

# Daniela Ivanova

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## Education

- 2020 – . . . . . **Ph.D., University of Glasgow** in Computing Science.  
*Independently secured UKRI scholarship* as part of the Computer Vision and Autonomous Systems research group at the University of Glasgow.  
Conducting research on the topic of *deep learning for analogue film restoration* (detection, segmentation and in-painting of artifacts), *network interpretability*, *generative models*, *synthetic data* and *multimodal approaches* to general *image restoration* and *anomaly detection*. Preliminary work has been published in top-tier conferences.  
Expected graduation - March 2025.
- 2016 – 2020 **BSc (Hons), University of Glasgow** in Computing Science.  
Graduated with *First Class Honours*, obtaining the *highest GPA of the year*.  
Thesis title: "A deep learning approach to artefact correction for photographic film", receiving *A1 grade (highest on record)* and multiple awards.  
Worked on redeveloping accessible educational games for Doorway Accessible Software Trust, a Scottish charity.
- 2011 – 2016 **Secondary School Diploma, Dobri Chintulov School** in Mathematics and Natural Sciences.  
Overall grade - 6.00 (highest possible), with focus in *Advanced Higher Maths, Informatics, Physics*.


## Research Publications

- 1 M. Aversa, G. Nobis, M. Hägele, *et al.*, "Diffinfinite: Large mask-image synthesis via parallel random patch diffusion in histopathology," *Proceedings of the Neural Information Processing Systems Track on Datasets and Benchmarks (NeurIPS)*, 2023. 📄 DOI: 10.48550/arXiv.2306.13384.
- 2 D. Ivanova, J. Williamson, and P. Henderson, "Simulating analogue film damage to analyse and improve artefact restoration on high-resolution scans," *Computer Graphics Forum (Proceedings of Eurographics 2023)*, vol. 42, no. 2, 2023. 📄 DOI: 10.1111/cgf.14749.
- 3 D. Ivanova, J. Siebert, and J. Williamson, "Perceptual loss based approach for analogue film restoration," *Proceedings of the 17th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications*, vol. 4, pp. 126–135, 2022. 📄 DOI: 10.5220/0010829300003124.






## Employment History

- 2020 – . . . . . **Teaching Assistant.** School of Computing Science, University of Glasgow.  
Courses at undergraduate and postgraduate level, including Deep Learning, Computer Vision Methods and Applications, Data Fundamentals, Programming, Object-oriented Software Engineering, Web App Development.
- 2018 – 2021 **Software Engineer.** Obashi Technology, Falkirk, Scotland.  
Back- and front-end developer, worked on designing and implementing an online business asset management platform using Golang and Vue.js.

## Employment History (continued)






2016 – 2018  **Print Specialist.** Staples, Glasgow, Scotland.  
Design and printing of bespoke wide-format goods.

## Skills


Languages  English: CEFR C2 - Proficient, German: CEFR B2 - Upper Intermediate, Bulgarian: Native.  
Coding  Python, PyTorch, HuggingFace, Pandas, JAX, Fast.ai, Google Cloud Platform, Amazon Web Services for ML, Golang, Java, C, C++, SQL, XML/XSL,  $\LaTeX$ , ...  
Databases  MySQL, PostgreSQL.  
Web Dev  HTML, css, JavaScript (Vue.js, React).  
Misc.  Academic research, teaching,  $\LaTeX$  typesetting and publishing, Data Visualisation, Adobe Creative Suite.

## Miscellaneous Experience


### Accolades

2020 - 2025  **EPSRC Scholarship in the College of Science and Engineering**, fully-funded PhD Scholarship by UK Research and Innovation (UKRI).  
2020  **Most Outstanding Undergraduate Project Award**, UofG School of Computing Science, for outstanding quality of Honours dissertation.  
 **Scottish Young Software Engineer of the Year**, ScotlandIS, for final year thesis, "A deep learning approach to artefact correction for analogue film".  
2019  **Most Outstanding Level 3 Honours Student**, UofG School of Computing Science, for academic achievement.  
2013, 2014, 2015, 2016  **American Foundation for Bulgaria Scholarship**, for excellence in academic achievement.



### Certification

2020  **Full Member.** British Computer Society (BCS), The Chartered Institute for IT.



### Invited Talks

2023  **Diffusion models for image restoration.** Machine Learning in Science Conference @ UofG.

### Conference organisation

 **British Machine Vision Conference (BMVC).** Reviewer.  
 **British Machine Vision Conference (BMVC).** Doctoral Consortium Chair.

### Volunteer experience

2018-2020  **Glasgow University Society for Women in Technology (GUSWITCH).** Vice president.  
2021-2022  **Computer Vision and Autonomous Systems (CVAS) research group seminars.** Organiser.

## References

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### **Dr John Williamson**

Senior Lecturer

School of Computing Science,

University of Glasgow,

[JohnH.Williamson@glasgow.ac.uk](mailto:JohnH.Williamson@glasgow.ac.uk)

### **Dr Paul Henderson**

Lecturer

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University of Glasgow,

[Paul.Henderson@glasgow.ac.uk](mailto:Paul.Henderson@glasgow.ac.uk)