**Tensor 101**

**Tensor101 contains some elementary materials introducing tensor computation / network.**

1. **Introduction to Tensor Decompositions and their Applications in Machine Learning**

[Stephan Rabanser](https://arxiv.org/search/stat?searchtype=author&query=Rabanser,+S)**,**[Oleksandr Shchur](https://arxiv.org/search/stat?searchtype=author&query=Shchur,+O)**,**[Stephan Günnemann](https://arxiv.org/search/stat?searchtype=author&query=G%C3%BCnnemann,+S)

<https://arxiv.org/abs/1711.10781>

1. **Lecture Notes - An Introductory Course on Tensor Networks**

**Jacob C. Bridgeman, Christopher T. Chubb**

<https://arxiv.org/pdf/1603.03039>

1. **Low-Rank Tensor Networks for Dimensionality Reduction and Large-Scale Optimization Problems: Perspectives and Challenges PART 1**

A. [Cichocki](https://arxiv.org/search/cs?searchtype=author&query=Cichocki,+A)**,**[N. Lee](https://arxiv.org/search/cs?searchtype=author&query=Lee,+N)**,**[I.V. Oseledets](https://arxiv.org/search/cs?searchtype=author&query=Oseledets,+I)**,**[A.-H. Phan](https://arxiv.org/search/cs?searchtype=author&query=Phan,+A)**,**[Q. Zhao](https://arxiv.org/search/cs?searchtype=author&query=Zhao,+Q)**,**[D. Mandic](https://arxiv.org/search/cs?searchtype=author&query=Mandic,+D)

<https://arxiv.org/abs/1609.00893>

1. **Tensor Networks for Dimensionality Reduction and Large-Scale Optimizations. Part 2 Applications and Future Perspectives**
2. [Cichocki](https://arxiv.org/search/cs?searchtype=author&query=Cichocki,+A), [A-H. Phan](https://arxiv.org/search/cs?searchtype=author&query=Phan,+A), [Q. Zhao](https://arxiv.org/search/cs?searchtype=author&query=Zhao,+Q), [N. Lee](https://arxiv.org/search/cs?searchtype=author&query=Lee,+N), [I.V. Oseledets](https://arxiv.org/search/cs?searchtype=author&query=Oseledets,+I), [M. Sugiyama](https://arxiv.org/search/cs?searchtype=author&query=Sugiyama,+M), [D. Mandic](https://arxiv.org/search/cs?searchtype=author&query=Mandic,+D)

<https://arxiv.org/abs/1708.09165>

1. **Tensor Decompositions and Applications**

**Tamara G. Kolda, Brett W. Bader**

<https://www.kolda.net/publication/TensorReview.pdf>