

# UNIVERSITY OF PENNSYLVANIA - SCHOOL OF MEDICINE

## Curriculum Vitae (Updated 01/01/2018)

**Name:** Yubing Tong

**Office Address:** Medical Image Processing Group  
Department of Radiology - University of Pennsylvania  
Goddard Laboratories Building - Sixth Floor  
3710 Hamilton Walk, Philadelphia, PA 19104-6021

**Office Phone:** 215-746-8629

**Emails:** yubing@mail.med.upenn.edu / ybtong99@gmail.com

### Education:

1995-1999 B. Engg. Industrial automatic system - Shandong Jianzhu University, China.  
1999-2002 M.S. Pattern recognition & intelligent system - Wuyi University, China.  
2002-2006 Ph.D. Communication & information system - Beihang University, China.

### Appointments:

- 2006-08 Video software engineer, project manager, Department of multimedia techniques, Arcsoft Inc. Shanghai, China.
- 2009-10 Postdoctoral researcher, Color Imaging Group, Hubert Curien Lab, Université Jean Monnet/Université de Lyon, ST Etienne, France.
- 2010-11 Postdoctoral researcher, Multimedia Information Modeling and Retrieval Group, Laboratoire d'Informatique de Grenoble (LIG) / Centre National de la Recherche Scientifique, Grenoble (CNRS - The French National Centre for Scientific Research), France.
- 2011-16 Postdoctoral research fellow, Medical Image Processing Group (MIPG), Department of Radiology, University of Pennsylvania, U.S.A.
- 2016- Research Associate, Medical Image Processing Group (MIPG), Department of Radiology, University of Pennsylvania, U.S.A.

### Mentoring Experience (as a Co-supervisor with Prof. Jayaram K. Udupa in UPenn/MIPG group):

- 2014- 10 PhD students in their research or theses, resulting in 9 co-authored publications
- 2016- 3 Postdocs in their research, resulting in 3 co-authored publications

### **Project experience:**

1. NIH 5R01 HL130468, PI: Arens, Raanan, Udupa Jayaram, David Wootton  
Title: A COMPUTATIONAL BIOMECHANICAL AIRWAY MODEL FOR OBESE CHILDREN AT RISK FOR OSAS  
Time: 2016-2021  
Role: key program & algorithm developer 4D MR airway segmentation algorithm; optimal bio-marks for children patients with and without OSAS
2. NIH 1R21HL1244621, PI: Udupa, Jayaram  
Title: DYNAMIC MRI IMAGE ANALYSIS FOR STUDYING THORACIC INSUFFICIENCY SYNDROME  
Time: 9/2015 – 9/2017  
Role: key program & algorithm developer 4D MR image construction; 4D lung segmentation approach
3. NSF STTR #1549509 PI / Project Leader: Joseph Camaratta, Jayaram K Udupa  
STTR Phase I: Automated object contouring methods and software for head and neck radiotherapy planning  
Time: 1/15/2016-12/31/2016  
Role: key algorithm developer with publications on AAR techniques on upper airway, 4D image segmentation
4. NIH 5R01HL105212 PI / Project Leader: Raanan Arens and Jayaram K Udupa  
Title: A STRUCTURAL & FUNCTIONAL STUDY OF THE UPPER AIRWAY IN ADOLESCENT GIRLS WITH PCOS  
Time: 2010-2014  
Role: key image segmentation algorithm development on image processing and segmentation approaches with publication of 4D IRFC for upper airway segmentation

### **Memberships in Professional and Scientific Societies:**

Member, American Association of Physicist in Medicine  
Member, Institute of Electrical and Electronic Engineers  
Member, Sigma Xi

### **Certificate: Yubing Tong, Automated Anatomy Recognition (AAR) team**

For completing all requirements of the Innovation Corps (I-Corps) Program, The University of Pennsylvania Innovation Site, **National Science Foundation**, Summer 2015.

--Corps program at Penn is supported by Penn Wharton School, Medicine School, Law School and Penn Center of Innovation as well as Ben Franklin Technology Partners of SE PA and Wharton Entrepreneurship.

(<http://pci.upenn.edu/icorps/>)

### **Editorial Positions:**

- 2014- Guest Editor for international Journal IC-MED, Intelligent Computing in Medical Sciences & Image Processing  
2015- Editor for MAYFEB Journal of Computer science

**Program Committee Member for International Conferences:**

IEEE International Conference on Computer Vision Theory and Applications  
(2017/2016/2015/2014)

IEEE International Conference on Systems, Man, and Cybernetics (2017/2014)

IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2016)

9th International Forum on Multimedia Image Processing /World Automation Congress  
2014

International Conference on Emerging Trends in Engineering & Technology 2012

**Reviewer for Journals:**

IEEE Transactions on Signal Processing

IEEE Transactions on Image Processing

IEEE Transactions on Medical Imaging

IEEE Transactions on Multimedia

IEEE Transactions on Circuits and Systems for Video Technology

IEEE Transactions on Broadcasting

Medical Image Analysis

Medical Physics

Journal of Computer Vision and Image Understanding

Journal of Pattern Recognition Research

Computerized Medical Imaging and Graphics

EURASIP: signal image and video processing

Autosoft Journal (ISAC Journal)

Computing and Informatics journal

Neural Computing and Applications (NCAA)

Elsevier/ Signal Processing: Image Communication

International Journal of Advanced Robotic Systems

International Journal of Image and Graphics

International Journal of Biomedical Imaging

International Journal of Innovative Computing, Information and Control

“Zeitschrift für Medizinische Physik” (Z MED PHYS), an official organ of the  
German and Austrian Society of Medical Physics and the Swiss Society of  
Radiobiology and Medical Physics

**Reviewer for Conferences:**

IEEE International Conference on Computer Vision Theory and Applications  
(2017/2016/2015/2014)

Medical Image Computing and Computer Assisted Interventions (MICCAI2017/2016/2015)

IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC 2017/2016/2015/2014/2013)

IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2016/2015)

The IEEE International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB 2016/2015)

The 5th International Conference on Biomedical Engineering and Biotechnology (ICBEB 2016)

The 5th International Conference on Electronics, Communications and Networks (2015)

### Grants:

1. Nvidia GPU grant, PI: Yubing Tong  
Title: Deep learning based fat segmentation from chest CT images of lung transplant patients. 2018-2019.

### Patents:

1. Jayaram K. Udupa, Dewey Odhner, Yubing Tong and Drew A.Torigian. "An interactive method for standardization and non-uniformity correction of MR image intensities," United States Patent, **Pub. No.:** US2016/0284071 A1, Pub. Date: Sep. 29, 2016.
2. Jayaram K. Udupa, Dewey Odhner, Drew A.Torigian and Yubing Tong: "Applications of anatomy recognition in medical tomographic imagery based on fuzzy anatomy models," International Patent, **Pub. No.:** WO 2015/175806 A1, Pub. Date: Nov. 19, 2015.
3. Jayaram K. Udupa, Dewey Odhner, Yubing Tong and Drew A.Torigian. "Automatic localization of body-wide lymph node stations in medical images using fuzzy models," (PENN reference 15-7410, 2015) US Patent, submitted.

### Journal Papers:

1. Shuzhi Su, Hongwei Ge, and **Yubing Tong**, Multi-graph embedding discriminative correlation feature learning for image recognition, Signal Processing: Image Communication, Volume 60, February 2018, Pages 173-182.
2. Li Li, Hongwei Ge, **Yubing Tong**, Yixin Zhang. Face Recognition Using Gabor-Based Feature Extraction and Feature Space Transformation Fusion Method for Single Image per Person Problem. Neural Processing Letters, page 1-21, 2017.
3. Torigian DA, Green-McKenzie J, Liu X, Shofer FS, Werner T, Smith CE, Strasser AA, Moghbel MC, Parekh AH, Choi G, Goncalves MD, Spaccarelli N, Gholami S, Kumar PS, **Tong Y**, Udupa JK, Mesaros C, Alavi A. A Study of the Feasibility of FDG-PET/CT to Systematically Detect and Quantify Differential Metabolic Effects of Chronic Tobacco Use in Organs of the Whole Body-A Prospective Pilot Study. Acad Radiol. 2017;24(8):930-40. doi: 10.1016/j.acra.2016.09.003. PubMed PMID: 27769824.
4. **Tong Y**, Udupa JK, Ciesielski KC, Wu C, McDonough JM, Mong DA, Campbell RM,

- Jr. Retrospective 4D MR image construction from free-breathing slice Acquisitions: A novel graph-based approach. *Med Image Anal.* 2017;35:345-59. doi: 10.1016/j.media.2016.08.001. PubMed PMID: 27567735; PMCID: PMC5099108.
5. **Tong Y**, Udupa JK, Sin S, Liu Z, Wileyto EP, Torigian DA, Arens R. MR Image Analytics to Characterize the Upper Airway Structure in Obese Children with Obstructive Sleep Apnea Syndrome. *PLoS One.* 2016;11(8):e0159327. doi: 10.1371/journal.pone.0159327. PubMed PMID: 27487240; PMCID: PMC4972248.
  6. **Tong Y**, Udupa JK, Torigian DA, Odhner D, Wu C, Pednekar G, Palmer S, Rozenshtein A, Shirk MA, Newell JD, Porteous M, Diamond JM, Christie JD, Lederer DJ. Chest Fat Quantification via CT Based on Standardized Anatomy Space in Adult Lung Transplant Candidates. *PLoS One.* 2017;12(1):e0168932. doi: 10.1371/journal.pone.0168932. PubMed PMID: 28046024; PMCID: PMC5207652.
  7. **Tong Y**, Udupa JK, Odhner D, Wu C, Sin S, Wagshul ME, Arens R. Minimally interactive segmentation of 4D dynamic upper airway MR images via fuzzy connectedness. *Med Phys.* 2016;43(5):2323. doi: 10.1118/1.4945698. PubMed PMID: 27147344; PMCID: PMC4833751.
  8. Sun K, Udupa JK, Odhner D, **Tong Y**, Zhao L, Torigian DA. Automatic thoracic anatomy segmentation on CT images using hierarchical fuzzy models and registration. *Med Phys.* 2016;43(3):1487-500. doi: 10.1118/1.4942486. PubMed PMID: 26936732.
  9. Matsumoto MM, Udupa JK, **Tong Y**, Saboury B, Torigian DA. Quantitative normal thoracic anatomy at CT. *Comput Med Imaging Graph.* 2016;51:1-10. doi: 10.1016/j.compmedimag.2016.03.005. PubMed PMID: 27065241.
  10. Huiqian Wang, Jayaram K. Udupa, Dewey Odhner, **Yubing Tong**, Liming Zhao, Drew A. Torigian. Automatic Anatomy Recognition in Whole-Body PET/CT Images. *Medical Physics* 43(1), 613-629, 2016.
  11. Tiange Liu, Qiguang Miao, Pengfei Xu, **Yubing Tong**, Jianfeng Song, Ge Xia, Yun Yang and Xiaojie Zhai. A Contour-Line Color Layer Separation Algorithm Based on Fuzzy Clustering and Region Growing. *Computers & Geosciences*, Vol. 88: 41-53, 2016.
  12. Michael G Mauk, Jinzhao Song, **Yubing Tong**, Haim H Bau and Changchun Liu. Translating Nucleic Acid Amplification Assays to the Microscale: Lab on a Chip for Point-of-Care Molecular Diagnostics. *Current Analytical Chemistry*, Vol. 12: 1-11, 2016.
  13. Jayaram K. Udupa, Dewey Odhner, Liming Zhao, **Yubing Tong**, Monica M.S. Matsumoto, Krzysztof C. Ciesielski, Alexandre X. Falcao, PavithraVaideeswaran, Victoria Ciesielski, BabakSaboury, Syedmehrdad Mohammadianrasanani, Sanghun Sin, Raanan Arens, Drew A. Torigian. Body-Wide Hierarchical Fuzzy Modeling, Recognition and Delineation of Anatomy in Medical Images. *Medical Image Analysis*, vol. 18, 752-771, 2014.
  14. **Yubing Tong**, Jayaram K. Udupa, Drew Torigian. Optimization of abdominal fat quantification on CT imaging through use of standardized anatomic space-A novel approach. *Medical Physics*, vol. 41(6):0635011-11, 2014.
  15. Robert M. Campbell, Jayaram K. Udupa, Jack Flynn, Hank Mayer, Michael Nance, Howard Panitch, Wei-Hsun Wang, **Yubing Tong**, Kieth Baldwin, Joseph McDonough, Andrew Mong. The Etiology of Thoracic Insufficiency Syndrome in Neuromuscular

- Scoliosis Based on Quantitative Dynamic Lung MRI (QdMRI). *Spine Deformity*, vol. 2(6): 505-506, 2014.
16. **Yubing Tong**, Faouzi Alaya Cheikh, Fahad Fazal Elahi Guraya, Hubert Konik and Alain Tremeau. A Spatiotemporal Saliency Model for Video Surveillance. *Journal of Cognitive Computing*, Springer, vol. 3(1): 241-263, 2011.
  17. **Yubing Tong**, Faouzi Alaya Cheikh, Hubert Konik and Alain Tremeau. Full reference image quality assessment based on saliency map analysis. *International Journal of Imaging Science and Technology*, vol. 54(3):030503-030514, 2010.
  18. Wenrui Ding, **Yubing Tong** and Qishan Zhang. Image and Video Quality Assessment Using Neural Network and SVM. *Tsinghua Science and Technology*, vol. 16(1): 112-116, 2008.
  19. **Yubing Tong**, Qishan Zhang. Image Quality Assessing Model Based on PSNR and SSIM. *Journal of Image & Graphics*, vol. 11(12): 1758-1763, 2006.
  20. **Yubing Tong**, Weiwei Hu, Dongkai Yang and Qishan Zhang. Review of Video Quality Assessment Methods. *Journal of CAD & Computer Graphics*, vol. 18(5): 1-7, 2006.
  21. **Yubing Tong**, Dongkai Yang, Qishan Zhang. Wavelet Kernel Support Vector Machines for Sparse Approximation. *Journal of Electronics (Springer)*, vol. 23(4): 539-542, 2006.
  22. Qing Chang, **Yubing Tong** and Qishan Zhang. Video quality assessing model based on single image quality with different weights, *Journal of Beijing University of Aeronautics and Astronautics*, 2007.33(3).
  23. **Tong Yubing**, Chang Qing, Zhang Qishan. H.264 inter-frame sub-block mode and intra-frame mode selection algorithm based on statistic threshold, *Optics and Electronics Engineering*, 2007.4. 133-136.
  24. **Tong Yubing**, Chang Qing, Zhang Qishan. Fast fingerprint classification algorithm based on oriented radial and generalized nonsymmetrical features. *Computer Applications*, 2005.Vo.25.No.6, 1307-1309.
  25. **Y.B. Tong**, Q.S.Zhang. Design of USB Fingerprint Capturing Device, *Semiconductor and Optics & Electronics*, 2004.Vo.25.No.1, 76-78.
  26. **Yubing Tong**, Qing Chang, Qishan Zhang, Patterns of SVM in Digital Watermarking, *Application Research of Computers*, 2005.Vo.22.No.3, 147-149.
  27. **Yubing Tong**, Qing Chang, Qishan Zhang, Document Image Compressing Algorithm Based on Image Content Analyzed and Features Extracted, *Radio Engineering of China*, 2004, Vol.34, No.11, 8-10.
  28. **Y.B. Tong**, Q.Chang, Q.S.Zhang. Embedded System of CCD Video & Image Capturing, *Optics and Electronics Engineering*, 2004.12.Vol.31, 133-136.
  29. Yuan Xiaoyu, **Tong Yubing**. PKI Architecture in Fingerprint Identification Application, *Information Security and Communication Secrecy*, 2004.11, 37-39.
  30. **Tong Yubing**, Wu Jinpei. Fuzzy Control of Household Washing Machines Based on Frequency Conversion Technology. *Journal of Wuyi University*, 2002.Vol.16.No.2, 52-57.
  31. **Tong Yubing**, Wu Jinpei. Fuzzy Control and Frequency Conversion Technique in Washing Machine Based on MC68332 Single chip. *Computer Measurement & Control*, 2002, Vol.10.No.10, 664-667.

## Conference Papers:

1. **Yubing Tong**, Chuang Wang, Jayaram K. Udupa, Caiyun Wu, Gargi Pednekar, Michaela D. Restivo, David J. Lederer, Jason D. Christie, Drew A. Torigian, Quantitative analysis of adipose tissue on chest CT to predict primary graft dysfunction in lung transplant recipients: a novel optimal biomarker approach, SPIE 2018, Medical Imaging (Accepted).
2. **Yubing Tong**, Jayaram K. Udupa, E. Paul Wileyto, Caiyun Wu, Joseph M. McDonough, Anthony Capraro, Oscar H. Mayer, Drew A. Torigian, Robert M. Campbell Jr., Quantitative dynamic MRI (QdMRI) volumetric analysis of pediatric patients with thoracic insufficiency syndrome, SPIE 2018, Medical Imaging (Accepted, **oral presentation**).
3. **Yubing Tong**, Jayaram K. Udupa, Xingyu Wu, Hierarchical model-based object localization for auto-contouring in head and neck radiation therapy planning, SPIE 2018, Medical Imaging (Accepted).
4. Fengxia Yan, Jayaram K. Udupa, **Yubing Tong**, et al. Automatic anatomy recognition using neural network learning of object relationships via virtual landmarks, SPIE 2018, Medical Imaging (Accepted).
5. Xingyu Wu, Jayaram K. Udupa, **Yubing Tong**. Auto-contouring via automatic anatomy recognition of organs at risk in head and neck cancer on CT images, SPIE 2018, Medical Imaging (Accepted, **oral presentation**).
6. Basavaraj N. Jagadale, Jayaram K. Udupa, **Yubing Tong**, Caiyun Wu, MRI in thoracic insufficiency syndrome to assess changes following surgical intervention, SPIE 2018, Medical Imaging (Accepted).
7. Jie Song, Jayaram K. Udupa, **Yubing Tong**, Architectural analysis on dynamic MRI to study thoracic insufficiency syndrome, SPIE 2018, Medical Imaging (Accepted).
8. Gargi V. Pednekar, Jayaram K. Udupa, David J. McLaughlin, Xingyu Wu, **Yubing Tong**. Image quality and segmentation, SPIE 2018, Medical Imaging (Accepted).
9. Guoping Xu, Jayaram K. Udupa, **Yubing Tong**, Dewey Odher et al. Thoracic lymph node station recognition on CT images based on automatic anatomy recognition with an optimal parent strategy, SPIE 2018, Medical Imaging (Accepted).
10. **Y.B. Tong**, J. K. Udupa, C.Y. Wu, D.A. Torigian. TIS segmentation Interactive iterative relative fuzzy connectedness lung segmentation on thoracic 4D dynamic MR images. SPIE 2017, Medical Imaging: Biomedical Applications in Molecular, Structural, and Functional Imaging, 10137, 1013721.
11. **Y.B. Tong**, J. K. Udupa, C.Y. Wu, D.A. Torigian. Disease Quantification on PET/CT Images without Object Delineation. SPIE Medical Imaging 2017 Image-Guided Procedures, Robotic Interventions, and Modeling, 10137, 10137V. (**oral presentation**)
12. **Y.B. Tong**, P.R. Bai, J. K. Udupa. Virtual Landmarks. SPIE Medical Imaging 2017: Image-Guided Procedures, Robotic Interventions, and Modeling, 10135, 1013521.
13. P.R. Bai, J.K. Udupa, **Y.B. Tong**, D.A. Torigian. Automatic thoracic body region localization. SPIE Medical Imaging 2017: Computer-Aided Diagnosis 10134, 101343X.
14. S Xie, W Zhuang, B Li, P Bai, W Shao, **Y Tong**. Blind deconvolution combined with level set method for correcting cupping artifacts in cone beam CT. SPIE Medical Imaging 2017: Image Processing 10133, 101331Z.
15. **Y.B. Tong**, J. K. Udupa, C.Y. Wu, G. Pednekar, J. R. Subramanian, D. J. Lederer, J. Christie, D. A. Torigian. Fat segmentation on chest CT images via fuzzy models, SPIE

- 2016, Medical Imaging: Image-Guided Procedures, Robotic Interventions, and Modeling, 9786, 978609.( **oral presentation**)
16. **Y.B. Tong**, J. K. Udupa, C.Y. Wu, G. Pednekar, J. R. Subramanian, D. A. Torigian, D. J. Lederer, J. Christie. Fat quantification and analysis of lung transplant patients on unenhanced chest CT images based on standardized anatomic space, SPIE Medical Imaging 2016: Biomedical Applications in Molecular, Structural, and Functional Imaging, 9788, 978817.( **oral presentation**)
  17. Lidong Huang, Jayaram K. Udupa, **Yubing Tong**, Drew. A. Torigian. Automatic anatomy recognition on CT images with pathology, SPIE Medical Imaging 2016, Computer-aided Diagnosis, 9785, 97851S.( **oral presentation**)
  18. Li Cao, Jayaram K. Udupa, Dewey Odhner, Lidong Huang, **Yubing Tong**, Drew A. Torigian. A general approach to liver lesion segmentation in CT images, SPIE Medical Imaging 2016: Image-Guided Procedures, Robotic Interventions, and Modeling, 9786, 978623.
  19. Yu Liu, Jayaram K. Udupa, Dewey Odhner, **Yubing Tong**, Drew A. Torigian. Definition and automatic anatomy recognition of lymph node zones in the abdomen and pelvis on CT images, SPIE Medical Imaging 2016: Biomedical Applications in Molecular, Structural, and Functional Imaging, 9788, 97881J.
  20. Yihua Song, Jayaram K. Udupa, Dewey Odhner, **Yubing Tong**, Drew A. Torigian. Lymph node detection in IASLC-defined zones on PET/CT images, SPIE Medical Imaging 2016: Computer-Aided Diagnosis, 9785, 978515.( **oral presentation**)
  21. **Yubing Tong**, Jayaram K. Udupa, et al. Automatic anatomy recognition in post-tonsillectomy MR images of obese children with OSAS. Proceeding of SPIE, Medical Imaging, Vol 9414, 94140Z1-6, 2015.( **oral presentation**)
  22. **Yubing Tong**, Jayaram K. Udupa, et al. Interactive non-uniformity correction and intensity standardization of MR images. Proceeding of SPIE, Medical Imaging, Vol 9415, 94111N1-6, 2015.
  23. **Yubing Tong**, Jayaram, K. Udupa, et al. MR image analysis of upper airway architecture in children with OSAS. Proceeding of SPIE, Medical Imaging, Vol 9417, 94172J1-6, 2015.
  24. Liming Zhao, Jayaram K. Udupa, **Yubing Tong**, et al. Automatic anatomy recognition of sparse objects. Proceeding of SPIE, Medical Imaging, Vol 9413, 94133N1-6, 2015.
  25. Huiqian Wang, Jayaram K. Udupa, **Yubing Tong**, et al. Automatic anatomy recognition in PET/CT Images. Proceeding of SPIE, Medical Imaging, Vol 9415, 9415181-6, 2015.( **oral presentation**)
  26. **Yubing Tong**, Jayaram K. Udupa, et al. A novel non-registration based segmentation approach of 4D dynamic upper airway MR images: minimally interactive fuzzy connectedness. Proceeding of SPIE, Medical Imaging, Vol 9038, 90380Z1-7, 2014.( **oral presentation**)
  27. **Yubing Tong**, Jayaram K. Udupa, et al. Standardized anatomic space for abdominal fat quantification. Proceeding of SPIE, Medical Imaging, Vol 9304, 90343D1-7, 2014.



28. **Yubing Tong**, Jayaram K. Udupa, et al. Graph-based retrospective 4D image construction from free-breathing MRI slice acquisitions. Proceeding of SPIE, Medical Imaging, Vol 9038, 903801I-7, 2014 .( **oral presentation**).
29. Kaiqiong Sun, Jayaram K. Udupa, Dewey Odhner and **Yubing Tong**. Automatic thoracic anatomy segmentation at CT using hierarchical fuzzy models and registration. Proceeding of SPIE, Medical Imaging, Vol.9036, 90361P1-8, 2014.
30. **Yubing Tong**, Jayaram K. Udupa, et al. Abdominal Adiposity Quantification at MRI via Fuzzy Model-Based Anatomy Recognition, Proceeding of SPIE, Medical Imaging, Vol.8672, 8672R1-7, 2013
31. **Yubing Tong**, Jayaram K. Udupa, et al. Recognition of Upper Airway and Surrounding Structures at MRI in Pediatric PCOS and OSAS, Proceeding of SPIE, Medical Imaging, Vol.8670, 86702S1-7, 2013.
32. Jayaram K. Udupa, O. Dewey and **Yubing Tong**. Fuzzy-Model-Based Body-wide Anatomy Recognition in Medical Images. Proceeding of SPIE, Medical Imaging, Vol.8671, 86712B1-7, 2013.
33. Bahjat Safadi, **Yubing Tong** and Georges Quénot. Incremental learning for active learning based Multi-learners for image indexing. MMM'2011: Proceedings of the 17th international conference on Advances in multimedia modeling, Volume Part I/ LNCS Springer, Volume 6523, 240-250, 2011.
34. **Yubing Tong**, Bahjat Safadi, Georges Quénot. Incremental Multi-Classifer Learning Algorithm on Grid5000 for Large Scale Image Annotation. MM'10/VLS-MCMR'10: Proceedings of the international workshop on Very-large-scale multimedia corpus, mining and retrieval, 1-6, 2010.
35. David Gorisse, Frédéric Precioso, Philippe-Henri Gosselin, Lionel Granjon, Denis Pellerin, Michele Rombaut, Hervé Bredin, Lionel Koenig, Rémi Vieux, Boris Mansencal, Jenny Benois-Pineau, Hugo Boujut, Claire Morand, Hervé Jégou, Stéphane Ayache, Bahjat Safadi, **Yubing Tong**, Franck Thollard, Georges Quénot, Matthieu Cord, Alexandre Benoît, Patrick Lambert. IRIM at TRECVID 2010: semantic indexing and instance search. TREC Video Retrieval Evaluation Online Proceedings (TRECVID), 2010.
36. David Gorisse, Frédéric Precioso, Philippe Gosselin, Lionel Granjon, Denis Pellerin, Michèle Rombaut, Hervé Bredin, Lionel Koenig, Héléne Lachambre, Elie El Houry, Rémi Vieux, Boris Mansencal, Yifan Zhou, Jenny Benois-Pineau, Hervé Jégou, Stéphane Ayache, Bahjat Safadi, **Yubing Tong**, Franck Thollard, Georges Quénot, Alexandre Benoît, Patrick Lambert. IRIM at TRECVID 2010: High Level Feature Extraction and Instance Search. TREC Video Retrieval Evaluation Online Proceedings (TRECVID), 2010.
37. **Yubing Tong**, Hubert Konik and Alain Tremeau. Color Face-Tuned Salient detection For Image Quality Assessment, EUVIP 2010, 253-260, 2010.
38. Fahad Fazal Elahi Guraya, Faouzi Alaya Cheikh, Alain Tremeau, Yubing Tong and Hubert Konik. Predictive Saliency Maps for Surveillance Videos. Ninth International

Symposium on Distributed Computing and Applications to Business Engineering and Science (DCABES), 508-513, 2010.

39. **Yubing Tong**, Hubert Konik, Faouzi Alaya Cheikh, Fahad Fazal Elahi Guraya and Alain Tremeau. Multi-Feature based visual saliency detection in surveillance video, Processing of SPIE , Video Communication and Image Processing, Vol. 7744, 7744041-7744049, 2010. (**Invited paper**).
40. Fahad Fazal Elahi Guraya, Ali Shariq Imran, **Yubing Tong**, Faouzi Alaya Cheikh. A Non-reference Quality Metric Based on Visual Attention Model for Videos, ISSPA, 10-13, 2010.
41. **Yubing Tong**, Qing Chang and Qishan Zhang. Image Quality Assessing by Using Neural Network and Support Vector Machines. The 5th IEEE International Conference on Machine Learning and Cybernetics, Dalian, China, Vol7:3987-3990, 2006.
42. Dongkai Yang, **Yubing Tong** and Qishan Zhang. Sparse Approximation Based on Wavelet Kernel SVM, Proceeding of the 4th International Conference on Machine Learning and Cybernetics, IEEE, Guangzhou, 2005.8, 4249-4253.

#### **Abstract:**

1. Jayaram K. Udupa, Gargi V. Pednekar, David J. McLaughlin, Xingyu Wu, Dewey Odhner, **Yubing Tong**, Charles B. Simone II, Joseph Camaratta, Drew A. Torigian. Evaluation of segmentation methods as a function of the quality of input images. AAPM 2017 Annual meeting. (accepted, 2017)
2. Xingyu Wu, Jayaram K Udupa, **Yubing Tong**, Drew A. Torigian. ISTRa e-Rekha: A high-performance software system for auto contouring head and neck anatomy in adaptive radiation therapy. ASTRO's 59th Annual Meeting. (accepted, 2017)
3. G. K. Sharma, G. S. Ahuja, D. Odhner, **Y. Tong**, M. T. Wiedmann, J. Jing, K. Huoh, N. Pham, Z. Chen, J. K. Udupa, B. J. Wong. A Novel image analysis approach to fourier-domain optical coherence tomography of the neonatal airway to quantify early structure and histopathological mucosal changes associated with neonatal subglottic stenosis: relative “fuzzy” connectedness, ASPO 2015 (Abstract accepted)
4. Shobhit Sharma, J. K. Udupa, **Y. Tong**, D. A Torigian. “Effect of MRI intensity standardization on liver tissue characterization: a comparison between normal and cirrhotic livers,” RSNA 2014 (Accepted).

#### **Presentations:**

1. Yubing Tong. “Super mask technique and its application in AAR recognition” MIPG, Department of Radiology, University of Pennsylvania, Philadelphia, PA, Dec.7, 2017.
2. Yubing Tong. “Virtual landmarks and its application in body region localization” MIPG, Department of Radiology, University of Pennsylvania, Philadelphia, PA, May.11, 2017.
3. Yubing Tong. “Disease quantification without exploration of delineation” Medical Imaging, SPIE 2017, Orlando, Florida. Feb.13, 2017.
4. Yubing Tong. “Interactive IRFC based lung segmentation at 4D dynamic thoracic MR

- images,” MIPG, Department of Radiology, University of Pennsylvania, Philadelphia, PA, Nov.17, 2016.
5. Yubing Tong. “*Interactive Non-uniformity Correction and Intensity Standardization of MR Images*,” MIPG, Department of Radiology, University of Pennsylvania, Philadelphia, PA, April 28, 2016.
  6. Yubing Tong. “Fat segmentation on chest CT images via Fuzzy models,” San Diego, California, Feb. 28, 2016.
  7. Yubing Tong. “Fat quantification and analysis of lung transplant patients on unenhanced chest CT images based on standardized anatomic space,” San Diego, California, March 3, 2016.
  8. Yubing Tong. “Automatic anatomy recognition on CT images with pathology” San Diego, California, March 2, 2016.
  9. Yubing Tong. “Lymph node detection in IASLC-defined zones on PET/CT images,” San Diego, California, March 1st, 2016.
  10. Yubing Tong. “Fat quantification and analysis of lung transplant patients on unenhanced chest CT images based on standardized anatomic space,” MIPG, Department of Radiology, University of Pennsylvania, Philadelphia, PA, Nov.12, 2015.
  11. Yubing Tong. “AAR Based multiple object segmentation at Neck MRI/CT image of Obese Children with OSAS,” MIPG, Department of Radiology, University of Pennsylvania, Philadelphia, PA, Mar.20, 2015.
  12. Yubing Tong. “Automatic anatomy recognition in post-tonsillectomy MR images of obese children with OSAS,” Medical Imaging, SPIE 2015, Orlando, Florida. Feb.24, 2015.
  13. Yubing Tong. “Automatic anatomy recognition in PET/CT Images,” Medical Imaging, SPIE 2015, Orlando, Florida. Feb.23, 2015.
  14. Yubing Tong, “4D Dynamic MR Image Construction and Quantification in Young Children with Thoracic Insufficiency Syndrome,” 13th Annual Biomedical Postdoc Research Symposium, BRB II/III, University of Pennsylvania, Philadelphia, PA, Nov. 18, 2014.
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## **Recommenders:**

Jayaram K. Udupa, Ph.D.,  
IEEE and AIMBE Fellow  
Professor and chief of Medical Image Processing Group (MIPG)  
Department of Radiology, University of Pennsylvania,  
#602, 6<sup>th</sup> floor at Goddard building,  
3710 Hamilton Walk, Philadelphia, PA, 19104.  
Email: [jay@mail.med.upenn.edu](mailto:jay@mail.med.upenn.edu)

Daniel Rueckert, Ph.D.,  
Royal Academy of Engineering (UK) Fellow  
IEEE and MICCAI Fellow  
Professor at Department of Computing, Imperial College London,  
Room 374, Huxley Building 180 Queen's Gate London SW7 2AZ, UK  
Email: [d.rueckert@imperial.ac.uk](mailto:d.rueckert@imperial.ac.uk)

Catherine Berrut, Ph.D.  
Former Vice President of University Joseph Fourier (2007-2012)  
Professor at University Joseph Fourier and Polytech Grenoble  
Laboratoire LIG - BP 53 - 38041 Grenoble Cedex 9 - France  
Email: [Catherine.Berrut@imag.fr](mailto:Catherine.Berrut@imag.fr)