

Probabilistic Tools for Dependency Modelling

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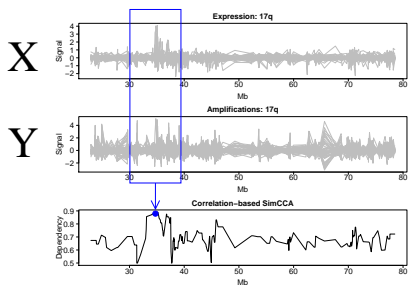
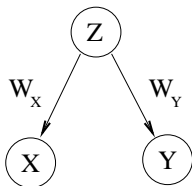
Summary

Applicable, model-based tools for the discovery and analysis of statistical dependency.

- ▶ implemented in R open source statistical environment
- ▶ open license (GNU GPL 2)
- ▶ development version



Cancer gene discovery with dependency detection



References

1. Francis Bach and Michael Jordan (2005). **A probabilistic interpretation of canonical correlation analysis**. Technical report. Department of Statistics, University of California, Berkeley
2. Ilkka Huopaniemi, Tommi Suviataival, Janne Nikkilä, Matej Oresic, and Samuel Kaski. **Multivariate multi-way analysis of multi-source data**. *Bioinformatics*, to appear (ISMB 2010).
3. Leo Lahti, Samuel Myllykangas, Sakari Knuutila, and Samuel Kaski. **Dependency detection with similarity constraints**. In *Proc. MLSP'09 IEEE International Workshop on Machine Learning for Signal Processing*, 2009.
4. Abhishek Tripathi, Arto Klami and Samuel Kaski. **Simple integrative preprocessing preserves what is shared in data sources**. *BMC Bioinformatics*, 2008, 9:111.
5. Olli-Pekka Huovilainen. **Screening of active DNA changes with dependency modelling..** Master's thesis (in Finnish). Department of Information and Computer Science, Aalto University School of Science and Technology, 2010.

For more information, see

<http://dmt.r-forge.r-project.org/>

