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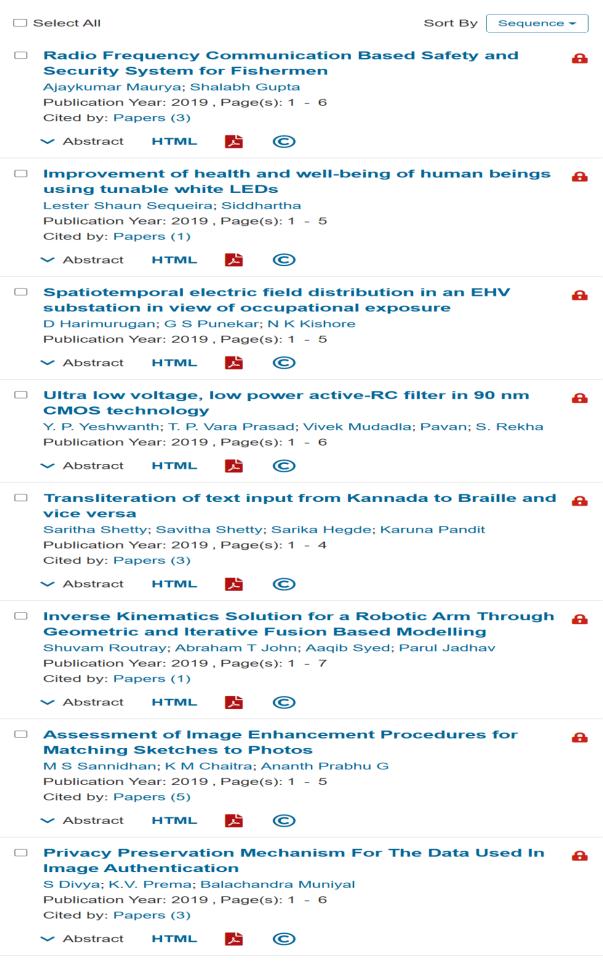
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Performance Comparison of Joint Correlation and Improved Energy Detection for Spectrum Sensing Arati Halaki; Sanjeev Gurugopinath; R. Muralishankar Publication Year: 2019, Page(s): 1 - 6 Cited by: Papers (1) **(C)** Abstract HTML <u>ا</u> ■ MIMO Channel Capacity Enhancement Using PCA Data **Reduction Methods with QPSK Modulation** Panem Charan Arur; Deepak Chodankar; Rajendra S. Gad Publication Year: 2019, Page(s): 1 - 4 ✓ Abstract HTML Development of Integrated Health Care App for Non -**Invasive Bio - Medical Application** B K Swathi Prasad; D Sunil; Ashok Gowda; Kotraswamy; Vijay Publication Year: 2019, Page(s): 1 - 5 Cited by: Papers (2) **(C)** ✓ Abstract HTML 7 □ A Study of Imaging the Cardiac Activation Sequences in Electrocardiology Vikas R Bhat: Anitha H. Publication Year: 2019, Page(s): 1 - 6 Abstract HTML Empirical Analysis of Man Poduco, Joh Schoduling with

## MIMO Channel Capacity Enhancement Using PCA Data Reduction Methods with QPSK Modulation

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**Text Views** 









## **Abstract**

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- II. Previous Work
- III. Proposed

  Methodology
  for Data

  Reduction and
  Transmission
  Over Mimo
- IV. Simulation Results

## Abstract:

Modern wireless communication system capacity can be enhanced using modulatior methods like QPSK/QAM, combination of multiple inputs multiple outputs (MIMO) channel, error correction codes and advanced multiplexing methods like Orthogonal Frequency Division Multiplexing (OFDM). Working on the similar goal, this paper proposed a methodology to enhance end to end performance of the system. The proposed method utilizes the Principal Component Analysis (PCA) for data reduction MIMO channel combination with 4-PSK modulation having Low Density Parity Check (LDPC) error correction. The BER and RMSE is calculated for both the schemes and the performance of the system is evaluated with the different configuration of the 2x2,3x3,4x4 MIMO channel with and without LDPC. This paper demonstrated the sensor data reduction with PCA to transmit the extracted features of the data over MIMO AWGN channel over LDPC correction to regress the data at the receiver end. The performance of the system is studied for Bit Errors Rate over noisy channel and RMSE to confirm the signal regression.

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