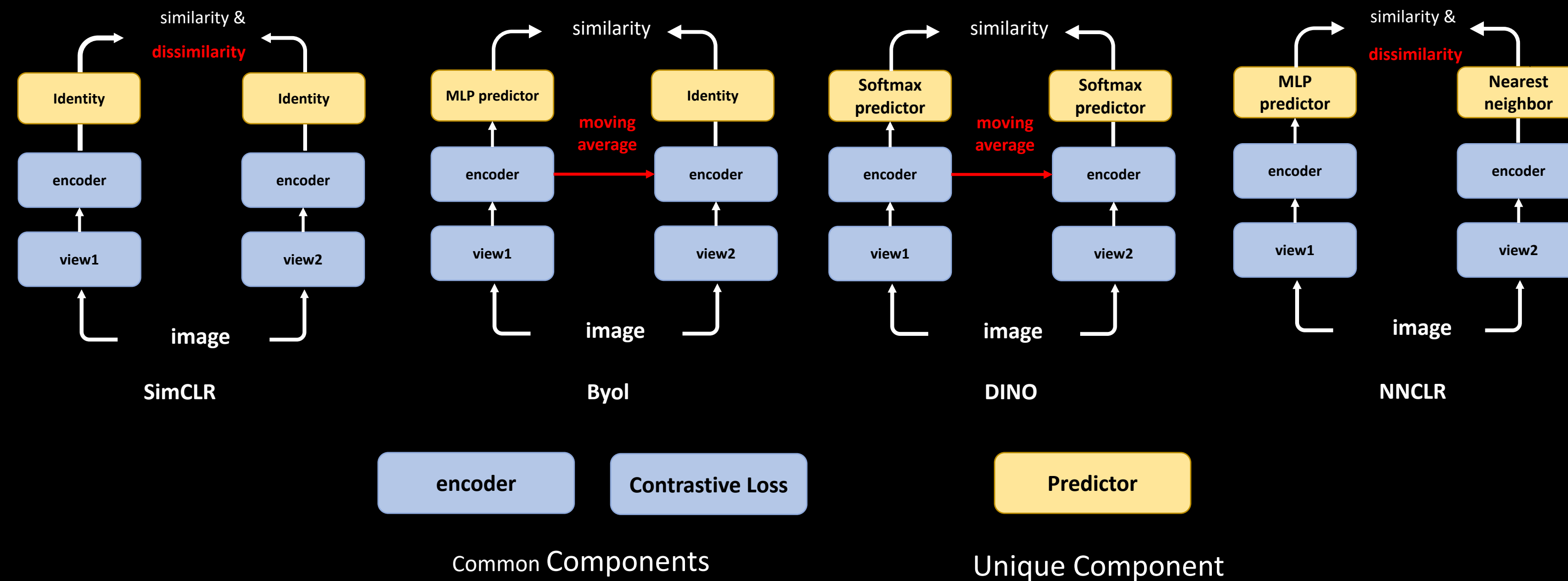


# Unifying Visual Contrastive Learning for Object Recognition from a Graph Perspective

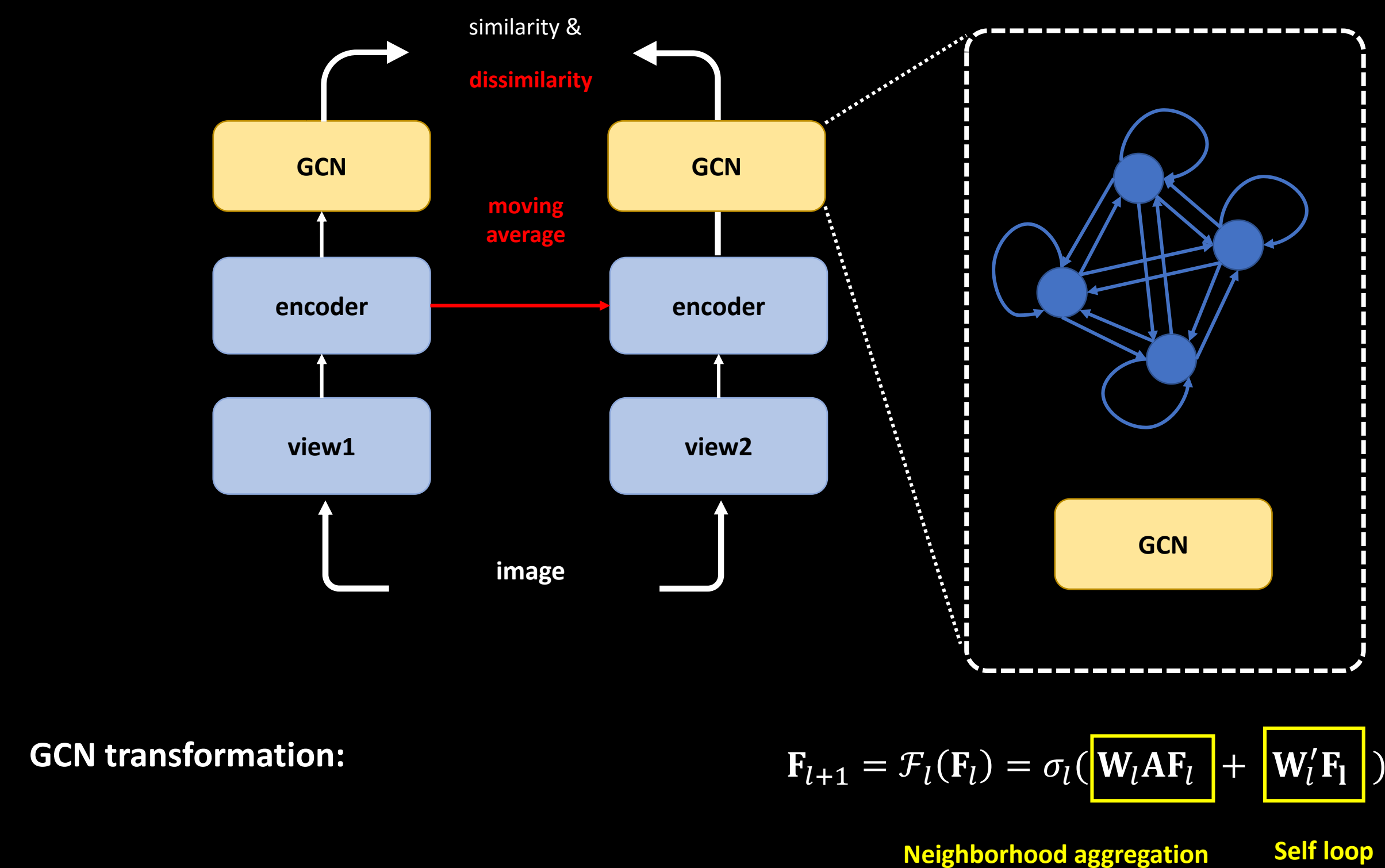
Shixiang Tang<sup>1,2</sup>, Feng Zhu<sup>2</sup>, Lei Bai<sup>1,3</sup>, Rui Zhao<sup>2</sup>, Wanli Ouyang<sup>1,3</sup>

1 The University of Sydney, 2 SenseTime Group Limited, 3 Shanghai AI Laboratory

## Typical framework for Self-supervised learning

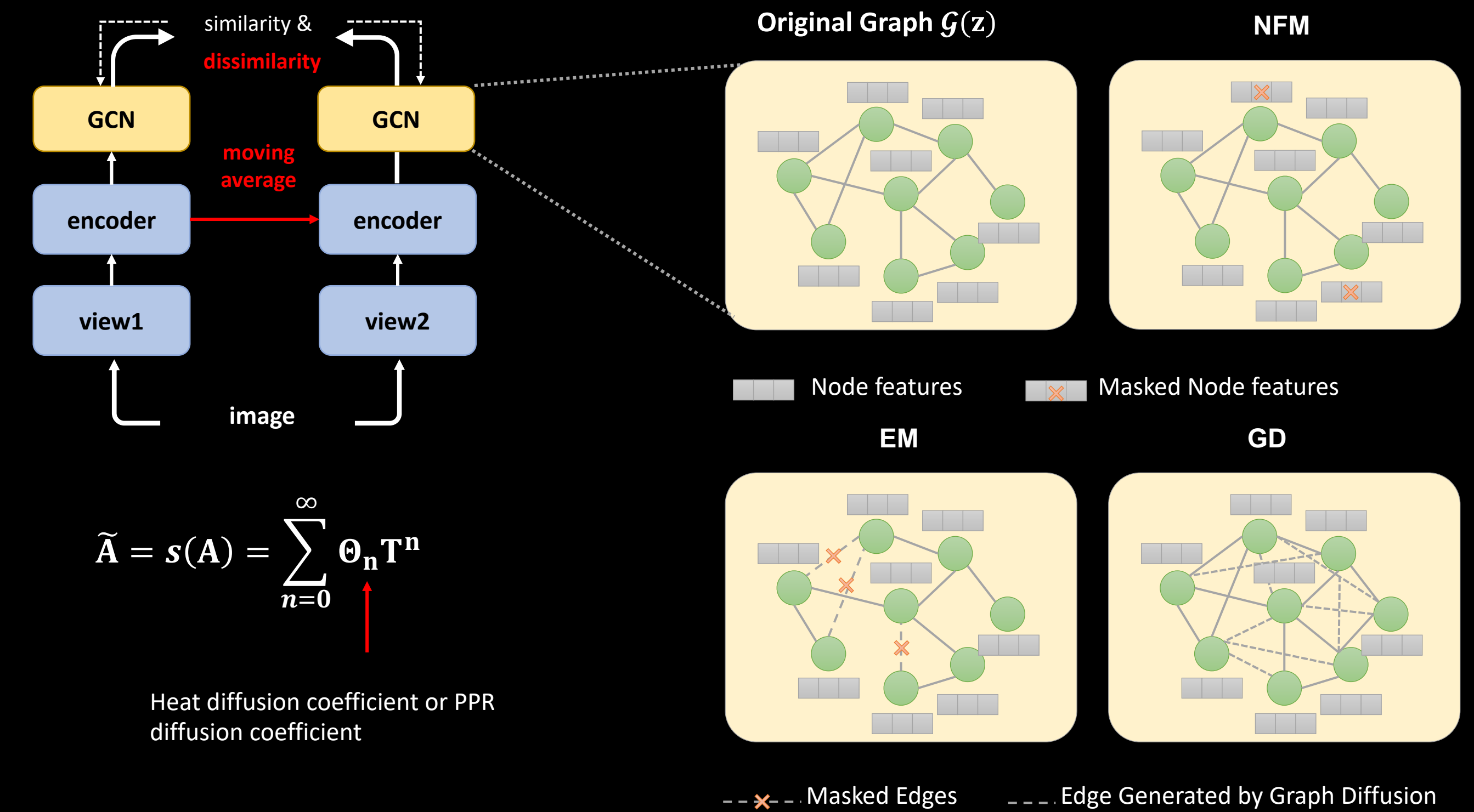


## Unifying predictors by a GCN predictor

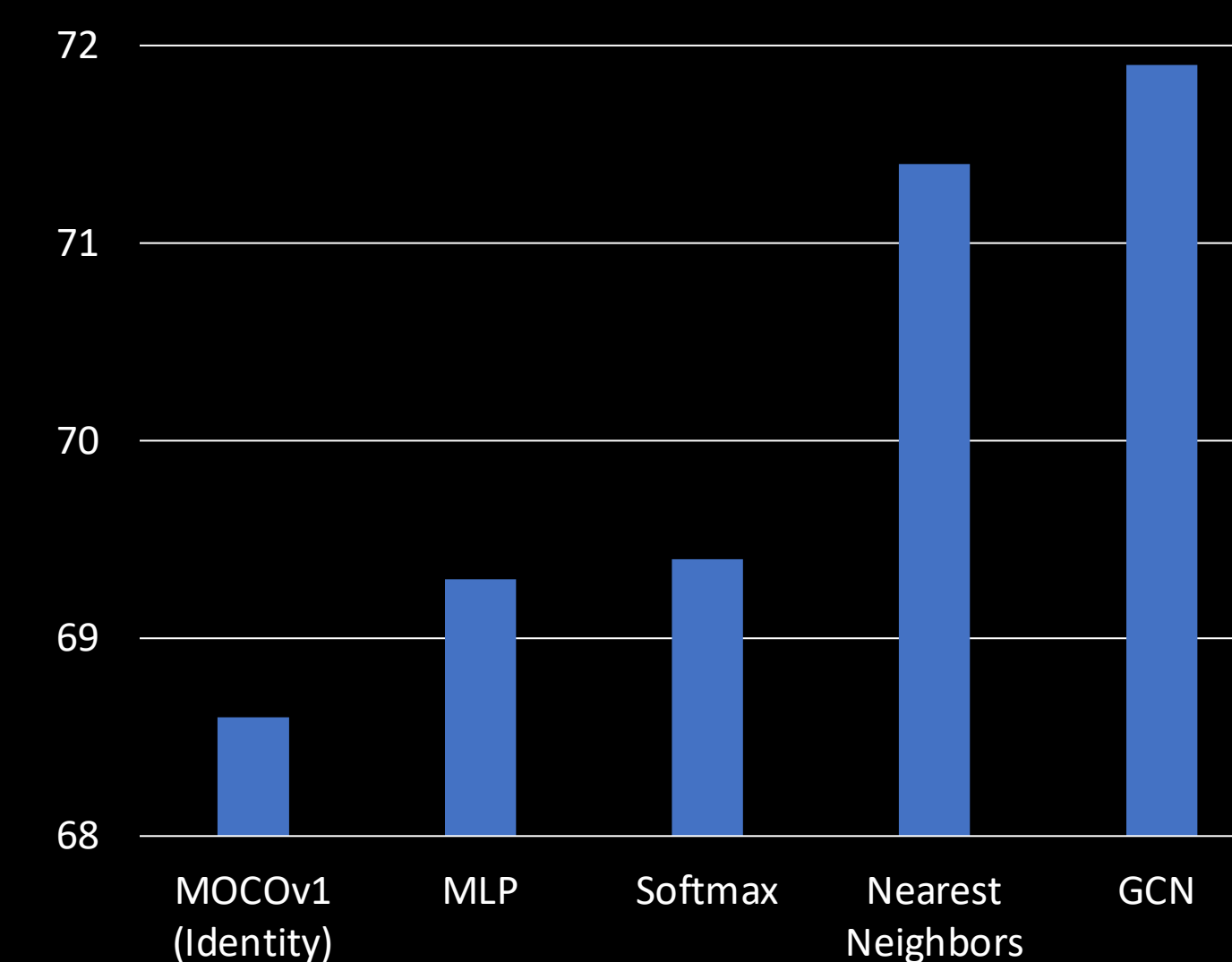


A: affinity Matrix       $\mathbf{F}_l, \mathbf{F}_{l+1}$ : features       $\mathbf{W}_l, \mathbf{W}_{l+1}$ : transformation matrix

## Graph augmentation introduced in Vision self-supervised learning



## Effectiveness of GCN predictor



## Effectiveness of graph aug

