

## Automatic Segmentation for Brainbow Images

Hung-Hui Juan<sup>(1)\*</sup>, Tung-Yu Wu<sup>(2)</sup>, and Henry Horng-Shing Lu<sup>(3)</sup>

National Chiao Tung University, Taiwan

<sup>(1)</sup> hhjuan@stat.nctu.edu.tw

<sup>(2)</sup> wtywty@stat.nctu.edu.tw

<sup>(3)</sup> hslu@stat.nctu.edu.tw

### Abstract

We develop a technique to segment Brainbow images automatically. This can help scientists understand the mechanism of an olfactory system based on the color and spatial information in images. We adopt the mixture model to model the phenomenon of crosstalk in Brainbow images. Spectral matting is further applied to extract neural components from different channels in Brainbow images. Empirical studies demonstrate the feasibility of the proposed method.