Afternoon Session

Chair: Jan Flusser (UTIA AV CR)

Speakers:

4. Ondřej Polakovič

5. Martina Daňková

6. Dagmar Plšková

7. Antonín Dvořák

All speakers are from the University of Ostrava

Image Processing and Analysis

Chair: Jan Flusser (UTIA AV CR)

Speakers:

- Jan Flusser (UTIA AV CR)
- Filip Šroubek (UTIA AV CR)
- Barbara Zitová (UTIA AV CR)
- Jiří Jan (UBMI VUT Brno)
- I. Peterlík, R. Jiřík (UBMI VUT Brno)
- Radim Kolář (UBMI VUT Brno)

Jan Flusser

flusser@utia.cas.cz

A survey of the recent work on image analysis in UTIA

DAR Image Processing Group in UTIA

Jan Flusser

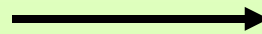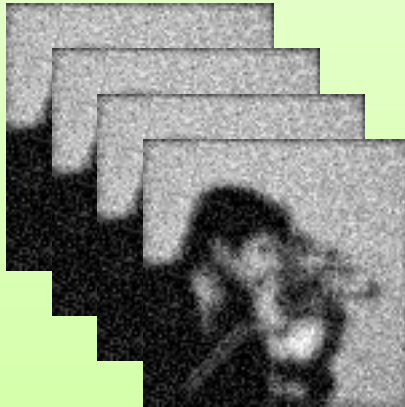Filip Šroubek

Michal Šorel

Jan Kamenický

Ondřej Horáček

Barbara Zitová

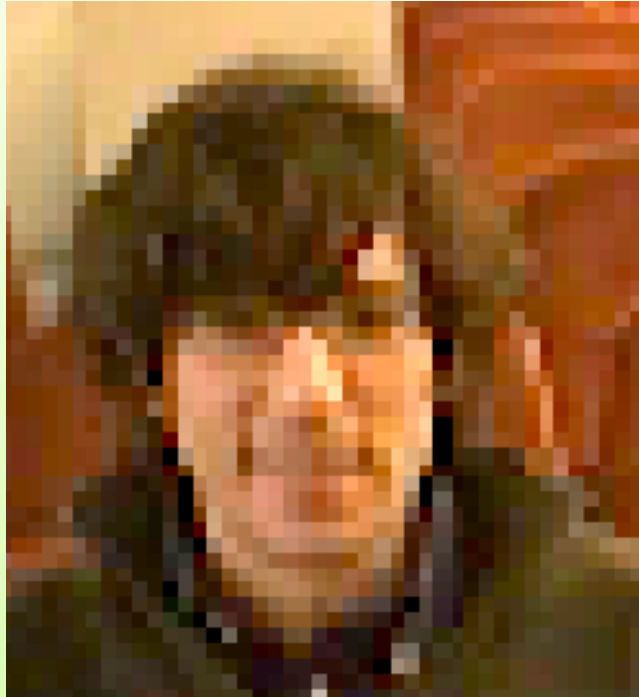Jiří Boldyš

Recent Work (2006) - Theory

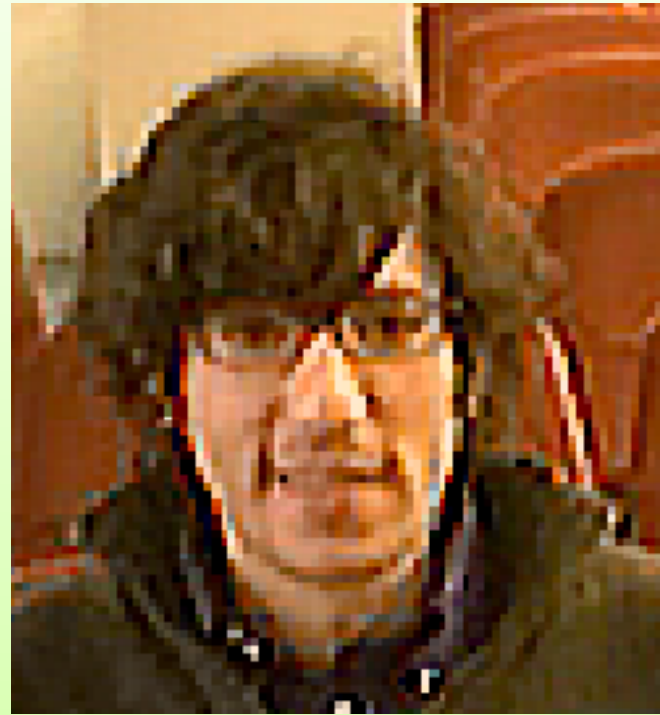- Super-resolution imaging

<p align="right">(F. Šroubek, J. Flusser)</p>
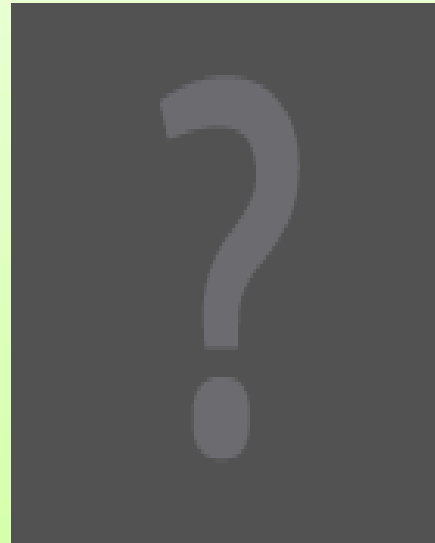
Super-resolution of a single image

LR input frame

Super-resolution image (2x)

Super-resolution imaging – progress in 2006

- Super-resolution of video

Super-resolution imaging – progress in 2006

- Super-resolution with non-integer factors

Super-resolution with non-integer factors

Recent Work (2006) - Theory

- Super-resolution imaging

  (F. Šroubek, J. Flusser)

- Deconvolution, scene reconstruction and depth estimation
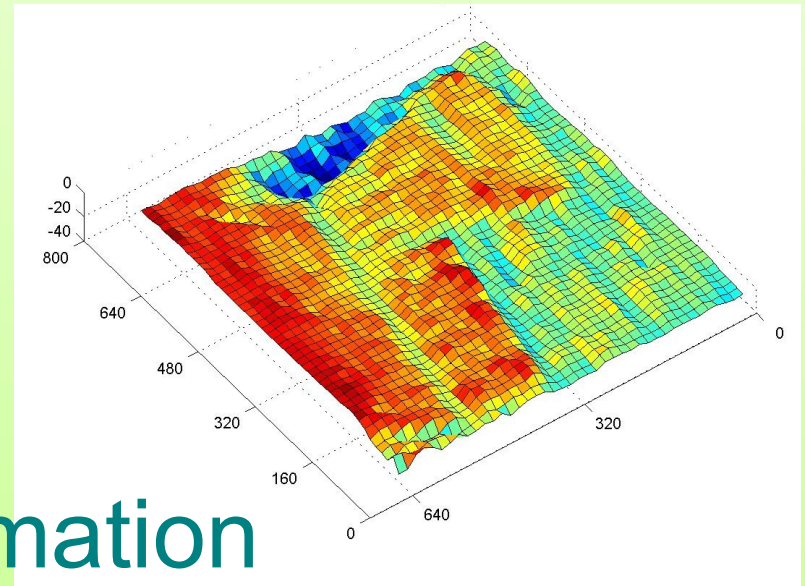
  (F. Šroubek, M. Šorel, J. Flusser)

Scene reconstruction

z_1

z_2

Depth estimation

Recent Work (2006) - Theory

- Super-resolution imaging
    (F. Šroubek, J. Flusser)

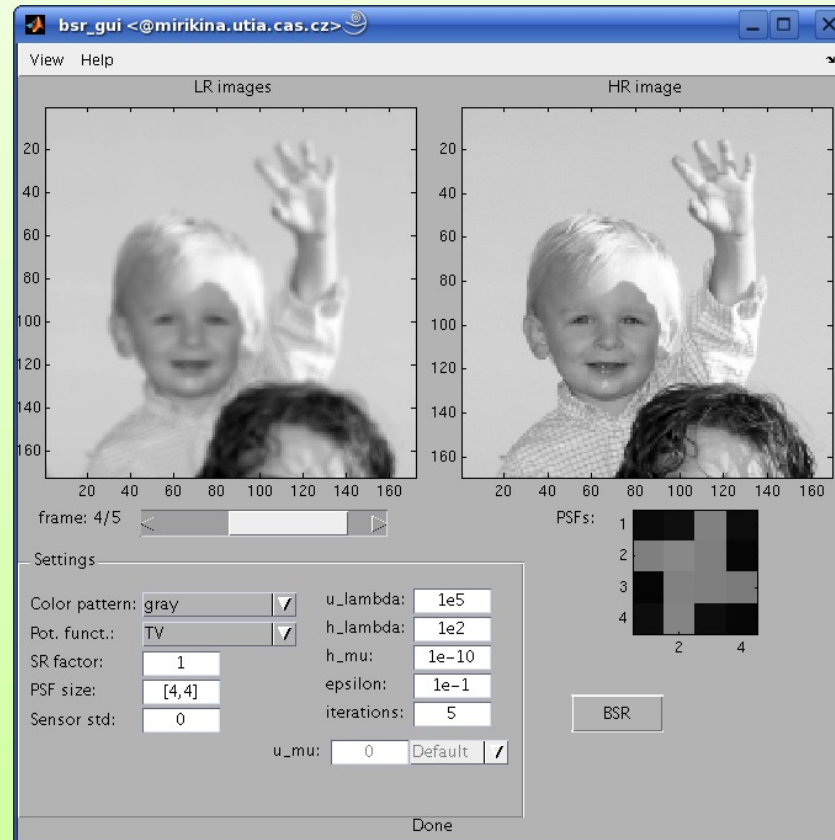- Deconvolution, scene reconstruction and depth estimation
    (F. Šroubek, M. Šorel, J. Flusser)

- Registration and fusion of multiple views, object recognition   (B. Zitová, O. Horáček, J. Kamenický, J.
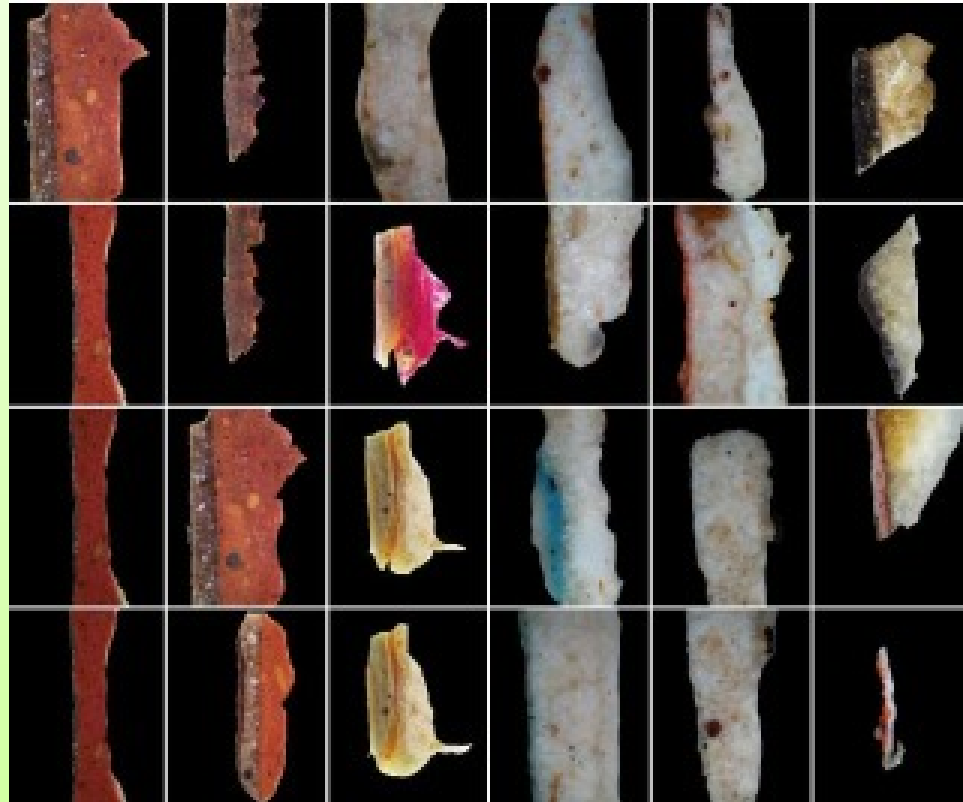
Applications

- Super-resolution Toolbox for Matlab
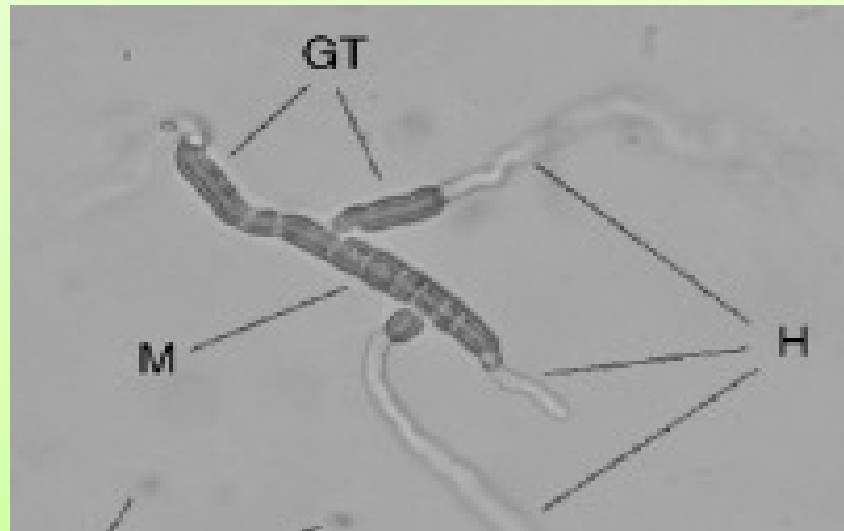
Applications

- Image database NEPHELE

Applications

- Biomedical applications

  - modelling of vision defects

Applications

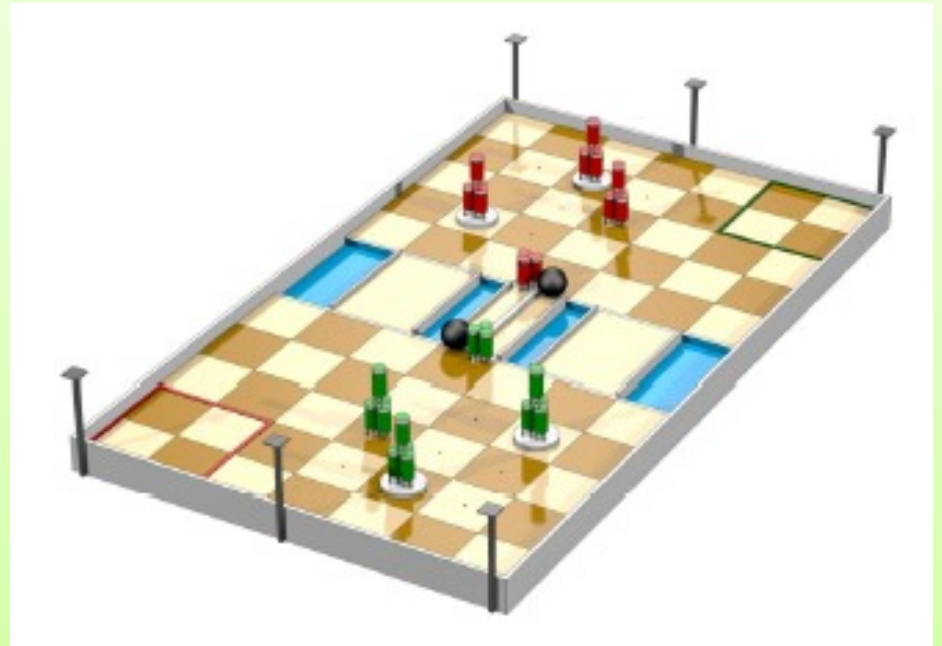- Biomedical applications

  - analysis of microscopic images

Biomedical applications - synthesis of artificial images

Applications

- Omni-directional vision for a mobile robot

Thank you !

Any questions ?