb. 2017.
- *From Point, Line, to Plane: Studying Composition and Styles of Comics from Image Analysis Perspective*, Kansai University, Japan, Jun. 2016.

- *Food Image Captioning with Verb-Noun Pairs Empowered by Joint Correlation*, Nagoya University, Japan, Jun. 2016.
- *On Style-Based Manga Analysis: Feature Design and Style Modeling*, Academia Sinica, Nov. 2015.
- 由點、線至面：從影像分析角度探討漫畫的組成與風格, 台灣資料科學愛好者年會, Aug. 2015.
- *Comics-based Storytelling and Drawing Style Description*, National Taiwan University, Mar. 2015.
- *Basics, Evolution, and Case Studies of Multimedia Content Analysis*, Hon Hai Technology Group, Nov. 2014.
- *Optimized Comics-Based Storytelling for Temporal Image Sequences*, National Chia Yi University, June 2014.
- *Optimized Comics-Based Storytelling for Temporal Image Sequences*, National Tsing Hua University, May 2014.
- *Optimized Comics-Based Storytelling for Temporal Image Sequences*, National Taiwan University of Science and Technology, May 2014.
- *From Signal to Collective Knowledge: Evolution and Case Studies of Multimedia Content Analysis*, National Tsing Hua University, Nov. 2013.
- *Basics, Evolution, and Case Studies of Multimedia Content Analysis*, HTC Corporation, Sep. 2013.
- *Presenting Temporal Image Sequences in Comics*, The University of Tokyo, Japan, Jul. 2013.
- *Size Does Matter: How Does Image Display Size Affect Aesthetic Perception*, The University of Electro-Communications, Japan, Jul. 2013.
- *Size Does Matter: How Does Image Display Size Affect Aesthetic Perception*, Hokkaido University, Japan, Jul. 2013.
- *Animation2Comics: Transforming Animation into Comics*, Taiwan-Austria Joint Symposium on Intelligent Multimedia Technologies, Klagenfurt University, Jun. 2013.
- *Rhythm of Motion Extraction and Rhythm-based Cross-Media Alignment for Dance Videos*, National Taiwan University of Science and Technology, Sep. 2012.
- *Rhythm of Motion Extraction and Rhythm-based Cross-Media Alignment for Dance Videos*, I-Shou University, Apr. 2012.
- *Image/Video Segmentation and Annotation by Social Media Analysis*, Academia Sinica, Sep. 2011.
- *Image/Video Segmentation and Annotation by Social Media Analysis*, Ming Chuan University, Sep. 2011.

- *Image/Video Segmentation and Annotation by Social Media Analysis*, National Chia Yi University, Mar. 2011.
- *Travel Media Analysis from Multiple Perspectives*, National Chi Nan University, Mar. 2010.
- *Travel Media Analysis from Multiple Perspectives*, National Taiwan Normal University, Nov. 2009.
- *Travel Media Analysis from Multiple Perspectives*, Providence University, Oct. 2009.
- *Semantics-based content analysis and organization in movies and sports videos*, CVGIP, Aug. 2008.
- 科技學院升學講座, National Chi Nan University, May 2008.
- *Semantic Analysis for Multimedia Content*, 2008 AI Forum, May 2008.
- *Multimedia content analysis, organization, and presentation*, National Chi Nan University, Jan. 2008.
- *Multimedia content analysis, organization, and presentation*, National Chung Cheng University, Dec. 2007.
- *Multimedia content analysis, organization, and presentation*, National Taiwan Normal University, May 2007.
- *Semantics-based Content Analysis and Organization in Movies and Sports Videos*, National Chung Cheng University, Apr. 2007.
- *Semantic Analysis and Collaborative Presentation of Multimedia Content*, National Taipei University, Mar. 2007.

14. Publications

14.1 PhD Dissertation

Semantics-based Content Analysis and Organization in Movies and Sports Videos, National Taiwan University, 2006.

14.2 Master Thesis

Exploring Computed Synchronization and its Applications for Navigated Hypermedia Documents, National Chi Nan University, 2002.

14.3 Journal Papers

J-1. **Wei-Ta Chu** and Ya-Lun Tsai, “A Hybrid Recommendation System Considering Visual Information for Predicting Favorite Restaurants,” accepted to *World Wide*

Web Journal, 2016.

- J-2. **Wei-Ta Chu**, Xiang-You Zheng, and Ding-Shiuan Ding, “Camera as Weather Sensor: Estimating Weather Information from Single Images,” *Journal of Visual Communications and Image Representation*, vol. 46, pp. 233-249, 2017.
- J-3. **Wei-Ta Chu** and Wei-Han Huang, “Cultural Difference and Visual Information on Hotel Rating Prediction,” *World Wide Web Journal*, vol. 20, no. 4, pp. 595-619, 2017.
- J-4. **Wei-Ta Chu** and Yung-Chieh Chou, “On Broadcasted Game Video Analysis: Event Detection, Highlight Detection, and Highlight Forecast,” *Multimedia Tools and Applications*, vol. 76, no. 7, pp. 9735-9758, 2017.
- J-5. **Wei-Ta Chu** and Chih-Hao Chiu, “Predicting Occupation from Images by Combining Face and Body Context Information” *ACM Transactions on Multimedia Computing, Communications, and Applications*, vol. 13, no. 1, Article No. 7, 2017.
- J-6. **Wei-Ta Chu**, Ying-Chieh Chao, and Yi-Sheng Chang, “Street Sweeper: Detecting and Removing Cars in Street View Images,” *Multimedia Tools and Applications*, vol. 74, no. 23, pp. 10965-10988, 2015. (SCIE, EI)
- J-7. **Wei-Ta Chu**, Chia-Hsiang Yu, and Hsin-Han Wang, “Optimized Comics-Based Storytelling for Temporal Image Sequences,” *IEEE Transactions on Multimedia*, vol. 17, no. 2, pp. 201-215, 2015. (SCIE, EI)
- J-8. **Wei-Ta Chu**, Chih-Hao Chen, and Han-Nung Hsu, “Color CENTRIST: Embedding Color Information in Scene Categorization,” *Journal of Visual Communications and Image Representation*, vol. 25, no. 5, pp. 840-854, 2014. (SCIE, EI)
- J-9. **W.-T. Chu** and C.-J. Li, “Somebody Helps Me: Travel Video Scene Detection Using Web-based Context,” *Neurocomputing*, vol. 95, pp. 60-71, 2012. (SCIE, EI)
- J-10. **W.-T. Chu** and S.-Y. Tsai, “Rhythm of Motion Extraction and Rhythm-Based Cross-Media Alignment for Dance Videos,” *IEEE Transactions on Multimedia*, vol. 14, no. 1, pp. 129-141, 2012. (SCIE, EI)
- J-11. W.-T. Peng, **W.-T. Chu**, C.-H. Chang, C.-N. Chou, W.-J. Huang, W.-Y. Chang, and Y.-P. Hung, “Editing by Viewing: Automatic Home Video Summarization by Viewing Behavior Analysis,” *IEEE Transactions on Multimedia*, vol. 13, no. 3, pp. 539-550, 2011. (SCIE, EI)
- J-12. **W.-T. Chu**, C.-J. Li, and S.-C. Tseng, “TravelMedia: An Intelligent Management System for Media Captured in Travel,” *Journal of Visual Communication and Image Representation*, vol. 22, no. 1, pp. 93-104, 2011. (SCIE, EI)
- J-13. **W.-T. Chu** and W.-H. Tsai, “Modeling Spatiotemporal Relationships between

- Moving Objects for Event Tactics Analysis in Tennis Videos,” *Multimedia Tools and Applications*, vol. 50, no. 1, pp. 149-171, 2010. (SCIE, EI)
- J-14. **W.-T. Chu** and C.-H. Lin, “Consumer Photo Management and Browsing Facilitated by Near-Duplicate Detection with Feature Filtering,” *Journal of Visual Communication and Image Representation*, vol. 21, no. 3, pp. 256-268, 2010. (SCIE, EI)
- J-15. C.-Y. Weng, **W.-T. Chu**, and J.-L. Wu, “RoleNet: Movie Analysis from the Perspective of Social Networks,” *IEEE Transactions on Multimedia*, vol. 11, no. 2, pp. 256-271, 2009. (SCIE, EI)
- J-16. **W.-T. Chu** and J.-L. Wu, “Explicit Semantic Events Detection and Development of Realistic Applications for Broadcasting Baseball Videos,” *Multimedia Tools and Applications*, vol. 38, no. 1, pp. 27-50, 2008. (SCIE, EI)
- J-17. **W.-T. Chu**, J.-C. Chen, and J.-L. Wu, “Tiling Slideshow: An Audiovisual Presentation Method for Consumer Photos,” *IEEE Multimedia*, vol. 14, no. 3, pp. 36-45, 2007. (SCI, EI)
- J-18. **W.-T. Chu**, W.-H. Cheng, and J.-L. Wu, “Semantic Context Detection Using Audio Event Fusion,” *EURASIP Journal on Applied Signal Processing*, vol. 2006, Article ID 27390, 12 pages, 2006. (SCIE, EI)
- J-19. **W.-T. Chu**, W.-H. Cheng, J. Y.-J. Hsu, and J.-L. Wu, “Towards Semantic Indexing and Retrieval Using Hierarchical Audio Models,” *Multimedia Systems*, vol. 10, no. 6, pp. 570-583, 2005. (SCI, EI)
- J-20. W.-H. Cheng, **W.-T. Chu**, and J.-L. Wu, “A Visual Attention based Region-of-Interest Determination Framework for Video Sequences,” *IEICE Transactions on Information and Systems*, vol. E-88D, no. 7, pp. 1578-1586, 2005. (SCIE, EI)
- J-21. **W.-T. Chu**, W.-H. Cheng, S.-F. He, C.-W. Wang, and J.-L. Wu, “A Unified Framework Using Spatial Color Descriptor and Motion-based Post Refinement for Shot Boundary Detection,” *GESTS International Transaction on Computer Science and Engineering*, vol. 2, no. 1, pp. 133-143, 2005.
- J-22. **W.-T. Chu**, and H.-Y. Chen, “Towards better Retrieval and Presentation by Exploring Cross-Media Correlations,” *Multimedia Systems*, vol. 10, no. 3, pp. 183-198, 2005. (SCI, EI)

14.4 Book Chapters

- B-1. 朱威達, “車道穩定裝置,” 車載通訊控制與設計, 賴源正, 黃崇明編審, 東華書局, 2011.
- B-2. 朱威達, “計算智慧與電腦視覺在駕駛輔助系統之應用,” 車載通訊: 原理、服務與應用, 藍崑展, 黃崇明編審, 東華書局, 2011.

- B-3. M.-C. Tien, J.-L. Wu, and **W.-T. Chu**, “A Comprehensive Study of Sports Video Analysis,” *Multimedia Analysis, Processing & Communications*, edited by W. Lin, D. Tao, J. Kacprzyk, Z. Li, E. Izquierdo, and H. Wang, Springer, SCI 346, pp. 413-441, 2011.
- B-4. **W.-T. Chu**, “On Cross-Media Correlation and Its Applications,” Chapter 1 of *Multimedia*, edited by K. Nishi, IN-TECH, Vukovar, Croatia, 2010.

14.5 International Conferences

- IC-1. **Wei-Ta Chu** and Chia-Hsing Lin, “Food Image Description Based on Deep-Based Joint Food Category, Ingredient, and Cooking Method Recognition,” accepted by International Workshop on Multimedia Services and Technologies for E-health, 2017.
- IC-2. **Wei-Ta Chu** and Wei-Wei Li, “Manga FaceNet: Face Detection in Manga based on Deep Neural Network,” *Proceedings of ACM International Conference on Multimedia Retrieval*, pp. 412-415, 2017.
- IC-3. **Wei-Ta Chu** and Samuel Situmeang, “Badminton Video Analysis based on Spatiotemporal and Stroke Features,” *Proceedings of ACM International Conference on Multimedia Retrieval*, pp. 448-451, 2017.
- IC-4. **Wei-Ta Chu** and Han-Yuan Chang, “Advertisement Detection, Segmentation, and Classification for Newspaper Images and Website Snapshots,” *Proceedings of International Computer Symposium*, 2016.
- IC-5. **Wei-Ta Chu** and Tsung-Han Yang, “A Study of Combining Re-coloring and Adding Patterns to Images for Dichromats,” *Proceedings of ACCV Workshop on Assistive Vision*, 2016.
- IC-6. **Wei-Ta Chu** and Yi-Ling Wu, “Deep Correlation Features for Image Style Classification,” *Proceedings of ACM International Conference on Multimedia*, pp. 402-406, 2016.
- IC-7. **Wei-Ta Chu**, Xiang-You Zheng, and Ding-Shiuan Ding, “Image2Weather: A Large-Scale Image Dataset for Weather Property Estimation,” *Proceedings of IEEE International Conference on Multimedia Big Data*, pp. 137-144, 2016.
- IC-8. **Wei-Ta Chu** and Wei-Chung Cheng, “Manga-Specific Features and Latent Style Model for Manga Style Analysis,” *Proceedings of IEEE International Conference on Acoustics, Speech and Signal Processing*, pp. 1332-1336, 2016.
- IC-9. **Wei-Ta Chu** and Han-Nung Hsu, “News Story Clustering with Fisher Embedding,” *Proceedings of IEEE International Conference on Acoustics, Speech and Signal Processing*, pp. 1175-1178, 2016.
- IC-10. **Wei-Ta Chu** and Yung-Chieh Chou, “Event Detection and Highlight Detection of Broadcasted Game Videos,” *Proceedings of ACM Workshop on*

- Computational Models of Social Interactions: Human-Computer-Media Communication*, pp. 1-8, 2015.
- IC-11. Ding-Shiuan Ding and **Wei-Ta Chu**, “Weather-Adaptive Distance Metric for Landmark Image Classification,” *Proceedings of Pacific-Rim Conference on Multimedia*, pp. 139-148, 2015. (in *Lecture Notes in Computer Science*, vol. 9315, Part II, pp. 139-148, 2015.)
- IC-12. **Wei-Ta Chu** and Feng-Chi Chang, “A Privacy-Preserving Bipartite Graph Matching Framework for Multimedia Analysis and Retrieval,” *Proceedings of ACM International Conference on Multimedia Retrieval*, pp. 243-250, 2015.
- IC-13. **Wei-Ta Chu** and Ming-Hung Hsu, “Fast Object Detection Using Multistage Particle Window Deformable Part Model,” *Proceedings of IEEE International Symposium on Multimedia*, pp. 98-101, 2014.
- IC-14. **Wei-Ta Chu** and Chih-Hao Chiu, “Predicting Occupation from Single Facial Images,” *Proceedings of IEEE International Symposium on Multimedia*, pp. 9-12, 2014.
- IC-15. **Wei-Ta Chu** and Ying-Chieh Chao, “Line-Based Drawing Style Description for Manga Classification,” *Proceedings of ACM Multimedia*, pp. 781-784, 2014.
- IC-16. **Wei-Ta Chu** and Fan Liu, “Mathematical Formula Detection in Heterogeneous Document Images,” *Proceedings of Conference on Technologies and Applications of Artificial Intelligence*, 2013.
- IC-17. **Wei-Ta Chu**, Cheng-Jung Li, and Jen-Yu Yu, “Tag Suggestion and Localization for Images by Bipartite Graph Matching,” *Proceedings of APSIPA Annual Summit and Conference*, 2013.
- IC-18. **Wei-Ta Chu** and Chia-Hsiang Yu, “Optimized Speech Balloon Placement for Automatic Comics Generation,” *Proceedings of ACM International Workshop on Interactive Multimedia on Mobile and Portable Devices*, pp. 1-6, 2013.
- IC-19. **Wei-Ta Chu**, Yen-Kuang Chen, and Kuan-Ta Chen, “Size Does Matter: How Image Size Affects Aesthetic Perception?” *Proceedings of ACM International Conference on Multimedia*, pp. 53-62, 2013. **(full paper)**
- IC-20. Kuan-Ta Chen, **Wei-Ta Chu**, and Martha Larson, “ACM Multimedia 2013 Workshop on Crowdsourcing for Multimedia,” *Proceedings ACM International Conference on Multimedia*, pp. 1089-1090, 2013.
- IC-21. **Wei-Ta Chu** and Chun-Chang Huang, “Evaluation of Product Quantization for Image Search,” *Proceedings of International Conference on Multimedia Modeling*, pp. 347-356, 2013. (in *Lecture Notes in Computer Science*, vol. 7732, pp. 347-356, 2013.)
- IC-22. Kuan-Ta Chen, **Wei-Ta Chu**, Martha Larson, and Wei Tsang Ooi, “ACM

- Multimedia 2012 Workshop on Crowdsourcing for Multimedia,” *Proceedings ACM Multimedia Conference*, pp. 1505-1506, 2012.
- IC-23. **Wei-Ta Chu** and Hsing-Han Wang, “Enabling Portable Animation Browsing by Transforming Animations into Comics,” *Proceedings of ACM International Workshop on Interactive Multimedia on Mobile and Portable Devices*, pp. 3-8, 2012.
- IC-24. **W.-T. Chu** and C.-H. Chen, “Color CENTRIST: A Color Descriptor for Scene Categorization,” *Proceedings of ACM International Conference on Multimedia Retrieval*, 2012.
- IC-25. **W.-T. Chu** and M.-H. Tsai, “Visual Pattern Discovery for Architecture Image Classification and Product Image Search,” *Proceedings of ACM International Conference on Multimedia Retrieval*, 2012.
- IC-26. **W.-T. Chu** and T.-C. Lin, “Logo Recognition and Localization in Real-World Images by Using Visual Patterns,” *Proceedings of IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 973-976, 2012.
- IC-27. **W.-T. Chu** and S.-C. Tseng, “GPU-Accelerated Scene Categorization under Multiscale Category-Specific Visual Word Strategy,” *Proceedings of IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 885-888, 2012.
- IC-28. **W.-T. Chu**, C.-J. Li, and Y.-K. Chou, “Tag Suggestion and Localization for Web Videos by Bipartite Graph Matching,” *Proceedings of International ACM Workshop on Social Media*, pp. 35-40, 2011.
- IC-29. **W.-T. Chu**, C.-C. Huang, and W.-F. Cheng, “News Story Clustering from Both What and How Aspects: Using Bag of Word Model and Affinity Propagation,” *Proceedings of International ACM Workshop on Automated Media Analysis and Production for Novel TV Services*, pp. 7-12, 2011.
- IC-30. **W.-T. Chu** and M.-L. Li, “Score Following and Retrieval Based on Chroma and Octave Representation,” *Proceedings of International Conference on Multimedia Modeling*, 2011. (in *Lecture Notes in Computer Science*, vol. 6523, pp. 229-239, 2011.)
- IC-31. **W.-T. Chu**, C.-J. Li, and T.-C. Lin, “Travel Video Scene Detection by Search,” *Proceedings of Pacific-Rim Symposium on Image and Video Technology*, pp. 180-185, 2010.
- IC-32. **W.-T. Chu** and W.-L. Liu, “Age Classification for Pose Variant and Occluded Faces,” *Proceedings of ACM Multimedia Conference*, pp. 743-746, 2010.
- IC-33. W.-T. Peng, C.-H. Chang, **W.-T. Chu**, W.-J. Huang, C.-N. Chou, W.-Y. Chang, and Y.-P. Hung, “A Real-Time User Interest Meter and Its Applications in Home Video Summarization” *Proceedings of IEEE International Conference*

on *Multimedia & Expo*, pp. 849-854, 2010.

- IC-34. **W.-T. Chu**, C.-C. Lin, and J.-Y. Yu, "Travel Photo and Video Summarization with Cross-Media Correlation and Mutual Influence," *Proceedings of International Conference on Multimedia Modeling*, 2010. (in *Lecture Notes in Computer Science*, vol. 5916, pp. 577-587, 2010.)
- IC-35. **W.-T. Chu**, C.-H. Lin, and J.-Y. Yu, "Feature Classification for Representative Photo Selection," *Proceedings of ACM Multimedia Conference*, pp. 509-512, 2009.
- IC-36. **W.-T. Chu**, Y.-L. Lee, and J.-Y. Yu, "Visual Language Model for Face Clustering in Consumer Photos," *Proceedings of ACM Multimedia Conference*, pp. 625-628, 2009.
- IC-37. **W.-T. Chu**, C.-C. Lin, and J.-Y. Yu, "Using Cross-Media Correlation for Scene Detection in Travel Videos," *Proceedings of ACM International Conference on Image and Video Retrieval*, 2009.
- IC-38. **W.-T. Chu**, Y.-L. Lee, and J.-Y. Yu, "Using Context Information and Local Feature Points in Face Clustering for Consumer Photos," *Proceedings of IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 1141-1144, 2009.
- IC-39. W.-T. Peng, W.-J. Huang, **W.-T. Chu**, C.-N. Chou, W.-Y. Chang, C.-H. Chang, and Y.-P. Hung, "A User Experience Model for Home Video Summarization," *Proceedings of 15th International Multimedia Modeling Conference*, 2009. (in *Lecture Notes in Computer Science*, vol. 5371, pp. 484-495, 2008.)
- IC-40. **W.-T. Chu** and C.-H. Lin, "Automatic Selection of Representative Photo and Smart Thumbnailing Using Near-Duplicate Detection," *Proceedings of ACM Multimedia Conference*, pp. 829-832, 2008. (short paper)
- IC-41. M.-C. Tien, Y.-T. Wang, C.-W. Chou, K.-Y. Hsieh, **W.-T. Chu**, and J.-L. Wu, "Event Detection in Tennis Matches Based on Video Data Mining," *Proceedings of IEEE International Conference on Multimedia & Expo*, pp. 1477-1480, 2008.
- IC-42. W.-T. Peng, Y.-H. Chiang, **W.-T. Chu**, W.-J. Huang, W.-L. Chang, P.-C. Huang, and Y.-P. Hung, "Aesthetics-based Automatic Home Video Skimming System," *Proceedings of International Multimedia Modeling Conference*, pp. 186-197, 2008.
- IC-43. C.-C. Liu, C.-H. Huang, **W.-T. Chu**, and J.-L. Wu, "ITEMS: Intelligent Travel Experience Management System," *Proceedings of ACM SIGMM International Workshop on Multimedia Information Retrieval*, pp. 291-298, 2007. (invited paper)
- IC-44. C.-Y. Weng, **W.-T. Chu**, and J.-L. Wu, "RoleNet: Treat a Movie as a Small

- Society,” *Proceedings of ACM SIGMM International Workshop on Multimedia Information Retrieval*, pp. 51-60, 2007. (NSC Travel Grant) (full paper, acceptance ratio=22%)
- IC-45. W.-H. Cheng, Y.-Y. Chuang, B.-Y. Chen, J.-L. Wu, S.-Y. Fang, Y.-T. Lin, C.-C. Hsieh, C.-M. Pan, **W.-T. Chu**, and M.-C. Tien, “Semantic-Event Based Analysis and Segmentation of Wedding Ceremony Videos,” *Proceedings of ACM SIGMM International Workshop on Multimedia Information Retrieval*, pp. 95-104, 2007. (full paper, acceptance ratio=22%)
- IC-46. C.Y. Weng, **W.-T. Chu**, and J.-L. Wu, “Movie Analysis through Roles’ Social Relationship,” *Proceedings of IEEE International Conference on Multimedia & Expo*, pp. 1403-1406, 2007.
- IC-47. J.-C. Chen, **W.-T. Chu**, J.-H. Kuo, C.-Y. Weng, and J.-L. Wu, “Tiling Slideshow,” *Proceedings of ACM International Conference on Multimedia*, pp. 25-34, 2006. (Acceptance ratio=16%) (**Best technical full paper award**)
- IC-48. **W.-T. Chu**, C.-W. Wang, and J.-L. Wu, “Extraction of Baseball Trajectory and Physics-Based Validation for Single-View Baseball Video Sequences,” *Proceedings of IEEE International Conference on Multimedia & Expo*, pp. 1813-1816, 2006.
- IC-49. **W.-T. Chu** and J.-L. Wu, “Development of Realistic Applications Based on Explicit Event Detection in Broadcasting Baseball Videos,” *Proceedings of International Multimedia Modelling Conference*, pp. 12-19, 2006.
- IC-50. Y.-H. Chen, J.-H. Kuo, **W.-T. Chu**, and J.-L. Wu, “Movie Emotional Event Detection Based on Music Mood and Video Tempo,” *Proceedings of IEEE International Conference on Consumer Electronics*, pp. 151-152, 2006.
- IC-51. J.-C. Chen, J.-H. Yeh, **W.-T. Chu**, J.-H. Kuo, and J.-L. Wu, “Improvement of Commercial Boundary Detection Using Audiovisual Features,” *The 6th Pacific-Rim Conference on Multimedia*, 2005. (in *Lecture Notes in Computer Science*, vol. 3767, pp. 776-786, 2005) (**SCIE, EI**)
- IC-52. **W.-T. Chu** and J.-L. Wu, “Integration of Rule-based and Model-based Methods for Baseball Event Detection,” *Proceedings of IEEE International Conference on Multimedia & Expo*, pp. 137-140, 2005.
- IC-53. C.-H. Liang, **W.-T. Chu**, J.-H. Kuo, J.-L. Wu, and Wen-Huang Cheng, “Baseball Event Detection Using Game-Specific Feature Sets and Rules,” *Proceedings of IEEE International Symposium on Circuits and Systems*, pp. 3829-3832, 2005.
- IC-54. W.-H. Cheng, **W.-T. Chu**, J.-H. Kuo, and J.-L. Wu, “Automatic Video Region-of-Interest Determination Based on User Attention Model,” *Proceedings of IEEE International Symposium on Circuits and Systems*, pp.

3219-3222, 2005.

- IC-55. **W.-T. Chu**, W.-H. Cheng, and J.-L. Wu, "Generative and Discriminative Modeling toward Semantic Context Detection in Audio Tracks," *Proceedings of the 11th International Multimedia Modelling Conference*, pp. 38-45, 2005.
- IC-56. **W.-T. Chu**, W.-H. Cheng, S.-F. He, C.-W. Wang, and J.-L. Wu, "A Unified Framework Using Spatial Color Descriptor and Motion-based Post Refinement for Shot Boundary Detection," *The 5th Pacific-Rim Conference on Multimedia*, 2004. (in *Lecture Notes in Computer Science*, vol. 3333, pp. 558-565, 2004.) (SCIE, EI)
- IC-57. H.-W. Chen, J.-H. Kuo, **W.-T. Chu**, and J.-L. Wu, "Action Movies Segmentation and Summarization Based on Tempo Analysis," *Proceedings of the ACM SIGMM International Workshop on Multimedia Information Retrieval*, pp. 251-258, 2004. (Acceptance ratio=16%)
- IC-58. C.-H. Liang, J.-H. Kuo, **W.-T. Chu**, and J.-L. Wu, "Semantic Units Detection and Summarization of Baseball Videos," *Proceedings of the IEEE International Midwest Symposium on Circuits and Systems*, vol. 1, pp. 297-300, 2004.
- IC-59. **W.-T. Chu**, W.-H. Cheng, J.-L. Wu, and Y.-J. Hsu, "A Study of Semantic Context Detection by Using SVM and GMM Approaches," *Proceedings of the IEEE International Conference on Multimedia & Expo*, vol. 3, pp. 1591-1594, 2004.
- IC-60. W.-H. Cheng, **W.-T. Chu**, and J.-L. Wu, "Semantic Context Detection based on Hierarchical Audio Models," *Proceedings of the 5th ACM SIGMM International Workshop on Multimedia Information Retrieval*, pp. 109-115, 2003.
- IC-61. C.-C. Ho, **W.-T. Chu**, C.-H. Huang, and J.-L. Wu, "User-Oriented Approach in Spatial and Temporal Domain Video Coding," *Proceedings of the 4th IEEE Pacific-Rim Conference on Multimedia*, 2003.
- IC-62. **W.-T. Chu**, and H.-Y. Chen, "Multiple Granularity Access to Navigated Hypermedia Documents Using Temporal Meta-Information," *The 3rd IEEE Pacific-Rim Conference on Multimedia*, 2002. (in *Lecture Notes in Computer Science*, vol. 2532, pp. 1227-1234, 2002.) (SCIE, EI)
- IC-63. **W.-T. Chu**, and H.-Y. Chen, "Cross-Media Correlation: A Case Study for Navigated Hypermedia Documents," *Proceedings of the ACM Multimedia Conference*, pp. 57-66, 2002. (Acceptance ratio=18%)
- IC-64. **W.-T. Chu**, K.-T. Hsu, and H.-Y. Chen, "Design of an Alignment System for Synchronized Speech-Text Presentation," *Proceedings of Distributed Multimedia Systems*, pp. 86-93, 2001.

14. 6 Local Conferences

- LC-1. 黃正宇, 游家祥, 朱威達, “視覺化故事書產生引擎,” 民生電子研討會, pp. 1805-1813, 2011.
- LC-2. W.-T. Chu, T.-M. Yang, and J.-J. Yu, “Product Quantization for Video Copy Detection,” *Proceedings of 24th Computer Vision, Graphics, and Image Processing Conference*, 2011.
- LC-3. 張豐麒, 黃俊璋, 何秉軒, 朱威達, “跨智慧型手機與 PC 之直覺操作介面設計,” 民生電子研討會, pp. 127-131, 2010.
- LC-4. W.-T. Chu, P.-C. Chuang, and J.-J. Yu, “Video Copy Detection Based on Bag of Trajectory and Two-Level Approximate Sequence Matching,” *Proceedings of the 23th Computer Vision, Graphics, and Image Processing Conference*, 2010.
- LC-5. W.-T. Chu, C.-T. Hung, and J.-J. Yu, “Object Segmentation Based on Common Information between Images,” *Proceedings of the 22th Computer Vision, Graphics, and Image Processing Conference*, 2009.
- LC-6. W.-T. Chu, M.-C. Tien, Y.-T. Wang, C.-W. Chou, K.-Y. Hsieh, and J.-L. Wu, “Event Detection in Tennis Matches Based on Real-World Audiovisual Cues,” *Proceedings of the 20th Computer Vision, Graphics, and Image Processing Conference*, pp. 541-548, 2007. (佳作論文獎)
- LC-7. W.-T. Chu and J.-L. Wu, “Explicit Baseball Event Detection by Combining Visual and Speech Information,” *Proceedings of the 19th Computer Vision, Graphics, and Image Processing Conference*, pp. 249-252, 2006.
- LC-8. W.-T. Chu and J.-L. Wu, “Detection of Spirited Incidental Music in Movies,” *Proceedings of Workshop on Computer Music and Audio Technology*, 2005.
- LC-9. W.-H. Cheng, W.-T. Chu, and J.-L. Wu, “A Visual Focus Detection Framework for Video Sequences,” *Proceedings of Workshop on Consumer Electronics and Signal Processing*, 2004. (Best student paper award)
- LC-10. K.-Y. Liu, H.-L. Wu, M.-W. Lai, W.-T. Chu, B.-H. Wu, and H.-Y. Chen, “Exploring Interactive Multimedia Technologies for Web-based ESL Learning,” *Proceedings of the Sixth International Conference on Multimedia Language Education, ROCMELIA*, pp. 181-191, 2002.
- LC-11. 賴茂濉, 朱威達, 陳恆佑, “網路式英語聽力訓練系統,” 民生電子研討會, 2001.
- LC-12. 陳恆佑, 宋如瑜, 朱威達, 吳獻良, “多媒體教學系統在華語文課程上的應用,” *5th Global Chinese Conference on Computers in Education*, pp. 1060-1066, 2001.

14.7 Demonstration

- D-1. **W.-T. Chu** and H.-H. Wang, “動畫轉漫畫技術,” *Computer Vision, Graphics, and Image Processing Conference*, 產學媒合發表會, 2012.
- D-2. **W.-T. Chu** and C.-C. Huang, “視訊新聞報導切割與群聚技術,” *Computer Vision, Graphics, and Image Processing Conference*, 產學媒合發表會, 2011.
- D-3. **W.-T. Chu** and C.-H. Lin, “Automatic Summarization of Travel Photos Using Near-Duplication Detection and Feature Filtering,” *Proceedings of ACM Multimedia Conference*, Multimedia Grand Challenges, pp. 1129-1130, 2009.
- D-4. **W.-T. Chu** and J.-L. Wu, “Exploring Broadcasting Baseball Videos based on Multimodal and Multidisciplinary Study,” *Proceedings of IEEE International Conference on Multimedia & Expo*, pp. 8, 2007.
- D-5. J.-C. Chen, **W.-T. Chu**, J.-H. Kuo, C.-Y. Weng, and J.-L. Wu, “Audiovisual slideshow: Present Your Journey by Photos,” *Proceedings of ACM Multimedia Conference*, pp. 955-956, 2006.
- D-6. K.-Y. Liu, N. Huang, B.-H. Wu, **W.-T. Chu**, and H.-Y. Chen, “The WSML System: Web-based Synchronization Multimedia Lecture System,” *Proceedings of the ACM Multimedia Conference*, pp. 662-663, 2002.

14.8 Others

- O-1. **朱威達**, 黃朝琴, 徐明宏, “Broadcast News Story Clustering without Prior Knowledge,” *影像與識別 (Image & Recognition)*, vol. 19, no. 1, pp. 48-72, 2013.
- O-2. Kuan-Ta Chen and **Wei-Ta Chu**, “Crowdsourcing for Image Understanding Research,” *IEEE COMSOC E-Letter*, vol. 8, no. 1, pp. 30-32, 2013.
- O-3. **朱威達**, “旅遊經驗之組織與呈現系統,” *工程科技通訊*, 第一一零期, pp. 83-87, 2011.
- O-4. J.-L. Wu and **W.-T. Chu**, “Audio and Video Semantic Analyses and Its Applications,” *International Workshop on Task-Relevant Ubiquitous Media Access*, 2005.
- O-5. Y.-S. Tung, **W.-T. Chu**, W.-H. Cheng, T.-J. Pan, H.-S. Chen, and J.-L. Wu, “FGS Anchor Sequences for Call for Evidence on Scalable Video Coding Advances and Related Tools,” *ISO/IEC JTC1/SC29/WG11 MPEG2002/M9821*, July 2003.
- O-6. 陳恆佑, **朱威達**, 吳獻良, 洪政欣, “網路影音教材查詢及同步點播,” *隔空教育論叢年刊第十二輯*, pp. 109-120, 2000.

15. System Development and Online Demo

1. Tiling Slideshow

<http://www.cmlab.csie.ntu.edu.tw/TilingSlideshow/>

2. Tennis Video Analysis:

<http://www.cmlab.csie.ntu.edu.tw/~wtchu/tennis/index.html>

3. Baseball Video Analysis:

<http://www.cmlab.csie.ntu.edu.tw/~wtchu/baseball/index.html>

4. Web-based Synchronized Multimedia Lecture System: (developed when I was a master student in National Chi Nan University)

<http://english.csie.ncnu.edu.tw>

<http://chinese.csie.ncnu.edu.tw>

5. 蝴蝶生態面面觀

<http://d1m.ncnu.edu.tw/butterfly>

16. Student Advised

16.1 PhD Students

16.2 Master Students

2017 入學：劉玉蕙，黃立緯，吳彥澄，柯林佑

2016 入學：何開加，郭紘睿，陳柏廷，游智棋，徐郁婷

2015 入學：吳若寧，吳依玲，李韋緯，劉雨鑫，Samuel Indra Gunawan Situmeang, 朱皓安

2014 入學：丁鼎軒，高銘治，蔡亞倫，林家興

2013 入學：鄭為中，邱志豪，周雍傑，楊宗翰，黃韋翰，張瀚元

2012 入學：徐漢農，游家祥，鄭翔祐，趙英傑

2011 入學：張豐麒，黃俊璋，徐明宏，劉帆

2010 入學：陳志豪，王星翰，張懿聖，陳昱光

2009 入學：李承融，楊子旻，黃聖鈞，林琮哲

2008 入學：劉文龍，李孟倫，莊柏祺，蔡尚穎，黃朝琴

2007 入學：蔡文河，林家弘，李亞霖，洪建達，林哲正，蔡明宏

Alumni:

Date	Name	Thesis
12/2016	Samuel Situmeang	Badminton Video Analysis based on Spatiotemporal and Stroke Features
07/2016	蔡亞倫	A Restaurant Recommender System Considering Visual Information (考慮視覺資訊之餐廳推薦系統)
07/2016	張瀚元	Advertisement Detection, Segmentation and Classification for Newspaper Images and Website Snapshots (針對報紙影像及網站快照做廣告偵測、切割及分類)
07/2016	林家興	Food Image Captioning with Verb-Noun Pairs Empowered by Joint Correlation (聯合模型相關性產生動詞名詞配對描述食物影像)
07/2016	丁鼎軒	Estimating Weather Information from Image with Random Forests (使用隨機森林從單張影像預測天氣資訊)
07/2016	楊宗翰	A Study of Combining Re-coloring and Adding Patterns to Images for Dichromats (研究結合重新著色及加入圖案的影像對於色盲者的影響)
01/2016	黃韋翰	Hotel Recommendation Considering Visual Information and Cultural Difference (考慮視覺資訊及文化差異於旅館推薦)
07/2015	邱志豪	Predicting Occupation from Images by Combining Face and Body Context Information (結合人臉及身體脈絡資訊於影像中預測職業)
07/2015	周雍傑	On Broadcasted Game Video Analysis: Event Detection, Highlight Detection, and Highlight Forecast (遊戲視訊分析：事件偵測及精彩片段偵測與預測)
07/2015	鄭為中	Manga-Specific Features and Latent Style Model for Manga Style Analysis (漫畫影像特徵與潛藏風格模型用於漫畫風格分析)
01/2015	徐漢農	News Story Clustering with Fisher Embedding from What and How Aspects (基於 Fisher Embedding 之新聞報導分群)
07/2014	游家祥	Optimized Comics-Based Storytelling for Temporal Image Sequences (用於時序性影像序列之最佳化漫畫敘事系統)
07/2014	鄭翔祐	A Camera as A Weather Sensor: Estimating Weather Information from a Single Image (以相機為天氣感測器：從影像預估天氣資訊)
07/2014	趙英傑	Design and Statistical Analysis of Manga-Specific Features for Manga Style Study (用於日式漫畫風格研究之影像特徵設計與統計分析)
01/2014	劉帆	Mathematical Formula Detection in Heterogeneous Document Images (異質性文件影像中的數學方程式偵測)
07/2013	黃俊璋	Evaluation of Product Quantization for Image Recognition (評估乘積量化用於影像辨識之效能)
07/2013	陳昱光	Investigation of How Image Display Size Affects Aesthetic Perception (探討影像顯示大小如何影響影像美感)
07/2013	徐明宏	Fast Object Detection and Tracking Using Multistage Particle Window

		Deformable Part Model (利用階段式粒子視窗之可變形部件模型的快速物件偵測與追蹤)
07/2013	張豐麒	A Privacy-Preserving Bipartite Graph Matching Framework for Multimedia Analysis and Retrieval (用於多媒體分析與檢索的隱私保護二元圖配對架構)
07/2012	張懿聖	Street Sweeper: Detection and Removal of Vehicles in Google Street View Images (街景清道夫：自 Google 街景圖中偵測與去除車輛)
07/2012	王星翰	Animation2Comics: Transforming Animation Videos into Comics (影片轉漫畫：將動畫影片轉換為漫畫)
07/2012	陳志豪	Color CENTRIST: A Color Descriptor for Scene Categorization (Color CENTRIST：用於場景分類的顏色描述子)
07/2011	林琮哲	Logo Recognition in Real-World Images by Using Visual Patterns (利用視覺化樣板與真實世界影像中之標誌辨識)
07/2011	黃朝琴	News Story Clustering with Bag of Word Model and Affinity Propagation (基於袋字模型及親和性互動演算法之新聞報導分群)
07/2011	楊子旻	Product Quantization for Video Copy Detection and News Topic Tracking (乘積量化應用於複製影片偵測與新聞主題追蹤)
07/2011	李承融	Video Scene Detection and Tagging by Social Media Analysis (利用社群媒體分析於場景偵測及標註)
07/2011	曾聖鈞	GPU-Accelerated Scene Categorization under Multiscale Category-Specific Visual Word Strategy (使用 GPU 加速多尺度特定類別視覺辭彙策略下之場景分群)
07/2010	蔡明宏	Mining Frequent Spatial Feature Configurations for Architecture Image Classification and Produce Image Retrieval (頻繁空間特徵結構探勘應用於建築物影像分類及商品影像檢索)
07/2010	莊柏祺	Video Copy Detection Based on Bag of Trajectory and Two-Level Approximate Sequence Matching (基於軌跡袋字模型與兩階段近似序列比對於複製影片偵測)
07/2010	蔡尚穎	On Correlating Dance Video with Music Based on Rhythm Information (基於節奏資訊分析跳舞影片與音樂之關連)
07/2010	李孟倫	Score Following and Retrieval Based on Sequence Matching and Chromagram Representation (基於序列比對與色譜表現的樂譜追蹤與檢索)
07/2010	劉文龍	Object Class Invariant Model for Age Estimation and Gender Classification in Pose Variant and Occluded Faces (物件類別不動量模型應用於不同姿勢與遮蔽下之人臉年齡估計及性別分類)
07/2009	林哲正	Using Cross-Media Correlation for Travel Media Analysis (利用跨媒體關聯性於旅遊媒體分析)

07/2009	洪建達	Clothes Segmentation in Consumer Photos by Using Common Information (使用共同資訊於消費性照片中之衣服區域切割)
06/2009	蔡文河	Modeling Spatiotemporal Relationship between Moving Objects for Sports Event Tactics Analysis (利用移動物體的時間-空間模型分析運動影片事件戰術)
06/2009	李亞霖	Visual Language Model for Face Clustering in Consumer Photos (使用視覺語言模型於消費型照片中進行人臉分群)
06/2009	林家弘	Consumer Photo Management and Browsing Facilitated by Near-Duplicate Detection with Feature Filtering (利用加入特徵過濾的相似偵測來幫助管理及瀏覽消費型照片)

16.3 Undergraduate Students

2017：陳雅暄、吳宛臻、李晨維、曾俊宏
2016：蔡呈佑、陳品翰、段伯陞、黃詩涵、田振宇、楊瑀婕、洪越嶺、李佳祥
2014：方國威、洪偉翔、黃聖理、宋東育、許博智
2013：周哲璋、高林立、張書堯、郭怡珠、陳亮元、賴宏暉
2012：蕭凡凱、林思岑、林仕鑫、陳弘毅
2011：黃正宇、游家祥、紀柏豪、徐漢農、郭冠廷
2010：張豐麒、黃俊璋、何秉軒
2009：邱耕毫
2008：游振威、謝宜婷、曾翊寧、江國睿、高立威、許斌聖

16.4 Interns

2017: Puripatt Phanpao, King Mongkut's University of Technology North Bangkok, Thailand
2016: 遠藤麗花, Hokkaido University, Japan
2016: Franziska Boenisch, Freie Universität Berlin, Germany
2016: Annick Volcy, Ecole Nationale Supérieure d'Ingenieur de Caen, France
2015: Jian Hao Loo, Universiti Putra Malaysia, Malaysia
2015: Marc Aurel Vischer, University Osnabruck, Germany
2014: Takahiro Inatsuki, Hokkaido University, Japan

17. Professional Services

教育部公費留學考試命題及閱卷委員, 2016
教育部中小學教師專業發展整合平台, 資訊學科諮詢委員, 2011~2015

暨南國際大學校課程委員會諮詢委員, Aug. 2015 ~
暨南國際大學通識教育中心課程委員會委員, Aug. 2011 ~
暨南國際大學校長遴選委員, 2008

18. Oral Defense Committee Member

18.1 Doctoral Dissertations

- 陳予郎, National Chung Cheng University, Jul. 2016.
- 洪澄瑜, National Chung Cheng University, Nov. 2014.
- 鄭靜怡, National Chung Cheng University, Jul. 2014.
- 郭芳娥, National Chung Cheng University, May 2014.
- 蔡佳銘, National Chung Cheng University, May 2013.
- 張松露, National Chung Cheng University, Apr. 2013.
- 廖元勳, National Chung Cheng University, Mar. 2013.
- 許富淞, National Chung Cheng University, Jan. 2013.
- 林凱舜, National Chung Cheng University, Nov. 2012.

18.2 Master Theses

- 戴翊竹, 鍾明芬, National Cheng Kung University, Jul. 2017.
- 林彥廷, National Chung Cheng University, May 2017.
- 陳政德, 戴韻潔, National Chung Cheng University, Dec. 2016.
- 廖灝添, 王勇翔, 葉中璋, 李哲緯, National Cheng Kung University, Jun. 2016.
- 彭奕嘉, 林育辰, 鍾文藍, 江嫚書, National Taiwan University, Apr. 2016.
- 鄭蓋聲, 王鴻凱, 許翔宇, National Chung Cheng University, Jan. 2016.
- 吳家榮, 張偉毅, National Chung Cheng University, Jul. 2015.
- Tran Vu Hoang, National Chung Cheng University, Jun. 2015.
- 呂理銘, 賴韋利, 張嘉哲, National Chung Cheng University, Apr. 2015.
- 譚長泓, 陳易志, 黃啟承, National Chung Cheng University, Jan. 2015.
- 姚伯仰, 劉書承, 黃暉盛, National Chung Cheng University, Jul. 2014.
- 李竣穎, 翁蘇台, 蔡呈新, National Tsing Hua University, Jul. 2014.
- 王舜玄, 繆昕, 李明璋, 傅承堯, National Taiwan University, Jun. 2013.
- 連奕婷, 張宇蓓, 蔡明宏, National Taiwan University, May 2012.
- 張宜鶯, National Chung Cheng University, Nov. 2011.
- 宋育寰, 辜振禹, National Central University, Jul. 2011.
- 周瑋慈, 林弘偉, 曾翊寧, National Taiwan University, Jun. 2011.
- 黃勝揚, National Chung Cheng University, Jan. 2011.

- 林道榮, National Chung Cheng University, Dec. 2010.
- 莊純福, 洪嘉芬, National Chung Cheng University, Jul. 2010.
- 陳品果, 鄭淵太, 陳宏哲, National Kaohsiung First University, Jul. 2010.
- 劉文廣, 鍾幸夫, National Chung Cheng University, Nov. 2009.
- 林世民, 蔡欣明, National Kaohsiung First University, Jul. 2009.
- 林政憲, National Chung Cheng University, Jul. 2009.
- 黃彥霖, 顏芷妤, 林恆毅, 江明哲, National Taiwan University, Jun. 2009.
- 謝達繹, 謝秉諺, 王奕棠, 周辰威, National Taiwan University, Jun. 2008.
- 方劭彥, 林映孜, National Taiwan University, Jan. 2008.