

Panel Tracking via Thurstonian Modeling

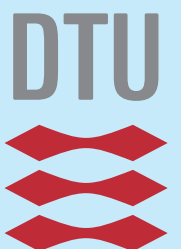


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Discrimination testing is one of the most commonly used tools in sensory science



Problem

Differences in panelist sensitivity can obscure differences in products

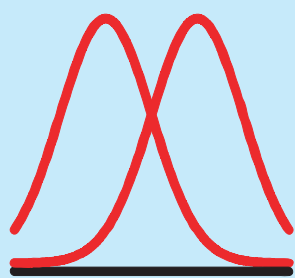
Goal

Quantify differences in panelists so as to better quantify differences in products

Key Insight

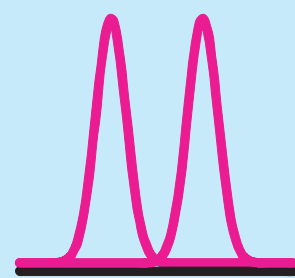
Using **Thurstonian modeling**, sensitivity parameters are assigned to each panelist to model differences between panelists

Lower sensitivity



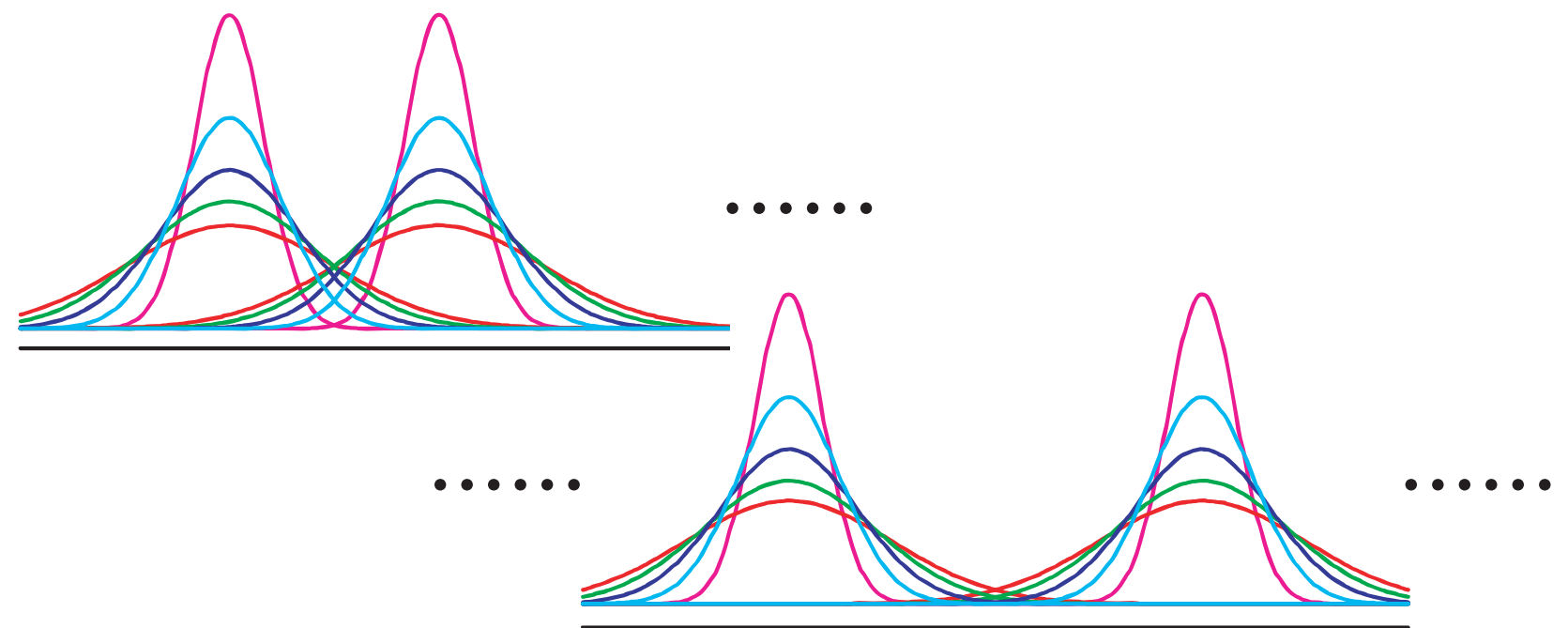
Effect Size

Higher sensitivity



Effect Size

Product differences change but panelists are assumed to have constant sensitivity



Benefits

- Distinguish sensitive panelists from insensitive panelists
- Estimate product differences more accurately by taking panelist differences into account
- Track panelist performance over time

Preliminary results indicate feasibility of modeling approach

Future work needed to improve robustness

Acknowledgement

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References

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