

Chen, Ding-Yun 陳鼎勻

+886-929-253-288, dingyun@gmail.com

Experience

- **Mediatek Corp.**, Technical Manager → Senior Technical Manager, 2008/12-now
 - A. Camera benchmark methodology: objective quality metrics (ex. noise, sharpness, exposure) according to human perception and subjective evaluation method (ex. scene design, psychology experiments, probabilistic models) for camera ISP & 3A & camera features algorithm qualification and specification. (2012/12~now)
 - B. Dual camera features algorithm evaluation (ex. depth engine, refocus image/video, denoise). **Mediatek Innovation Award 2016** for stereo camera calibration, active learning, and applications. (2013/11~now)
 - C. A customer camera project coordinator of ISP & 3A & lens module & system (2016/10~now)
 - D. Camera issue tracking host in Mediatek for long term 3A/ISP/features quality & performance improvement. (2014/10~now)
 - E. Video codec standard (ex. H.265 & next H.266) patent viewer in Mediatek. (2013/5~2016/4)
 - F. Multimedia innovative feature exploring and prototyping. (2011/4~2012/12)
 - G. Video codec DSP and HW/SW hybrid solution in architecture design, microcode develop, SystemC model, and parallel algorithm. **Mediatek Paper Award 2011** for a multi-core video codec system. (2008/12~2011/5)
- **Realtek Corp.**, System Design Engineer → Project Associate Manager, 2003/10-2008/12
 - A. Video codec firmware: 1) Hardware software partitioning, golden C model, verification, profiling, chip bring up, and workaround; 2) Application interface design, integration, debugging and memory management; 3) Embedded system low-level software and high-level software design, optimization, task schedule, buffer management, etc.
 - B. Video codec and image processing: MPEG-1/2/4 decoder, RealVideo decoder, JPEG decoder, scaling, filtering, rotation, cropping, color conversion, image transition effects, animated OSD, video/subtitle mixer, de-blocking, etc.
- Adjunct lecturer, Shih Chien University (2001,8-2002,1), and National Chi Nan University (1999,8-2000,7)

Education

- Ph.D., Computer Science and Information Engineering, **National Taiwan University**, 1999,9-2003,6

Title: Three-Dimensional Model Shape Description and Retrieval Based on LightField Descriptors, Adviser: Ming Ouhyoung

- M.S., Computer Science and Information Engineering, **National Taiwan University**, 1997,9-1999,6

Title: VideoVR: A Real-Time System for Automatically Constructing Panoramic Images from Video Clips, Adviser: Ming Ouhyoung

Dragon Thesis Award First Prize 龍騰論文金質獎 1999. Most outstanding academic research, by Acer Foundation

Publications

- [D.-Y. Chen](#) and C.-T. Ho, "No Reference Local Image Quality Metrics Fusion For Camera Image Signal Processing", 27th IPPR Conf. on Computer Vision, Graphics, and Image Processing (CVGIP), Aug. 2014.
- C.-C. Ju, [D.-Y. Chen](#), C.-T. Ho and C.-H. Tsai, "A Panoramic Video System by Direct Manipulation Video Navigation", IEEE ICME Workshop on Mobile Multimedia Computing, July 2014.
- [D.-Y. Chen](#), C.-C. Ju, C.-T. Ho and C.-H. Tsai, "MVSE: A Multi-core Video Decoder System Level Analytics Engine", International Symposium on VLSI Design, Automation and Test, Apr. 2013.
- [D.-Y. Chen](#), C.-T. Ho, C.-C. Ju and C.-H. Tsai, "A Novel Parallel H.264 Decoder Using Dynamic Load Balance on Dual Core Embedded System", IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP), pp. 2313-2316, Mar. 2012.
- J.-S. Yeh, [D.-Y. Chen](#), B.-Y. Chen and M. Ouhyoung, "A Web-Based Three-Dimensional Protein Retrieval System by Matching Visual Similarity", Bioinformatics (Applications Note), Vol. 21, No. 13, pp. 3056-3057, July, 2005. (cited by 50 from Google Scholar)
- [D.-Y. Chen](#), X.-P. Tian, Y.-T. Shen and M. Ouhyoung, "On Visual Similarity Based 3D Model Retrieval", **Computer Graphics Forum (EuroGraphics'03), Vol. 22, No. 3, pp. 223-232, Sept. 2003. (cited by 1105 from Google Scholar)**
- [D.-Y. Chen](#) and M. Ouhyoung, "A 3D Model Alignment and Retrieval System", International Computer Symposium, Workshop on Multimedia Technologies, Vol. 2, pp. 1436-1443, Dec. 2002. (cited by 43 from Google Scholar)
- [D.-Y. Chen](#) and M. Ouhyoung, "A 3D Object Retrieval System Based on Multi-Resolution Reeb Graph", Computer Graphics Workshop, pp.16, June 2002. (cited by 63 from Google Scholar)
- [D.-Y. Chen](#), M. Ouhyoung and J.-L. Wu, "A Shift-Resisting Public Watermark System for Protecting Image Processing Software", IEEE Transactions on Consumer Electronics, Vol. 46, No. 3, pp. 404-414, Aug. 2000. (cited by 45 from Google Scholar)
- [D.-Y. Chen](#), M. C.-C. Ho and M. Ouhyoung, "VideoVR: A Real-Time System for Automatically Constructing Panoramic Images from Video Clips", Lecture Notes in Artificial Intelligence, Vol. 1537, pp.140-143, 1998. (cited by 16 from Google Scholar)

Patents

- [D.-Y. Chen](#), C.-T. Ho, C.-C. Ju and C.-H. Tsai, "Method and apparatus for controlling image generation of image capture device by determining one or more image capture settings used for generating each subgroup of captured images", US Patent No. 9,503,652, Nov. 2016 (Granted)
- C.-C. Ju, [D.-Y. Chen](#) and C.-T. Ho, "Preview system for concurrently displaying multiple preview images generated based on input image generated by image capture apparatus and related preview method thereof", US Patent No. 9,503,645, Nov. 2016 (Granted)
- C.-C. Ju, C.-T. Ho and [D.-Y. Chen](#), "Content-adaptive image resizing method and related apparatus thereof", US Patent No. 9,066,013, Feb. 2016. (Granted)
- [D.-Y. Chen](#), C.-T. Ho, C.-C. Ju and C.-H. Tsai, "Video decoding method and related computer readable medium", TW Patent No. I512673, Dec. 2015. (Granted)
- [D.-Y. Chen](#), C.-C. Ju and C.-T. Ho, "Method and apparatus for image denoising with three-dimensional block-matching", US Patent No. 9,123,103, Sept. 2015. (Granted)
- C.-C. Ju, [D.-Y. Chen](#) and C.-T. Ho, "Multi-purpose camera system supporting normal camera functionality and additional user input functionality", US Patent No. 9,258,483, Jun. 2015. (Granted)
- C.-T. Ho, [D.-Y. Chen](#) and C.-C. Ju, "Video encoding method, video encoder, video decoding method and video decoder", TW Patent No. I487379, Jun 2015. (Granted)
- C.-C. Ju, C.-T. Ho and [D.-Y. Chen](#), "Image resizing method and image resizing apparatus", CN Patent NO. CN103428427A, Dec. 2013. (Granted)
- [D.-Y. Chen](#), "Halftoning Method and Related Apparatus Using the Tiling Rule of Wang Tiles", TW Patent, No. I271999, Jan. 2007. (Granted)
- C.-C. Ju, C.-T. Ho and [D.-Y. Chen](#), "Image-based motion sensor and related multi-purpose camera system", US Patent Granted (processing)
- [D.-Y. Chen](#), C.-T. Ho, C.-C. Ju and C.-H. Tsai, "A parallel algorithm for video decoder using dynamic load balance", US Patent Granted (processing)
- C.-C. Ju, [D.-Y. Chen](#) and C.-T. Ho, "Video recording method of recording output video sequence for image capture module and related video recording apparatus thereof", US Patent Granted (processing)
- C.-M. Cheng, E. Huang, Y.-C. Lee, C.-H. Tsai, C.-C. Ju, [D.-Y. Chen](#) and C.-T. Ho, "Video frame processing method", US Patent Granted (processing)
- S. Chan, M. Chen and [D.-Y. Chen](#), "image processing method and electronic apparatus with image processing mechanism", US Patent Granted (processing)