

## ***Retinal Imaging- a perfect window to trace complications and abnormalities***

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### ***Abstract***

Health care has become a crucial focal point of the human race, globally. Number of patients, irrespective of age and sex, are increasing day-by-day facing abnormalities with at least one ailment. Despite advancements in technology and science, the suffering caused by long-term diseases has remained as a curse on humans. But, the endeavors of the research teams in various dimensions with appropriate specializations are becoming a blessing for clinicians to deal effectively with patients. Among all diseases, 'diabetes' is such a disease which once affected, cascades into and damages almost all organs of human body. Though diabetes is an enduring disease, its prognostic impact could be lowered if proper prevention measures are taken cared. Thanks to 'ophthalmoscope' (being invented 150 years ago by von Helmholtz) which really changed the way to non-invasively investigate the human eye to trace not only the complications of 'Diabetic Retinopathy' (is a condition that occurs as a result of damage to the blood vessels of the retina in people who have diabetes) but also the abnormalities of other pathologies of 'Diabetic Neuropathy' (nerve damage caused by diabetes that leads to numbness and sometimes pain and weakness in the hands, arms, feet, and legs. This disease affects the digestive tract, heart, and genitalia), 'Diabetic Nephropathy' (is a kidney disease from long-standing diabetes that affects the tiny blood vessels in the glomerulus, a key structure in the kidney composed of capillary blood vessels) etc. A large cram of research is rapidly progressing and with further advances in imaging, it is more likely that the domain of retinal research will surely remain active and shall be clinically relevant for many years down to come. Very soon, novel metrics and caliber biomarkers for other organ diseases are likely to get emerge from depth and detail of retinal phenotyping. In this presentation, I would like to disclose the recent advancements took place in mapping retinal imaging to other pathologies. The quantitative and qualitative aspects of retinal microvascular structure determining the strength of the kidney diseases and/or renal failures is also putforth.

and near to submit his thesis work, at GITAM University, Vishakapatnam, A.P, India.

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### ***Speaker Biography:***

N.C Santosh Kumar has received his M.Tech in Software Engineering from Kakatiya Institute of Technology and Science, Kakatiya University, Warangal. Currently, he is working as Assistant Professor in the Department of CSE at Kakatiya Institute of Technology and Science, Warangal, Telangana, INDIA. Worked in various software projects and gained rich experience in software development. His research interest is in Biomedical Image Processing and published 04 papers in reputed Journals. Currently, he is a research scholar,