Dr. Vinod Pankajakshan

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Dept. of Electronics & Computer Engg.
Indian Institute of Technology Roorkee
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CURRENT RESEARCH INTERESTS

Multimedia Forensics, Digital Watermarking, Image/Video Quality Assessment

EDUCATION

PhD   January 2008

Department of Electronics & Communication Engineering

Indian Institute of Technology Guwahati

Thesis title : Motion-Coherent Video Watermarking

Supervisor : Prof. Prabin Kumar Bora

MTech   January 2002

Department of Electronics & Communication Engineering

Indian Institute of Technology Guwahati

Specialization : Digital Signal Processing

BTech   May 1999

Rajiv Gandhi Institute of Technology, Kottayam, Kerala

Specialization : Electronics & Communication Engineering

RESEARCH/TEACHING EXPERIENCE

Post-Doctoral Researcher   March 2009 - Feb 2011

Image & Video Communications Research Group

IRCCyN Lab, Nantes, France

www.irccyn.ec-nantes.fr

Associate Lecturer   October 2008 - December 2008

Department of Computing

University of Surrey, UK

www2.surrey.ac.uk/computing

Research Fellow   March 2007 - September 2008

Formal Methods and Security Research Group

University of Surrey, UK

www2.surrey.ac.uk/computing/research/fms

PUBLICATIONS

Refereed Journals

1. V. Pankajakshan , G. Doerr and P. K Bora, "Detection of Motion Incoherent Components in Video Streams", **IEEE Transactions on Information Forensics & Security**, March 2009.

2. V. Pankajakshan and P. K. Bora, "Motion-Compensated Inter-Frame Collusion attack on Video Watermarking and a Countermeasure", **IEE Proceedings - Information Security**, June 2006.

Conference/Workshop Proceedings

1. F. Autrusseu, S. David and V. Pankajakshan, "A Perceptually Driven Hybrid Watermarking Technique in the Wavelet Domain", in **SPIE Conference on Media Watermarking, Security and Forensics XIII**, USA, January 2011.

2. V. Pankajakshan and F. Autrusseu, "A Multi-Purpose Objective Quality Metric for Image Watermarking", in **17th IEEE International Conference on Image Processing (ICIP)**, Hong Kong, September 2010.

3. F. Autrusseu, S. David and V. Pankajakshan, "A Subjective Study of Visibility Thresholds for Wavelet Domain Watermarking", in **17th IEEE International Conference on Image Processing (ICIP)**, Hong Kong, September 2010.

4. T. Stutz, V. Pankajkshan, F. Autrusseu, A. Uhl and H. Hofbauer, "Subjective and Objective Quality Assessment of Transparently Encrypted JPEG2000 Images", in **12th ACM Multimedia and Security Workshop**", Italy, September 2010.

5. M. Carosi, V. Pankajakshan and F. Autrusseu, "Towards a Simplified Perceptual Quality Metric for Watermarking Applications", in **SPIE 22nd International Symposium on Electronic Imaging**, USA, January 2010.

6. W. Huang, A.T.S Ho and V. Pankajakshan, "Watermarking-based Content Authentication of Motion-JPEG Sequences", in **IET 5th International Conference on Visual Information Engineering**, China, August 2008.

7. V. Pankajakshan and A. T. S. Ho, "Improving Video Steganalysis Using Temporal Correlation" in **IEEE 3rd International Conference of Intelligent Information Hiding and Multimedia Signal Processing**, Taiwan, November 2007.

8. V. Pankajakshan, G. Doerr and P. K Bora,"Assessing Motion-Coherency in Video Watermarking", in **8th ACM Multimedia and Security Workshop**, Switzerland, 2006.

9. V. Pankajakshan and P. K. Bora, "A New Inter-frame Collusion Attack and a Countermeasure", in **4th International Workshop on Digital Watermarking**, Italy, 2005.

10. V. Pankajakshan and P. K. Bora, "Motion Compensated Frame Temporal Filtering (MC-FTF): A Video Watermarking Attack, in **11th National Conference on Communications (NCC)**, IIT Kharagpur, February 2005.

11. V. Pankajakshan and P. K. Bora, "A New Algorithm for Collusion Resistant Video Watermarking", in **11th IEEE International Conference on Image Processing (ICIP)**, Singapore, October 2004.

12. V. Pankajakshan and P. K. Bora, "Oblivious Video Watermarking Using Temporal Wavelet Transform", in **9th National Conference on Communications (NCC)**, IIT Madras, January 2003.

CONFERENCE/WORKSHOP ATTENDED

- 22nd SPIE International Symposium on Electronic Imaging, USA (2010)
- 1st IEEE International Workshop on Information Forensics and Security, UK (2009)
- 9th Information Hiding Workshop, France (2007)
- 8th ACM Multimedia and Security Workshop, Switzerland (2006)
- 4th International Workshop on Digital Watermarking, Italy (2005)
- 11th IEEE International Conference on Image Processing, Singapore (2004).

ACTIVITIES AND SERVICES

- Affiliate member, IEEE Information Forensics & Security, Technical Committee
- Reviewer for:
    - IEEE Transactions on Information Forensics & Security
    - IEEE Transactions on Circuits & Systems for Video Technology
    - IET Information Security
    - Elsevier Signal Processing
- Vice President of the IITG Students' Gymkhana Council (2003- 2004)
- Member of the IITG football team (2000-2006)