CHUANMIN JIA

Contact

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Research Interests

- Video Processing
- Light Field Image Compression
- Machine Learning

Education

Peking University (PKU) , Beijing, China — Sep. 2015 – present
- *Ph.D.* candidate in Computer Science
- Advisor: Prof. Siwei Ma and Prof. Wen Gao

Beijing Univ. of Posts. & Telecom. (BUPT) , Beijing, China — Sep. 2011 – Jul. 2015
- *B.Eng* in Computer Science and Technology
- Overall GPA 86.7/100, rank: 10%
- Thesis: Research on Compressed Video Enhancement and GPU Acceleration. (in Chinese)

Research Experience

Institute of Digital Media, Peking University — Sep. 2014 – present
- *Research Assistant*

Institute of Computational Linguistics, Peking University — Feb. 2014 – Aug 2014
- *Research Intern*

Innovation Research Center, Beijing Univ. of Posts. & Telecom. — Aug. 2013 – Mar. 2014
- *Research Intern*

Journal Papers

- Siwei Ma, Xinfeng Zhang, Jian Zhang, **C. Jia**, Shiqi Wang and Wen Gao "Nonlocal In-Loop Filter: The Way Toward Next-Generation Video Coding?," *IEEE MultiMedia* 23 (2), 16-26.

Conference Papers

- **C. Jia**, S. Wang, X. Zhang, S. Wang and S. Ma, "Spatial-Temporal Residue Network Based In-Loop Filter for Video Coding", **Accepted** *by IEEE Visual Communications and Image Processing (***VCIP***)*, St. Petersburg, Florida, USA, Dec, 2017. (Oral)
- **C. Jia**, Y. Yang, X. Zhang, S. Wang, S. Wang and S. Ma, "Light Field Image Compression with Sub-apertures Reordering and Adaptive Reconstruction", *Proc. of the Pacific-Rim Conference on Multimedia (***PCM***)*, Harbin, China, Sept, 2017. (Oral) (Best Paper Award)
- **C. Jia**, Y. Yang, X. Zhang, S. Wang, X. Zhang, S. Wang and S. Ma, "Optimized Inter-view Prediction Based Light Field Image Compression with Adaptive Reconstruction", *Proc. of IEEE International Conference on Image Processing* (**ICIP**), grand challenge for LF image coding, Beijing, China, Sept, 2017. (Oral)
- **C. Jia**, X. Zhang, J. Zhang, S. Wang and S. Ma, "Deep Convolutional Network based Image Quality Enhancement for Low Bit Rate Image Compression," *Proc. of IEEE Visual Communications and Image Processing (***VCIP***)*, Chengdu, China, Nov. 2016. (Oral)

- J. Zhang, **C. Jia**, N. Zhang, S. Ma, and W. Gao, "Structure-driven Adaptive Non-local Filter for High Efficiency Video Coding (HEVC)," *Proc. of IEEE Data Compression Conference (***DCC***)*, Snowbird, Utah, USA, Mar. 2016. (Oral) (**Top Conference in Data Compression**)
- J. Zhang, **C. Jia**, S. Ma, and W. Gao, "Non-Local Structure-Based Filter for Video Coding," *Proc. of IEEE International Symposium on Multimedia (***ISM***)*, Miami, Florida, USA, Dec. 2015. (Oral)

Honors and Awards

- **Best Paper Award** of the Pacific-Rim Conference on Multimedia (PCM) conference, 2017
- 1^{st} prize of Video Big Data Compression Contest of the National Graduate Contest on Smart-City Technology. 2016
- Excellent Graduation Thesis Award, Beijing Univ. of Posts. & Telecom. 2015
- Innovation Scholarship (Collaborative Innovation Center for Future Media Network). 2015
- Honorable Mention Winner in American Mathematical Contest in Modeling. 2014

Professional Activity

Reviewer

- IEEE International Symposium on Multimedia (ISM). (since Aug 2017)
- IEEE Visual Communication and Image Processing (VCIP). (since July 2017)
- Journal of Visual Communication and Image Representation (JVCIR). (since Oct 2016)

Conference Oral Presentations and Invited Talks

- Light Field Image Compression with Sub-apertures Reordering and Adaptive Reconstruction, *PCM2017, Harbin, China, Sep. 2017*
- Optimized Inter-View Prediction Based Light Field Image Compression With Adaptive Reconstruction, *ICIP2017, Grand Challenge for Light Field Image coding, Beijing, China, Sep. 2017*
- Deep Convolutional Network based Image Quality Enhancement for Low Bit Rate Image Compression, *VCIP2016, Chengdu, China, Nov. 2016*

Memberships

- Student Member, IEEE

Selected Projects

View Synthesis Optimization, **Apr. 2016 - Sep. 2016**

- Optimizing an open-source view synthesis software using CUDA. Achieving 6x acceleration, with real time FHD (1080P) view synthesis over 40fps.

NFC Tour Guide, **Aug. 2013 - Mar. 2014**

- Developed an Android app using NFC for tourism. Mainly responsible for implementing of NFC pay, speech tour guide and database interface design.

Flower Recognition, **Jul. 2013 - Sep. 2013**

- Proposed recognition algorithm by combining histogram and contour feature with linear classifier. iOS app development and recognition algorithm implementation.

SKILLS

- Programming: C/C++, CUDA, MATLAB, Power Shell, Python, LaTeX.
- Operating System: Mac OS X, Ubuntu Linux, Windows
- Libraries/Frameworks: Caffe, MXNET, Tensorflow, HEVC/H.265, AVS2
- Github Repo: `https://github.com/codersadis`

Last updated: October 9th 2017