



Partial Differential Equations Seminar

Title A fingerprint image restoration method using a partial differential equation

Speaker 김준석 교수

Affiliation 고려대 수학과

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Location Zoom 강연

Abstract

In this presentation, we consider an efficient fingerprint image restoration algorithm using the partial differential equation, which was used for modeling the microphase separation of diblock copolymers. We take a small local region embedding the damaged domain and solve the nonlocal CH equation to restore the fingerprint image. The proposed method has the advantage in that the pixel values in the damaged fingerprint domain can be obtained using the image information from the outside of the damaged fingerprint region. Fingerprint restoration based on adjacent pixel information can ensure the accuracy of the fingerprint information with a low computational cost. Computational experiments demonstrated the superior performance of the proposed fingerprint restoration algorithm.

참고: 강연에 참석하는 학생들에게는 MATLAB 소스코드를 발표당일에 학생들에게 공개하고 지문복구 시연을 하겠다는 김준석 교수의 전언이 있음.