

Jan Butora

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Position:	CNRS (French National Center of Scientific Research) Researcher	
Research domains:	Media Forensics, Steganography, Steganalysis, Trustworthy Deep Learning, Generated Content Detection, Watermarking, Statistical Image Modeling	
Education:	Binghamton University , Binghamton, NY, USA 2021: PhD under the supervision of Jessica Fridrich: Digital Image Steganography Charles University , Prague, Czech Republic 2017: Master thesis with speciality: Mathematical Methods of Information Security (<i>summa cum laude</i>) 2015: Bachelor thesis with speciality: Mathematical Methods of Information Security	
Employees:	Centre National de la Recherche Scientifique , France <i>CNRS Researcher (Chargé de Recherche) at CRIStAL (Lille),</i>	Oct. 2024 - Today
	Centre National de la Recherche Scientifique , France <i>CNRS Postdoctoral Researcher at CRIStAL (Lille), Funded by l'Agence de l'innovation de défense</i>	Jun. 2021 - Sep. 2024
	Binghamton University , Binghamton, NY, USA <i>PhD under J. Fridrich's supervision Funded by DARPA</i>	Aug. 2017 - May 2021
Awards:	Honorable Mention Award , 12th Workshop on Information Hiding and Multimedia Security, Baiona, Spain, June 24-26, 2024 “ <i>The Adobe Hidden Feature and its Impact on Sensor Attribution</i> ” co-authored with Patrick Bas Best Paper Award , 9th Workshop on Information Hiding and Multimedia Security, Brussels, Belgium, June 22-25, 2021 “ <i>Revisiting Perturbed Quantization</i> ” co-authored with Jessica Fridrich Best Paper Award , 7th Workshop on Information Hiding and Multimedia Security, Paris, France, July 3-5, 2019 “ <i>Effect of JPEG Quality on Steganographic Security</i> ” co-authored with Jessica Fridrich	
Community Involvement:	2022 - 2024: Elected Member of IEEE Information Forensics and Security Technical Committee 2022 - 2024: Award Subcommittee Member of IEEE Information Forensics and Security Technical Committee Dec. 2022: Award Chair of the IEEE International Workshop on Information Forensics and Security, Shanghai, China Jun. 2022: Technical Program Chair of the ACM Workshop on Information Hiding and Multimedia Security, Santa Barbara, USA	

Reviewer:	<ul style="list-style-type: none"> • 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) • IEEE International Workshop on Information Forensics and Security (IEEE WIFS) • ACM Workshop on Information Hiding and Multimedia Security (ACM IH&MMSec) • EURASIP Journal on Information Security
Invited Talks:	<p>Adobe hidden feature and its detection, ENFSI DIWG 2024, The Hague, Netherlands, October 2024</p> <p>Controlling false positives of DL steganalyzers, seminar in LIRMM laboratory, Montpellier, France, December 2023</p> <p>Robust Steganography, UNCOVER Summer School on Steganography, Prague, Czech Republic, September 2023</p>
Teaching:	<p>Centrale Lille, France 2024: Information Security</p> <p>IMT Nord Europe, France 2024: Security, Authentication, and Forensics 2023: Security, Authentication, and Forensics 2022: Théorie du Signal</p> <p>Binghamton University, USA 2020: Deep Learning for Electrical and Computer Engineering 2019: Detection Theory 2019: Fundamentals of Steganography</p>
Scientific publications:	<p>5 articles published in scientific journals + 1 currently under review</p> <p>23 papers published in conferences</p>
Citations (Scholar):	<p>h-index: 10</p> <p>Number of citations: 411</p>
List of publications:	<p>International journal publications</p> <ul style="list-style-type: none"> • ‘Dual JPEG Compatibility: a Reliable and Explainable Tool for Image Forensics’ with E. Levecque, and P. Bas, IEEE Transactions on Information Forensics and Security, under review • ‘Finding Incompatibles Blocks for Reliable JPEG Steganalysis’ with E. Levecque, and P. Bas, IEEE Transactions on Information Forensics and Security, September 2024 • ‘Size-Independent Reliable CNN for RJCA Steganalysis’ with P. Bas, IEEE Transactions on Information Forensics and Security, March 2024

- ‘Errorless Robust JPEG Steganography using Outputs of JPEG Coders’ with P. Puteaux, and P. Bas, IEEE Transactions on Dependable and Secure Computing, August 2023
- ‘Side-Informed Steganography for JPEG Images by Modeling Decompressed Images’ with P. Bas, IEEE Transactions on Information Forensics and Security, April 2023
- ‘Reverse JPEG Compatibility Attack’ with J. Fridrich, IEEE Transactions on Information Forensics and Security, vol. 15, no.1, pp. 1444-1454, December 2019

International conference publications

- ‘Errorless Robust JPEG Steganography for Pixel Images’, with E. Levecque, and P. Bas, IEEE WIFS, Rome, Italy, December 2-5, 2024
- ‘Detection of the Adobe Pattern’, with P. Bas, 32th EUSIPCO, Lyon, France, August 26-30, 2024
- ‘The Adobe Hidden Feature and its Impact on Sensor Attribution’, with P. Bas, 12th IH&MMSec. Workshop, Baiona, Spain, June 24-26, 2024
- ‘Analysis and Mitigation of the False Alarms of the Reverse JPEG Compatibility Attack’, with P. Bas, 11th IH&MMSec. Workshop, Chicago, Illinois, June 28-30, 2023
- ‘Compatibility and Timing Attacks for JPEG Steganalysis’, with E. Levecque, and P. Bas, 11th IH&MMSec. Workshop, Chicago, Illinois, June 28-30, 2023
- ‘Toward Reliable JPEG Steganalysis (at QF 100)’, with E. Levecque, J. Klein, and P. Bas, IEEE WIFS, Shanghai, China, December 12-16, 2022
- ‘Fighting the Reverse JPEG Compatibility Attack: Pick your Side’, with P. Bas, 10th IH&MMSec. Workshop, Santa Barbara, California, June 27-29, 2022
- ‘CNN Steganalyzers Leverage Local Embedding Artifacts’, with Y. Yousfi, and J. Fridrich, IEEE WIFS, Montpellier, France, December 7-10 2021
- ‘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

National conference publications

- ‘Attaque temporelle de la compatibilité JPEG’, with E. Levecque, and P. Bas, GRETSI, Greno-

ble, France, August 28 - September 1, 2023

- ‘Stéganographie robuste et sans erreur dans des images JPEG en utilisant les sorties des codeurs JPEG’, with P. Puteaux, and P. Bas, CORESA, Lille, France, 7-9 June , 2023
- ‘Vers une Stéganalyse Certifiée pour des Images JPEG’, with E. Levecque, J. Klein, and P. Bas, GRETSI, Nancy, France, September 6-9, 2022
- ‘High Quality JPEG Compressor Detection via Decompression Error’, with P. Bas, GRETSI, Nancy, France, September 6-9, 2022