Generalizing Convolutional Neural Networks to Graph Domains

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Abstract:
For the past few years, various works have aimed at tackling the problem of extending Convolutional Neural Networks (CNNs) to irregular domains. In this presentation, we propose to use graphs as an intermediate solution, thus deriving two subproblems: a) identifying a graph given a set of signals and b) defining CNN-like structures given a graph domain. For both problems, we introduce original approaches and discuss their performance.

Bio:
Vincent Gripon is a permanent researcher with IMT-Atlantique (Institut Mines-Télécom), Brest, France. He obtained his M.S. from École Normale Supérieure of Cachan and his Ph.D. from Télécom Bretagne. His research interests lie at the intersection of information theory, computer science and neural networks. He co-authored about 60 papers in the above-mentioned domains.

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