Biography: Yen-Wei Chen

Professor, Ritsumeikan University, College of Information Science and Engineering
1-1-1   Nojihigashi, Kusatsu, Shiga 525-8577, Japan
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Professional Preparation

Kobe University (Kobe, Japan)	B.E.	Instrumentation	
		1985	
Osaka University (Osaka, Japan)	M.E.	Electrical and Electronics	1987
Osaka University (Osaka, Japan)	Ph.D	Electrical and Electronics	1990

Appointments

Ristumeikan University (Kyoto, Japan)	Professor, College of ISE	2004-Present
	Director, Center of Advanced ICT for Med. and Healthcare	2014-Present
Univ. of the Ryukyus (Okinawa, Japan)	Professor, Dept. of EEE	2003-2004
Univ. of the Ryukyus (Okinawa, Japan)	Associate Professor, Dept. of EEE	1994-1995
Univ. of the Ryukyus (Okinawa, Japan)	Lecture, Dept. of EEE	1994-1995
Institute for Laser Tech. (Osaka, Japan)	Research Fellow	1991-1994
Otsuka Electronics Co. (Osaka, Japan)	Engineer	1990-1991

Visiting Position

Zhejiang Univ. (Hangzhou, China)	Chair Professor (Computer Sci.)	2014-Present
Penn State Univ. (State College, PA, USA)	Visiting Professor (IST)	2010-2011
Oxford University (Oxford, UK)	Visiting Scholar (FMRI Center)	2003-2004

Honor/Awards

2017.5	Best Paper Award (The Society of Cosmetic Chemists of Japan)
2017.2	Best Student Paper Award as the advisor (SPIE Medical Imaging 2017)
2015.11	Best Student Paper Award as the advisor (Int. Conf. on Innovation in Medicine and Healthcare 2015)
2014.7	Best Paper Award (The Japanese Society of Medical Imaging Tech.)
2013.11	Best Poster Award (The 9th Joint Workshop on Machine Perception and Robotics 2013)
2012.11	Best Scientific Paper Award (Int. Conf. on Pattern Recognition 2012)
2011.11	Best Poster Award (The Color Science Association of Japan)
2009.10	Poster Award (Asia Simulation Conference 2009)
2009.7	Best Teacher Award of Ritusmeikan University
2009.3	Watanabe Kouzo Invention Award
2004.9	Excellent Presentation Award (SCI&ISIS 2004)
2002.11	Excellent Presentation Award (SCI&ISIS 2002)
2001.1	Outstanding Overseas Chinese Scholars Fund of Chinese Academy of Science

Synergistic Activities

Services to the Scientific Community:

・Assessor of Overseas Experts of Chinese Academy of Science (2000~2005)

・Editor-in-Chief (2017 – present): *International Journal of Computers in Healthcare.*

・Associate Editor (2005 – present): *International Journal of Image and Graphics.*

・Associate Editor (2017- present): *International Journal of Knowledge-Based and Intelligent Eng. Systems*

・Lead Guest Editor (2012), *Computational Intelligence and Neuroscience*, Special Issue on "Computational Intelligence in Biomedical Science and Engineering."

・Guest Editor (2003), *International Journal of Image and Graphics*, Special Issue on "3D Vision and Medical Image Processing."

・Guest Editor (2004), *International Journal of Computational Intelligence and Applications*, Special Issue on "Computational Intelligence in Signal and Image Processing."

・General Chair (2017): 5th *International Conf. on Innovation in Medicine and Healthcare (In-Med2017).*

・Program Chair (2016): 4th *International Conf. on Innovation in Medicine and Healthcare (In-Med2016).*

・General Chair (2015): 3rd *International Conf. on Innovation in Medicine and Healthcare (In-Med2015).*

・General Chair (2013): *The 9th Joint Workshop on Machine Perception and Robotics (MPR2013).*

・General Chair (2009): *5th Int. Conf. on Intelligent Information Hiding and Multimedia Signal Processing.*

・Referee for more than 20 international journals.

・Delivered invited speeches at more than 30 conferences, universities or research institutions around the world.

News Media: Major News Media in Japan, including *MAINICHI, SUNKEI, KYOTO, NIKKAN,* have reported our research activities

Transfer to Industry: joint researches with more than 10 industry companies and have more than 10 patents

Research Grants: PI and co-PI of more than 30 research projects supported by the Japanese Ministry for Education, Science, Culture and Sports (MEXT).

Thesis Supervisor and Post-doctoral Research Fellow Sponsor

a. **Ph.D:** Total: 17

Xianyan Zeng (Professor, Fort Valley State Univ., USA), Shinya Nozaki (Associate Prof. Univ. of the Ryukyus, Japan), Jian Cheng (Professor, NLPR, CAS, China), Xianhua Han (Associate Prof. Yamagichi Univ., Japan), Rui Xu (Associate Prof. Dalian Institute of Technology, China), Tomoko Tateyama (Assistant Prof. Institute of Hiroshima Technology, Japan), Guifan Duan (Associate Prof. Zhejiang Univ., Japan), Danni Ai (Associate Prof. Beijing Institute of Technology, China), Xu Qiao (Lecture, Shandong Univ., Japan), Masataka Seo (Lecture, Ritsumeikan Univ., Japan), Takanori Igarashi (Senior Researcher, Kao Corp., Japan), Chenlun Lin (Engineer, Taiwan), Junping Deng (Lecture, Tianjing Univ., Japan), Chunhua Dong (Post-doctoral Fellow, Fort Valley State Univ., USA), Ngo Truc Hung (Lecture, Can Tao Univ., Vietnam), Yutaro Iwamoto (Assistant Prof. Ritsumeikan Univ., Japan), Sihai Yang (Associate Prof., Huaqiao Univ., China).

b. **Master:** more than 60

c. **Post-doc**: Total: 9

Xianyan Zeng (Professor, Fort Valley State Univ., USA), Shinya Nozaki (Associate Prof. Univ. of the Ryukyus, Japan), Jian Cheng (Professor, NLPR, CAS, China), Xianhua Han (Associate Prof. Yamagichi Univ., Japan), Rui Xu (Associate Prof. Dalian Institute of Technology, China), Tomoko Tateyama (Assistant Prof. Institute of Hiroshima Technology, Japan), Guifan Duan (Associate Prof. Zhejiang Univ., Japan), Danni Ai (Associate Prof. Beijing Institute of Technology, China), Xu Qiao (Lecture, Shandong Univ., Japan), Masataka Seo (Lecture, Ritsumeikan Univ., Japan), Takanori Igarashi (Senior Researcher, Kao Corp., Japan), Chenlun Lin (Engineer, Taiwan), Junping Deng (Lecture, Tianjing Univ., Japan), Chunhua Dong (Post-doctoral Fellow, Fort Valley State Univ., USA), Ngo Truc Hung (Lecture, Can Tao Univ., Vietnam), Yutaro Iwamoto (Assistant Prof. Ritsumeikan Univ., Japan), Sihai Yang (Huaqiao Univ., China).

Selected Recent publications

1. Xian-Hua Han and Yen-Wei Chen: "HEp-2 Staining Pattern Recognition Using Stacked Fisher Network for Encoding Weber Local Descriptor," *Pattern Recognition*, Vol.63, pp.542-550, 2017.
2. Xian-Hua Han, Yen-Wei Chen and Gang Xu: "Integration of spatial and orientation contexts in local ternary patterns for HEp-2 cell classification," *Pattern Recognition Letter*, Vol.82, pp.23-27, 2016
3. A.H. Foruzan and Y.-W. Chen: "Improved segmentation of low-contrast lesions using sigmoid edge model," *Int. J. CARS*, Vol.11, pp.1267-1283 (2016.7)
4. Truc Hung Ngo, Yen-Wei Chen, Naoki Matsushiro and Masataka Seo, "Quantitative Assessment of Facial Paralysis Based on Spatiotemporal Features," *IEICE Trans. on Information and Systems*, Vol.E99-D, No.1, pp.187-196 (2016.1).
5. Xian-Hua Han, Yen-Wei Chen, Gang Xu, "High-Order Statistics of Weber Local Descriptors for Image Representation", *IEEE Trans. Cybernetics,* Vol.45, No.6, pp.1180-1193 (2015)
6. Chunhua Dong, Yen-Wei Chen, Amir Hossein Foruzan, Lanfen Lin, Xian-hua Han, Tomoko Tateyama, Xing Wu, Gang Xu and Huiyan Jiang, "Segmentation of liver and spleen based on computational anatomy models," *Computers in Biology and Medicine*, Vol. 67, pp.146-160 (2015-11).
7. Chunhua Dong, Yen-Wei Chen, Toshihito Seki, Ryosuke Inoguchi, Chen-Lun Lin and Xian-Hua Han, "Non-rigid image registration with anatomical structure constraint for assessing locoregional therapy of hepatocellular carcinoma," *Computerized Medical Imaging and Graphics*, Vol.45, pp.75-83 (2015-9).
8. Chenyan Bai, Jia Li, Zhouchen Lin, Jian Yu and Yen-Wei Chen, "Penrose Demosaicking," *IEEE Trans. on Image Processing*, Vol.24, No.5, pp.1672-1684 (2015-5).
9. Masatoshi Hori, Toshiyuki Okada, Keisuke Higashiura, Yoshinobu Sato, Yen-Wei Chen, Tonsok Kim, Hiromitsu Onishi, Hidetoshi Eguchi, Hiroaki Nagano, Koji Umeshita, Kenichi Wakasa and Noriyuki Tomiyama, "Quantification of Liver Shape on CT Using the Statistical Shape Model to Evaluate Hepatic Fibrosis," *Academic Radiology*, Vol.22, No.3, pp.303-309 (2015.3).
10. J.P. Deng, X.-H. Han, Y.W. Chen, G. Xu. Y. Sato, M. Hori, N. Tomiyama, "Sparse and Low-Rank Matrix Decomposition for Local Morphological Analysis to Diagnose Cirrhosis", *IEICE Transactions on Information and Systems*, vol. E97-D, No.12, pp.3210-3221, (2014.12)
11. Xian-Hua Han, Jian Wang, Gang Xu, Yen-Wei Chen:"High-order Statistics of Micro-Texton for HEp-2 Staining Pattern Classification," *IEEE Transaction on Biomedical Engineering*, Vol.61, No.8, pp.2223-2234 (2014.8)
12. Amir H. Foruzan, Yen-Wei Chen, Masatoshi Hori, Yoshinobu Sato and Noriyuki Tomiyama, "Capturing Large Shape Variations of Liver Using Population-Based Statistical Shape Models," *International Journal of Computer Assisted Radiology and Surgery*, Vol.9, No.6, pp.967-977 (2014.4)
13. Yen-Wei Chen, So Sasatani, and Xian-Hua Han, "Alignment-Free and High-Frequency Compensation in Face

Hallucination," *The Scientific World Journal*, Volume 2014, Article ID 903160, 9 pages (2014.2)

14. Danni Ai, Guifang Duan, Xianhua Han, <u>Yen-Wei Chen</u>: "Generalized *N*-Dimensional Independent Component Analysis and Its Application to Multiple Feature Selection and Fusion for Image Classification," *Neurocomputing*, Vol.103, pp.186-197 (2013)

15. Xian-Hua Han and <u>Yen-Wei Chen</u>: "Multilinear Supervised Neighborhood Embedding of Local Descriptor Tensor for Scene/object Recognition," *IEEE Trans. on Image Processing*, Vol.21, No.3, pp.1314-1326 (2012).

16. Guifang Duan, Hongcui Wang, Zhenyu Liu, and <u>Yen-Wei Chen</u>: "A Machine Learning-Based Framework for Automatic Visual Inspection of Microdrill Bits in PCB Production," *IEEE Trans. on Systems, Man, and Cybernetics—PART C: Applications and Reviews,* Vol. 42, NO. 6, pp. 1679-1689 (2012)

17. Songyuan Tang, Yongtian Wang, Yen-Wei Chen: "Application of ICA to X-ray coronary digital subtraction angiography," *Neurocomputing*, Vol.79, pp.168-172 (2012)

18. Xian-Hua Han, Yen-Wei Chen, "A robust method based on ICA and mixture sparsity for edge detection in medical images for edge detection in medical images", *Signal Image and Video Processing*, Vol.5, No.1, pp.39-47 (2011)

19. X. Qiao, X.H. Han, T. Igarashi, K. Nakao, and <u>Y.-W. Chen</u>, "Tensor-Based Subspace Learning and Its Applications in Multi-Pose Face Synthesis," *Neurocomputing,* Vol.73, pp. 2727-2736 (2010).

20. Rui Xu and <u>Yen-Wei Chen</u>, "Generalized N-dimensional Principal Component Analysis (GND-PCA) and Its Application on Construction of Statistical Appearance Models for Medical Volumes with Fewer Samples," *Neurocomputing*, Vol.72, pp.2276-2287 (2009).

21. Toshiyuki Okada, Yuta Iwasaki, Tsuyoshi Koyama, Nobuhiko Sugano, <u>Yen-Wei Chen</u>, Kazuo Yonenobu, Yoshinobu Sato, "Computer-assisted preoperative planning for reduction of proximal femoral fracture using 3D-CT data," *IEEE Transactions on Biomedical Engineering*, Vol.56, No.3, pp.749-759 (2009).

22. Rui Xu, <u>Yen-Wei Chen</u>, Song-Yuan Tang, Shigehiro Morikawa and Yoshimasa Kurumi, "Parzen-window based normalized mutual information for   medical image registration," *IEICE Trans Information & Systems*, Vol. E91-D, No.1, pp.132-144 (2008).

Books

1. <u>Yen-Wei Chen</u> and Lahmi C. Jain (Eds): *Subspace Method for Pattern Recognition in Intelligent Environment*, Springer, 2014 (ISBN: 978-3-642-54850-5 (Print) 978-3-642-54851-2 (Online))

2. <u>Yen-Wei Chen</u>, Carlos Toro, Satoshi Tanaka, Robert I. Howlett and Lakhmi C. Jain (Eds): *Innovation in Medicine and Healthcare 2015*, Springer, 2015 (ISBN 978-3-319-23023-8)

3. <u>Yen-Wei Chen</u>, Satoshi Tanaka, Robert I. Howlett and Lakhmi C. Jain (Eds): *Innovation in Medicine and Healthcare 2016*, Springer, 2016 (ISBN 978-3-319-39686-6)

4. <u>Yen-Wei Chen</u>, Satoshi Tanaka, Robert I. Howlett and Lakhmi C. Jain (Eds): *Innovation in Medicine and Healthcare 2017*, Springer, 2017 (ISBN 978-3-319-59397-5)

5. <u>Yen-Wei Chen</u>: *Image Enhancement, Restoration, Super-Resolution*, Triceps, 2011 (in Japanese).

6. Gang Kou, Yi Peng, Franz I.S. Ko, <u>Yen-Wei Chen</u> and Tomoko Tateyama   (Eds): *Software Engineering and Data Mining*, IEEE Computer Society, 2010

7. <u>Yen-Wei Chen</u>: *Independent Component Analysis for Pattern Recognition and MATLAB Implementation*, Triceps, 2007 (in Japanese).