



Sahely Bhadra
IISc Bangalore
Asst. Prof., CSE
sahely[at]iitpkd[dot]ac[dot]in
<https://iitpkd.ac.in/people/sahely>



Research Interests

- Multi view learning, nonlinear model learning with kernel
- Learning from data with noisy or missing values
- Structural feature extraction
- Convex optimization, robust optimization
- Bioinformatics, Astroinformatics

Brief Summary of Research

I have recently worked on problem of extracting information from data considering multiple complementary views (Bhadra et al., 2017), non-linear relationships (Uurtio et al., 2018, 2019) and structural constraints (Bhadra et al. 2018). However, current methods do not tackle all of the above aspects at the same time. I am currently focusing on developing efficient models and scalable optimization algorithms to progress in that direction to analyse both time series and whole-genome molecular biology data with structural constraints among the variables, such as sequential, hierarchical or network constraints.

Projects

- Optimization Methods for Pattern Analysis in Multi-View and Structural Data in collaboration with Prof Juho Rousu, Aalto University.

Recent Publications

- [Large-Scale Sparse Kernel Canonical Correlation Analysis](#), Viivi Uurtio, Sahely Bhadra and Juho Rousu, Proceedings of the 36th International Conference on Machine Learning (ICML) 6383--6391 (2019)
- [Sparse Non-Linear CCA through Hilbert-Schmidt Independence Criterion](#) Viivi Uurtio, Sahely Bhadra, Juho Rousu. IEEE International Conference on Data Mining (ICDM'18) (2018)
- [Principal Metabolic Flux Mode Analysis](#) Sahely Bhadra, Peter Blomberg, Sandra Castillo, and Juho Rousu. Bioinformatics 34 (14) 2409–2417 (2018)
- [Multi-view kernel completion](#) Sahely Bhadra, Samuel Kaski, Juho Rousu, Machine Learning 106 (5) 713-739 (2017)