



Gagan Rath, Ph.D.

Designation : Professor

Department : Department of Electronics and Communication Engg.

(JOINED THE INSTITUTE IN 2019)

Contact : 9556270837(M)

Email : gagan.rath@silicon.ac.in

RESEARCH INTERESTS:

Distributed coding in sensor networks, Distributed video coding, Image/Video compression and communication, Joint source-channel coding.

Academic Qualifications

Ph. D. : IISC, Bangalore (1999)

M. E. : IISC, Bangalore (1993)

Specialization: Electrical Communication Engineering

Teaching Experience/Industrial Experience/Research Experience

Teaching Experience: 22 Years

Industry Experience: 1 Year (Motorola India Electronics Ltd.)

Research Experience: 23 Years

PUBLICATIONS

JOURNAL & CONFERENCES:

JOURNALS:

1. **G B Rath**, A Makur, Subblock matching-based conditional motion estimation with automatic threshold selection for video compression, IEEE Transactions on Circuits and Systems for video Technology 13 (9), 914-924, 2003
2. **G Rath**, C Guillemot, Performance analysis and recursive syndrome decoding of DFT codes for bursty error recovery, IEEE Transactions on Signal Processing 51 (5), 1335-1350, 2003
3. **G Rath**, C Guillemot, Frame-theoretic analysis of DFT codes with erasures, IEEE Transactions on Signal Processing 52 (2), 447-460, 2004
4. **G Rath**, C Guillemot, Characterization of a class of error correcting frames for robust signal transmission over wireless communication channels, EURASIP Journal on Advances in Signal Processing 2005 (2), 1-13
5. W Yang, **G Rath**, C Guillemot, Scalable video coding with inter layer signal decorrelation techniques, EURASIP Journal on Advances in Signal Processing 2007 (1), 054342

6. **G Rath**, W Yang, C Guillemot, Compression of Laplacian pyramids through orthogonal transforms and improved prediction, IEEE transactions on image processing 17 (9), 1587-1604, 2006
7. F Racapé, F Galpin, **G Rath**, E Francois, AHG8: adaptive QP for 360 video coding, JVET-F0038, 2017

CONFERENCES:

1. G Rath, A Sahoo, A comparative study of some greedy pursuit algorithms for sparse approximation, 2009 17th European Signal Processing Conference, 398-402.
2. **G Rath**, C Guillemot, Sparse approximation with an orthogonal complementary matching pursuit algorithm, 2009 IEEE International Conference on Acoustics, Speech and Signal Processing, 3325-3328.
3. **G Rath**, C Guillemot, JJ Fuchs, Sparse approximations for joint source-channel coding, 2008 IEEE 10th Workshop on Multimedia Signal Processing, 481-485.
4. W Yang, **G Rath**, C Guillemot, Improved inter layer prediction for scalable video coding, 2007 IEEE International Conference on Acoustics, Speech and Signal Processing.
5. **G Rath**, C Guillemot, An SVD based transform for critical representation of laplacian pyramid, 2006 International Conference on Image Processing, 1689-1692
6. **G Rath**, C Guillemot, Compressing the Laplacian pyramid 2006 IEEE Workshop on Multimedia Signal Processing, 75-79