

CMMA Monthly Seminar

第14回 CMMA 月例セミナー

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Abstract

There are two type lightness optical illusions, one is to emphasize the contrast of brightness (brightness contrast) and the other is to weaken the contrast of brightness (brightness assimilation). In particular, it is considered that brightness contrast exists to capture clearly the contour of the object, and it is caused by lateral inhibition in retina. Therefore many visual models assume the function of lateral inhibition. Our new macroscopic model does not assume the lateral inhibition (i.e., does not assume the function to emphasize the contours of the object), and mimic a normal information processing in the retina. We find that our model can reproduce the contrast and assimilation simultaneously. This suggests that in retina there is no function to emphasize the contour of the object aggressively. Moreover, we find that our model can't represent the contrast if the parameters fulfill certain conditions. This is likely to represent the individual differences of information processing in the retina.

“A macroscopic model for understanding lightness optical illusions”

日時：2016年5月16日(月) 16:30-17:10

場所：明治大学 中野キャンパス高層棟6階 研究セミナー室3

主催：

文部科学省 共同利用・共同研究拠点
明治大学先端数理科学インスティテュート
現象数理科学研究拠点 (CMMA)



■連絡先

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