MVG Research Group

Fix Me!

Research area

Deep neural networks in early detection of melanomas

Fix Me!

Computer-aided dermatopathology

Research goal:
To improve skin melanoma diagnosis by providing additional means of automatic detection of important diagnostic features in histopathological images.

The research topics include:

- tissue segmentation
- epidermis segmentation
- nests of melanocytes segmentation
- epidermal morphometry measurement

Research activity

Publications:

- **Dariusz Kucharski**, **Pawel Kleczek**, **Joanna Jaworek-Korjakowska**, Grzegorz Dyduch, Marek Gorgon. *Semi-Supervised Nests of Melanocytes Segmentation Method Using Convolutional Autoencoders*. Sensors, 2020, vol. 20, issue 6, 1546, doi: 10.3390/s20061546 (HTML)
  [IF5 (2018) = 2.737, Top10]
- **Pawel Kleczek**, **Joanna Jaworek-Korjakowska**, Marek Gorgon. *A novel method for tissue segmentation in high-resolution H&E-stained histopathological whole-slide images*. Computerized Medical Imaging and Graphics, 2020, vol. 79, 2022, Art. ID 101686, doi: 10.1016/j.compmedimag.2019.101686 (HTML)
  [IF5 (2018) = 2.737, Top10]
- **Pawel Kleczek**, Grzegorz Dyduch, Agnieszka Graczyk-Jarzynka, **Joanna Jaworek-Korjakowska**. *A New Approach to Border Irregularity Assessment with Application in Skin Pathology*. Applied Sciences (Basel), 2019, 9(10), 2022, doi: 10.3390/app9102022 (Abstract, HTML, PDF)
  [IF5 (2018) = 2.287]
- **Paweł Kłeczek**, Martyna Lech, Grzegorz Dyduch, **Joanna Jaworek-Korjakowska**, Ryszard Tadeusiewicz. *Segmentation of black ink and melanin in skin histopathological images*. Proc. SPIE 10581, Medical Imaging 2018: Digital Pathology, 105811A (2018); doi: 10.1117/12.2292859. (Abstract)

- **Paweł Kłeczek**, Grzegorz Dyduch, **Joanna Jaworek-Korjakowska**, Ryszard Tadeusiewicz. *Automated epidermis segmentation in histopathological images of human skin stained with hematoxylin and eosin*. Proc. SPIE 10140, Medical Imaging 2017: Digital Pathology, 101400M (2017). doi: 10.1117/12.2249018. (Abstract, Poster PDF)
- **Paweł Kłeczek**, Sylwia Mól, **Joanna Jaworek-Korjakowska**. *The Accuracy of H&E Stain Unmixing Techniques When Estimating Relative Stain Concentrations*. PCBBE 2017: Advances in Intelligent Systems and Computing, Springer (2017), doi: 10.1007/978-3-319-66905-2_7, pp. 87–97 (Abstract)

Conferences:

- SPIE Medical Imaging 2018 (Houston, TX, USA)
  Paweł Kłeczek: *Segmentation of black ink and melanin in skin histopathological images*[1] (poster)
- 20-th Polish Conference on Biocybernetics and Biomedical Engineering (Kraków, Polska)
  Paweł Kłeczek: *The accuracy of H&E stain unmixing techniques when estimating relative stain concentrations*[2] (poster)
- SPIE Medical Imaging 2017 (Orlando, FL, USA)
  Paweł Kłeczek: *Automated epidermis segmentation in histopathological images of human skin stained with hematoxylin and eosin*[3] (poster)

Anomaly detection with the use of pre-trained CNN architectures

Fix Me!

Detection and analysis of patterns (@asia: muszę dopracować)

Fix Me!

Cell detection - Andrzej...

Fix Me!

Kategorie

I

- includes

Strony

A

- Awards & Prizes

C

- Conferences

G

- Grants

P

- Przydatne materiały
- Publications

R

- Research partners

T

- Team

1)
All authors: **P. Kłeczek**, M. Lech, G. Dyduch, **J. Jaworek-Korjakowska**, R. Tadeusiewicz.
2)
All authors: **P. Kłeczek**, S. Mól, **J. Jaworek-Korjakowska**
3)
All authors: **P. Kłeczek**, G. Dyduch, **J. Jaworek-Korjakowska**, R.Tadeusiewicz