

6<sup>th</sup> International Conference on

# BIOSTATISTICS AND BIOINFORMATICS

November 13-14, 2017 | Atlanta, USA

## Factorization of directed graph describing protein network using for research of plants stability to drought and extreme temperatures

G Sh Tsitsiashvili, V P Bulgakov and A S Losev  
Far Eastern Federal University, Russia

In this paper, a sequential algorithm of graph nodes classification and their partial order definition are applying to protein network using for a study of the key players required for connecting ABA signaling and ABA-mediated drought and thermo tolerance. Suggested classification procedure allows finding in the network using for research of plants stability to drought and extreme temperatures proteins, the most important clusters for thermo stability and impacts to provide them conditions that are more convenient. It is possible to allocate output proteins DREB2C, ABA receptors PYLs, which are the most important for thermo stability of plants by their biochemical characteristics. In the network, there are only two multi node clusters and only one of them has edges connected with allocated output proteins. Details of this multi node cluster with allocated output proteins are analyzing.

### Biography

G Sh Tsitsiashvili is professor of the chair of Algebra, Geometry and Analysis at Far Eastern Federal University. 68 years since the birth of Tsitsiashvili Gurami Shalvovich (19 December, 1948), doctor of physical-mathematical sciences, Professor, main scientific researcher of Institute for Applied Mathematics Far Eastern Branch of RAS

guram@iam.dvo.ru

Notes: