סמינר משתלמים

You are invited to attend a lecture by
Boaz Ophir

הנכם מוזמנים להרצאתו של
בעז אופיר*

בנושא :

Show-Through Cancellation in Scanned Images

Show-Through interference is a common occurrence when scanning duplex printed documents. The back-side printing shows through the paper thus contaminating the front side image. The same occurs when scanning the reverse side. Previous work focused on analyzing the process that causes the phenomenon. It was shown that the process can be modeled as a non-linear convolutive mixture of the desired images.

Two developed show-through removal algorithms are presented. The first algorithm, improving on earlier work, uses a decorrelation criterion. An adaptive multi-stage filtering scheme estimates the PSFs while adapting to local background brightness through a mean-shift process. The effects of cross interference are minimized by an additional post processing adaptive filtering stage. The second algorithm treats the problem as a Blind Source Separation (BSS) problem, simultaneously estimating the images and mixing parameters. Image separation is achieved via an alternating minimization process, minimizing a cost functional using Total-Variation regularization. Regularization weighting is set by a location dependent scheme aiming to preserve desired image edges only. Optimization is done via the Iterated Conditional Modes (ICM) method, to avoid large scale optimization.

* M.Sc. Research under the supervision of Prof. David Malah.

* סטודנט לתואר שני בהנחיית פרופ׳ דוד מלאך.

The lecture will take place
On Wednesday, 22.2.2006 at 14:30
in Room 1061 Electrical Eng. Building
Technion City

ההרצאה תתקיים ביום ד׳ 22.2.2006
בשעה 14:30 בחדר 1061
בבניין הפקולטה להנדסת חשמל
קריית הטכניון

כיבוד קל יוגש לפני הרצאה