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研究论文

交叉视觉皮质模型中向心自动波的实现

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摘要：

对交叉视觉皮质模型神经元运行机理进行了深入研究，分析了以向心自动波为解决方式的构造方法，指出Kinser向心自动波的构造方式存在的问题；从曲线演化的线性热流和形态学中值集两个角度设计了向心自动波的具体实现方式，解决了交叉视觉皮质模型迭代过程中所产生的干涉现象.

关键词： 交叉视觉皮质模型 向心自动波 线性热流 形态学中值集

Implementation of the centripetal autowave in an intersecting cortical model

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Abstract:

The Intersecting Cortical Model (ICM) possesses the Autowave nature stemming from the connection function during the firing process, but poses a problem called interference, which could blur the edge and detail in image processing tasks. Combined with the advanced development of vision biophysics, the paper makes an in-depth study of the solution based on the construction of the Centripetal Autowave and points out problems of the CA put forward by Kinser. Then, two new ways to conduct CA developing from the curve evolution idea are proposed, respectively, based on the linear heat flow and morphological median set, which truly solve the interference caused during ICM firing iteration.

Keywords: intersecting cortical model (ICM) centripetal autowave (CA) linear heat flow morphologic median set

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