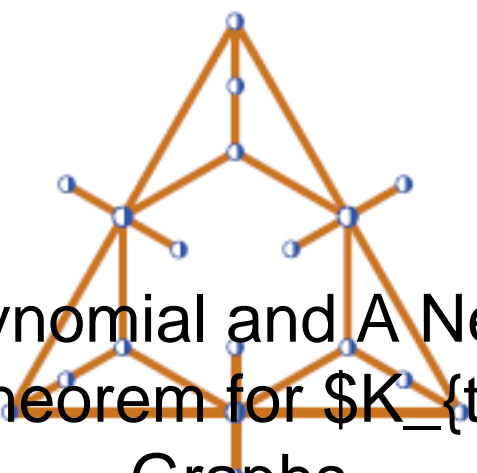


Bled'11 - 7th Slovenian International Conference on Graph Theory

Contribution ID : 224



Clique Polynomial and A New Proof of Turan's Theorem for K_{t+1} -Free Graphs

Content :

For a given simple graph G , we define an i -clique as a complete subgraph of G on i vertices. The generating function for the number of i -cliques in G is called the "clique polynomial" of G . Using elementary tools from Calculus, Hajiabolhasan and Mehrabadi showed that this polynomial has always a real root for any given simple graph G . As an immediate consequence, they gave a new proof of the Mantel's theorem for triangle-free graphs. In this paper, using similar tools from Calculus, we present a new proof of Turan's theorem for K_{t+1} -free graphs which is a generalization of Mantel's theorem.

Primary authors : Dr. TEIMOORI FAAL, Hossein (Department of Applied Mathematics of Charles University in Prague and Institute for Theoretical Computer Science(ITI))

Co-authors : Dr. BAYAT, Morteza (Department of Electrical and Computer Engineering, Zanjan University)

Presenter : Dr. TEIMOORI FAAL, Hossein (Department of Applied Mathematics of Charles University in Prague and Institute for Theoretical Computer Science(ITI))

Session classification : --not yet classified--

Track classification : General session

Type : Oral presentation