Jan Butora

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Research activity

Centre national de la recherche scientifique (CNRS), Lille, France

    Postdoctoral researcher June 2021 - May 2023

Binghamton University, Binghamton, NY

    Research assistant August 2017 - May 2021

Education

Binghamton University, Binghamton, NY

    Ph.D. Electrical and Computer Engineering, May 2021.

Charles University, Prague, Czech Republic

    M.S. Mathematical Methods of Information Security, June 2017 (with honors).

    B.S. Mathematical Methods of Information Security, June 2015.

Research Interests

- Steganography
- Steganalysis
- Applied Deep Learning

Teaching Experience

Binghamton University

Instructor

- EECE-580G Deep Learning for EECE, Fall 2020

Instructor of Record

- EECE-566 Detection Theory, Spring 2019
- EECE-562 Fundamentals of Steganography, Fall 2019

Awards

- Best Paper Award, 9th IH&MMSec. Workshop, Brussels, Belgium, June 22-25, 2021

  - Revisiting Perturbed Quantization

- Best Paper Award, 7th IH&MMSec. Workshop, Paris, France, July 3-5, 2019

  - Effect of JPEG Quality on Steganographic Security

- Research Assistantship (RA), EECE Department, Binghamton University, 2017-2021

Publications

Journal Papers:

- **Reverse JPEG Compatibility Attack**, with J. Fridrich, IEEE Transactions on Information Forensics and Security, vol. 15, no.1, pp. 1444-1454, December 2019

Conference Papers:

- **Fighting the Reverse JPEG Compatibility Attack: Pick your Side**, with P. Bas, 10th IH&MMSec. Workshop, Santa Barbara, California, June 27-29, 2022.

- **Revisiting Perturbed Quantization**, with J. Fridrich, 9th IH&MMSec. Workshop, Brussels, Belgium, June 22-25, 2021.

- **How to Pretrain for Steganalysis**, with Y. Yousfi and J. Fridrich, 9th IH&MMSec. Workshop, Brussels, Belgium, June 22-25, 2021.

- **Improving EfficientNet for JPEG Steganalysis**, with Y. Yousfi, J. Fridrich, and C. F. Tsang, 9th IH&MMSec. Workshop, Brussels, Belgium, June 22-25, 2021.

- **Extending the Reverse JPEG Compatibility Attack to Double Compressed Images**, with J. Fridrich, IEEE ICASSP 2021, Toronto, Canada, June 6-11, 2021.

- **ImageNet Pre-trained CNN Models for JPEG Steganalysis**, with Y. Yousfi, E. Khvedchenya, and J. Fridrich, IEEE WIFS, New York, NY, December 6-11, 2020

- **Turning Cost-Based Steganography into Model-Based**, with Y. Yousfi and J. Fridrich, 8th IH&MMSec. Workshop, Denver, CO, June 20-22, 2020

- **Steganography and its Detection in JPEG Images Obtained with the "Trunc" Quantizer**, with J. Fridrich, IEEE ICASSP 2020, Barcelona, Spain, May 4-8, 2020

- **Minimum Perturbation Cost Modulation for Side-Informed Steganography**, with J. Fridrich, Proc. IS&T, Electronic Imaging, Media Watermarking, Security, and Forensics 2020, San Francisco, CA, January 26-30, 2020

- **Effect of JPEG Quality on Steganographic Security**, with J. Fridrich, 7th IH&MMSec. Workshop, Paris, France, July 3-5, 2019

- **Breaking ALASKA: Color Separation for Steganalysis in JPEG Domain**, with Y. Yousfi, J. Fridrich, and Q. Giboulot, 7th IH&MMSec. Workshop, Paris, France, July 3-5, 2019

- **Detection of Diversified Stego Sources with CNNs**, with J. Fridrich, Proc. IS&T, Electronic Imaging, Media Watermarking, Security, and Forensics 2019, San Francisco, CA, January 14-17, 2019

Professional Activities

Fellowships

- IEEE Information Forensics and Security Technical Committee (IFS-TC) Elected member, 2022-2024.

- IEEE Information Forensics and Security Award Subcommittee Member, 2022.

Conference

- Technical Program Chair of the ACM Workshop on Information Hiding and Multimedia Security (IH&MMSec), Santa Barbara, California, June 2022.

- Award Chair of the IEEE International Workshop on Information Forensics and Security (WIFS), Shanghai, China, December 2022.

Reviewer

- IEEE Transactions on Information Forensics and Security (IEEE TIFS)

- IEEE Transactions on Dependable and Secure Computing (IEEE TDSC)

- IEEE Transactions on Multimedia (IEEE TM)

- IEEE International Conference on Acoustics, Speech and Signal Processing (IEEE ICASSP)

- IEEE International Conference in Image Processing (IEEE ICIP)