



**Computer Society of India, Chennai Chapter  
IEEE Computer Society, Madras Chapter**

*Cordially invite you for a talk by*

**Dr. R.K. Shyamasundar**

Senior Professor and JC Bose National Fellow,  
Tata Institute of Fundamental Research, Mumbai – 400005

*on*

**“Malware Detection: Challenges”**

**on Thursday, 28<sup>th</sup> Oct 2010 at 6.30 p.m.**

**at CSI Education Directorate, Taramani, Chennai – 600 113**

(Situated in the opposite lane to Indira Nagar MRTS Railway Station. About 100 meters away from the Dharmambal Women's Polytechnic & Opposite to the Institute of Mathematical Sciences and Institute of Hotel Management)

**Dr. P. Sakthivel**  
Chairman  
CSI Chennai Chapter

**Mr. H.R. Mohan**  
Chairman  
IEEE-CS Madras Chapter

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*Programme*

**6.00 p.m.: Tea & Fellowship :: 6.30 p.m.: Talk :: 7.45 p.m.: Dinner**

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*About the Talk*

Malware is increasingly becoming a serious threat and a nuisance in the information and network age. Human experts extract (involves complex analysis of encrypted and/or packed binaries) a signature (usually a text pattern) of the malware and deploy it, to protect against a malware. However, this approach does not work for polymorphic and metamorphic malware, which have the ability to change shape from attack to attack; also, metamorphic virus detection even assuming fixed length is NP-complete. To counter these advanced forms of malware we need semantic signatures which capture the essential behaviour of the malware (which remains unchanged across variants). In this talk, an algorithmic approach for extracting the semantic signature of a malware -as a regular expression over API calls- and demonstrate via experiments its efficacy in detecting and predicting malware variants will be presented.