



# Tensor Decompositions for Analyzing Multi-Way Data

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# Software@Sandia

- **Tensor Toolbox for Matlab:** main R&D tool  
[https://gitlab.com/tensors/tensor\\_toolbox](https://gitlab.com/tensors/tensor_toolbox)
- **Genten:** CP-ALS, GCP, single-node parallelism  
<https://gitlab.com/tensors/genten>
- **SparTen:** CP-APR, single-node parallelism  
<https://gitlab.com/tensors/sparten>
- **TuckerMPI:** Tucker decomposition, compression  
<https://gitlab.com/tensors/TuckerMPI>
- **Genten-MPI:** CP-ALS, distributed memory  
Open-source forthcoming
- **PyTTB:** Python  
Open-source forthcoming

Tensor Toolbox for MATLAB:  
<https://www.tensortoolbox.org/>  
Bader, Kolda, Acar, Dunlavy, and others

