

1997 Paper 9 Question 12

Computer Vision

Discuss the rôle of non-linear operators in vision for the extraction of motion information, texture information, colour information, and stereo information. What are the limitations of linear operators (such as filters) compared with non-linear ones? What is a quadrature pair, and what is a Hilbert pair? What is a Hilbert Transform, and what is a natural way to build a useful non-linear operator from it? [20 marks]