Wen-Chao (Vincent) Yang
No.56, Shujen Rd., Takang Vil., Kueishan District, Taoyuan City 33304, Taiwan (R.O.C.)
+886-3-3285187 una135@mail.cpu.edu.tw, ORCID: 0000-0002-2120-2774

SKILLS

Project Management and System Analysis:

- Successfully planned and performed the "Campus e-Project" (80 million TWD) at Central Police University
- Successfully performed more than 8 system development projects
- Led engineers in defining clients' inquiries for the use of campus systems

Forensic Science:

- Performed and assisted 18 image forensic cases
- Performed and assisted 3 digital forensic cases
- Performed and assisted 5 document forensic cases

Technical Skills:

- Inter-disciplinary Integration, Forensic Science, Steganography, Computer-Aided Forensics. Camp Lecture Adviser
- Matlab, Python, SQL, Delphi

ACADEMIC AND WORK EXPERIENCE

08/2024 – **Chairman**, *Dept. of Forensic Science*, *Central Police University*, Taoyuan, Taiwan

- Administration Overseeing
- Academic Program Oversight
- Faculty and Student Support
- External Engagement
- Strategic Planning

08/2023 – 07/2024 **Director**, *Public Relations Office*, *Central Police University*, Taoyuan, Taiwan

- Public Relations & Communications Management

08/2021 - **Associate Professor**, *Dept. of Forensic Science*, *Central Police University*, Taoyuan, Taiwan

- Teaching Courses: Crime data mining and machine learning, Forensic multimedia processing, Digital evidence steganalysis, and Introduction to Computer
- Provided forensic service for criminal cases

02/2016 - 07/2021 **Assistant Professor**, *Dept. of Forensic Science*, *Central Police University*, Taoyuan, Taiwan

- Teaching Courses: Crime data mining and machine learning, Forensic multimedia processing, Digital evidence steganalysis, and Introduction to Computer
- Provided forensic service for criminal cases

06/2015 - 01/2016 **Captain**, *Computer Center*, *Central Police University*, Taoyuan, Taiwan

- Management of campus information systems
- Assisted in planning the information budget of the Ministry of the Interior

07/2011 - 05/2015 **Vice Captain**, *Computer Center*, *Central Police University*, Taoyuan, Taiwan

- Analyzed system requirements and developed information systems
- Planning the information budget (15 million per year)

09/2007 - 06/2011 **Technician**, *Computer Center*, *Central Police University*, Taoyuan, Taiwan
- Analyzed system requirements and developed information systems
- Enhanced system efficiency by 10%

12/2002 - 08/2007 **Lieutenant**, *Forensic Science Labs.*, *Central Police University*, Taoyuan, Taiwan
- Drafted laboratory management documentation.
- Courses Assistant

07/1997 - 11/2002 **Assistant**, *Forensic Science Labs.*, *Central Police University*, Taoyuan, Taiwan
- Laboratories management.
- Courses Assistant

VISITING EXPERIENCE

07/2024 **Visiting Scholar**, *GrapheneX-UTS Human-centric Artificial Intelligence Centre, University of Technology Sydney*, Sydney, Australia

01/2019 – 01/2020 **Visiting Scholar**, *Department of Electrical and Computer Engineering*, *Old Dominion University*, Norfolk, Virginia, USA

08/2018 **Visiting Scholar**, *Computational Intelligence and Brain Computer Interface Centre*, *University of Technology Sydney*, Sydney, Australia

09/2015 - 10/2015 **Visiting Scholar**, *The Henry C. Lee Institute of Forensic Science*, *University of New Haven*, West Haven, Connecticut, USA

EDUCATION

09/2004- 12/2014 **Ph.D. in Computer Science**, *National Chiao Tung University,* Hsinchu, Taiwan
- Ph.D. dissertation: A study on reversible and lossless steganography
- Relevant coursework: Computer Architecture, Algorithm, Steganography, and Artificial Intelligence

09/1999- 06/2002 **MBA in Information Management**, *National Central University,* Taoyuan, Taiwan
- Master's thesis: The Research of Keeping Digital Evidence in Untrusted Local Area Network
- Relevant coursework: Information Modeling, Enterprise Computer Networks, Software Engineering, and Intelligent Information Systems

09/1993- 06/1997 **B.A. in Criminal Investigation**, *Central Police University*, Taoyuan, Taiwan
- Relevant coursework: Criminal Investigation, Crime Scene Investigation, Photography, Criminal Law, and Criminal Procedure Law

PARTICIPATION

2024- **Board Member**, *Taiwan Academy of Forensic Sciences*

2020-2024 **Secretary General**, *Taiwan Academy of Forensic Sciences*

2019- **Supervisor**, *The Henry C. Lee Forensic Science Foundation*

2017-2020 **Supervisor**, *Taiwan Academy of Forensic Sciences*

2016-2018 **Course leader and adviser**, *CSI camp* (2 terms a year)

2003- **Life Member**, *The Chinese Cryptology and Information Security Association*

2002- **Member**, *Taiwan Academy of Forensic Sciences*

RESEARCH PROJECTS

2025 Research on Developing an AI-Based Emerging Technology Handwriting-Assisted Forensic System. (Ministry of Justice Investigation Bureau, 114-1301-10-28-01)

2023-2024	Research on the high-tech investigation framework, and education and skills of the high-tech investigators. (Criminal Investigation Bureau, 112ERC43)
2023-2026	Multimedia Forensics under the Strengthening Forensic Science in Response to Judicial Reform (Ministry of the Interior, 112-0805-02-28-01~115-0805-02-28-01)
2022-2023	Third-party inspection of X-ray image AI recognition (National Chung-Shan Institute of Science and Technology)
2020-2021	A study for deepfake video detection and prevention with AI collaborative analysis (MOST 109-2221-E-015-002 -)
2018-2020	A platform for tracing origins of digital image/video evidence with AI collaborative analysis (MOST 107-2221-E-015 -003 -MY2)
2017-2018	A studying and implementation of tracing origin framework of digital image/video evidences in Taiwan (MOST 106-2218-E-015-001 -)

PUBLICATION

Book

1. Chung-Hao Chen, Wen-Chao Yang, Lijian Chen, *Technologies to Advance Automation in Forensic Science and Criminal Investigation*, IGI Global, 2022. DOI: 10.4018/978-1-7998-8386-9, ISBN13: 9781799883869, ISBN10: 1799883868, EISBN13: 9781799883883, ISBN13 Softcover: 9781799883876

Journal

1. Hsiang-Ju Lai, Long-Huang Tsai, Kung-Yang Hsu, Wen-Chao Yang*, "The Research on the Handwriting Stability in Different Devices and Conditions," *Sensors*, 26(2), 538, 2026. https://doi.org/10.3390/s26020538. (SCIE)
2. Nhi Do Ngoc Huynh, Jiajun Jiang*, Chung-Hao Chen, Wen-Chao Yang, "AI-Based Steganography Method to Enhance the Information Security of Hidden Messages in Digital Images," *Electronics*, 14(22), 4490, 2025. https://doi.org/10.3390/electronics14224490. (SCIE)
3. Wen-Chao Yang*, "The Research on the Trends, Challenges, and Misuse-Prevention of Deepfake Technologies," *Forensic Sci. J.*, vol. 24, no. 1, pp.13-24, 2025.
4. Jiajun Jiang*, Wen-Chao Yang, Chung-Hao Chen, Timothy Young, "A New Deepfake Detection Method with No-Reference Image Quality Assessment to Resist Image Degradation." *Eng*, 6(10), 274, 2025. DOI: 10.3390/eng6100274. (ESCI, EI)
5. Wen-Chao Yang, Chih-Hung Shih, Jiajun Jiang*, Sergio Pallas Enguita, Chung-Hao Chen, "Analyzing Visual Attention in Virtual Crime Scene Investigations Using Eye-Tracking and VR: Insights for Cognitive Modeling." *Electronics*, 14(16), 3265, 2025. DOI: 10.3390/electronics14163265. (SCIE)
6. Wen-Chao Yang*, Jiajun Jiang, Austin Mao, Kai-An Su, Chung-Hao Chen, "The Study on The Estimation of Vehicles Speed Using A Dashboard Camera," *Multimedia Tools Applicat.*, 83, pp. 45777–45798, 2024. Published online: 2023. DOI: 10.1007/s11042-023-17171-2. (SCIE)
7. Wen-Chao Yang*, Jiajun Jiang, Chung-Hao Chen, "A Fast Source Camera Identification and Verification Method Based on PRNU Analysis for Use in Video Forensic Investigations," *Multimedia Tools Applicat.*, 80(5), pp. 6617–6638, 2021. Published online: 2020. DOI: 10.1007/s11042-020-09763-z. (SCIE)
8. Wen-Chao Yang*, "StarGAN Deepfake videos detection based on NRIQA and SVM," *Forensic Sci. J.*, vol. 20 no. 1, pp. 1-12, 2021
9. Wen-Chao Yang*, Jhou-Chang Tsai, "Deepfake detection based on no-reference image quality," *Forensic Sci. J.*, vol. 19, no. 1, pp. 29-38, 2020.
10. Wen-Chao Yang*, Long-Huang Tsai, Chung-Hao Chen, "Applying the Sensor Noise based Camera Identification Technique to Trace Origin of Digital Images in Forensic

Science," *Forensic Sci. J.*, vol. 16, no. 1, pp. 19-42, 2017.

11. Wen-Chao Yang*, Te-Chi Lo, Chung-Hao Chen, "Applying Memory Forensic Technique in Popular Browsers to Assist Criminal Investigation in the Cloud," *Forensic Sci. J.*, vol. 16, no. 1, pp. 43-50, 2017.
12. Wen-Chao Yang, Ling-Hwei Chen*, "A steganographic method via various animations in PowerPoint files," *Multimedia Tools Applicat.*, vol. 74, no. 3, Feb. 2015, pp. 1003-1019. (Published online: 1 October 2013, DOI:10.1007/s11042-013-1708-1, SCI)
13. Wen-Chao Yang, Ling-Hwei Chen*, "Reversible DCT-based data hiding in stereo images," *Multimedia Tools Applicat.*, vol. 74, no. 17, pp. 7181–7193, Sep. 2015. Published online: 23 March 2014, DOI:10.1007/s11042-014-1958-6. (SCI)
14. Wen-Chao Yang*, Ling-Hwei Chen, Chang-Hsing Lee, "A difference expansion based reversible data hiding algorithm using edge-oriented prediction," *Int. J. Security Its Applicat.*, vol.8, no. 6, Nov. 2014. (EI)
15. Che-Yen Wen*, Hsuan-Hsiao Chen, Chao-Kuo Lin, Wen-Chao Yang, "A Study of Applying Light Detection and Ranging (LIDAR) to Crime Scene Documentation," *Forensic Sci. J.*, vol. 12, no. 1, pp. 31-46, 2013.

Conference

1. Wen-Chao Yang*, Tzu-Huan Lin, "Source camera identification in LINE social network via CCD fingerprint," in *Proc. The 2020 13th International Congress on Image and Signal Processing, BioMedical Engineering and Informatics* (*CISP-BMEI 2020*), 2020, Online, ISBN 978-0-7381-0544-4, DOI: 10.1109/CISP-BMEI51763.2020.9263557. (EI)
2. Hsin-Chuan Chiu, Chung-Hao Chen, Wen-Chao Yang*, Jiajun Jiang, "Automatic Full and Partial Shoeprint Retrieval System for Use in Forensic Investigations," in *Proc. The 2019 12th International Congress on Image and Signal Processing, BioMedical Engineering and Informatics* (*CISP-BMEI 2019*), Huaqiao, Jiangsu, China, Oct. 19-21, 2019. (EI)
3. Wei-Wen Hsu, Min Zhang, Chung-Hao Chen*, Wen-Chao Yang, "The use of deep learning and mean shift to learn global and local processing in human visual perception," in *Proc. IEEE International Conference on Systems, Man, and Cybernetics* (*SMC*), Budapest, Hungary, Oct. 9-12, 2016. (EI)

OTHER

Languages: Mandarin (native), English (conversational), Hokkien (conversational)

Interests: Basketball, Reading, Logical Analysis

References: https://efs.cpu.edu.tw/p/412-1068-936.php

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