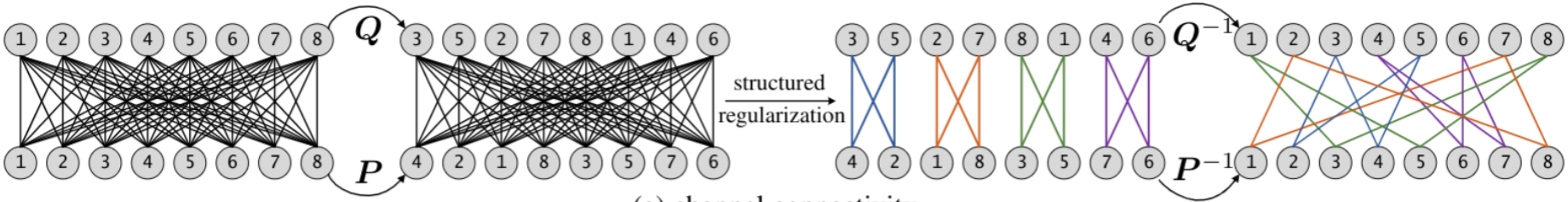
Structured Sparsification with Joint Optimization of Group Convolution and Channel Shuffle

Xin-Yu Zhang, Kai Zhao, Taihong Xiao, Ming-Ming Cheng, Ming-Hsuan Yang

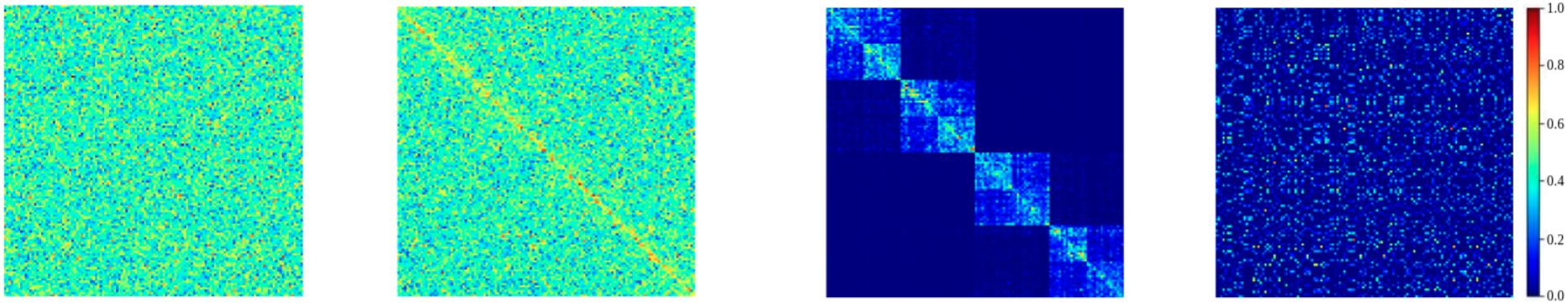
xinyuzhang@mail.nankai.edu.cn

Overview

As an alternative to filter pruning, we compress the model by learning a group structure and a channel shuffle pattern jointly.



(a) channel connectivity



(b) weight norm matrix

Figure: Overview of the proposed *structured sparsification*.

Highlights.

(i) Learning connectivity (channel shuffle) via linear programming;

(ii) Structured L_1 regularization to promote group structure.