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Gert Behiels

Profile

Born in Sint-Niklaas on 4th February, 1972

Creative and innovative.
Enthusiastic with very efficient work methods.
Broad interests ranging from sports and adventure to culture.
Passionate windsurfer and skier. Playing badminton, running or biking when there is no wind or snow.
Team player: volunteer at speelpleinwerking (1989-1990) and active in the student praesidium for WINA.

Experience

Researcher, Agfa Radiology Solutions — 2002-Present

Acted as research, development and project lead.
Coached several team members to become expert in their domain.
Responsible for the technical development of following image processing projects:

- VirtualDR: Technology innovation project for automatic patient thickness measurement and augmented reality with depth cameras.
- Tomosynthesis: Innovation project for 3D image reconstruction.
- Full Leg Full Spine: Automatic image stitching of DR images.
- Mammography Workstation: Innovative, automatic methods to enhance mammography hanging protocols.
- CAD for mammo: automatic detection and classification of micro-calcifications and masses in mammographies.
- Gridlines suppression: automatic detection, modelling and correction of static anti-scatter grids in digital RX.
- Microlens-artefact correction: automatic correction of periodic- and stitching artefacts with real-time implementation for DX-S.

PhD Student, Catholic University Leuven — 1998-2002

“Statistical models of anatomical structures in digital RX”

- Automatic registration, segmentation and classification of bones in digital RX for automatic bone age assessment.
- Non rigid point matching.
- Inhomogeneity correction caused by the heel effect.

Researcher, IWT — 1996-1998

“Image analysis and segmentation”

- automatic segmentation of digital RX with “active shape models”

Education

Master in Applied Informatics - Catholic University Leuven 1994-1996
Graduated Cum Laude (74.4 %) - Computer Graphics Research Group

Master in Physics - Catholic University Leuven 1990-1994
Graduated Magna Cum Laude (75.5 %) - Plasma-Astrophysics

High School - Sint-Lodewijkscollege Lokeren 1984-1990
Major in Latin and Sciences

Skills

Excellent software development skills (C/C++, Java, C#, CUDA, OpenCL).
10+ years experience in medical image processing.
Thorough knowledge of Matlab, Python with experience in VTK, ITK and OpenCV.
Artificial intelligence and classification algorithms for medical applications.
Development experience of clinical software and applications.
Management, leadership, communication and coaching trainings (JUMP) at Agfa.

Languages

Dutch Mother tongue

English Thorough knowledge, refined through publications, oral presentations at congresses and daily contacts with English speaking colleagues.

French Practical knowledge

Publications

International Journals

- **G. Behiels**, F. Maes, D. Vandermeulen, P. Suetens, Evaluation of image features and search strategies for segmentation of bone structures in radiographs using active shape models, Medical image analysis, vol. 6, no. 1, pp. 47-62, March 2002
- **G. Behiels**, F. Maes, D. Vandermeulen, P. Suetens, *Retrospective correction of the heel effect in hand radiographs*, Medical image analysis, vol. 6, no. 3, pp. 183-190, September 2002

Published in International Conference Proceedings

- **G. Behiels,** F. Maes, D. Vandermeulen, P. Suetens, *Retrospective heel effect correction in conventional radiography*, Proceedings IEEE workshop on mathematical methods in biomedical image analysis, pp. 87-94, December 7-14, 2001, Kauai, Hawaii
- **G. Behiels,** F. Maes, D. Vandermeulen, P. Suetens, *Retrospective correction of the heel effect in hand radiographs* , Proceedings 4th international conference on medical image computing and computer-assisted intervention - MICCAI2001, lecture notes in computer science, vol. 2208, pp. 301-308, October 14-17, 2001, Utrecht, The Netherlands
- **G. Behiels,** D. Vandermeulen, P. Suetens, *Statistical shape model-based segmentation of digital X-ray images* , IEEE workshop on mathematical methods in biomedical image analysis, pp. 61-68, June 11-12, 2000, Hilton Head Island, South Carolina, USA
- **G. Behiels,** D. Vandermeulen, F. Maes, P. Suetens, P. Dewaele, *Active shape model-based segmentation of digital X-ray images*, Proceedings 2nd international conference on medical image computing and computer-assisted intervention – MICCAI'99, lecture notes in computer science, vol. 1679, pp. 128-137, September 19-22, 1999, Cambridge, UK

Patent applications[1]

- +15 patents filed
- +12 patents granted

[1] Please contact Agfa's Intellectual Property department for details.