

Andrei BURSUC

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📄 <https://abursuc.github.io/>

Interests

- Research Deep neural networks, annotation-efficient learning (self-supervised, few-shot), learning representations, predictive uncertainty estimation, visual search
- Personal Volunteering, education, reading, hiking, traveling

Education

- 2012 **Doctorat ParisTech, PhD**, *Mines ParisTech*, Paris, France
- Thesis: *Object based visual content indexing and retrieval*
 - Advisors: Françoise PRETEUX and Titus ZAHARIA
- 2004 – 2009 **Engineer's Degree**, *POLITEHNICA University of Bucharest*, Faculty of Electronics, Telecommunications and Information Technology, Bucharest, Romania
- Ranked 12th out of 248 students

Professional experience

- 2023 – today **Deputy Scientific Director**, *valeo.ai*, Paris, France
- 2021 – 2023 **Senior Research Scientist**
- 2018 – 2021 **Research Scientist**
- Research on reliability of deep learning models
 - Research on annotation-efficient learning for deep neural networks
 - Leading technological transfer activities
- 2022 – today **Associate researcher**, *Inria Astra project team*, Paris, France
- 2016 – 2018 **Research Scientist**, *Safran Tech*, Chateaufort, France
- 2015 – 2016 **Postdoctoral researcher**, *Inria Paris*, Willow Team, Paris, France
- Advisors: Josef SIVIC and Ivan LAPTEV
- 2014 – 2015 **Postdoctoral researcher**, *Inria Bretagne*, TEX-MEX Team, Rennes, France
- Advisor: Hervé JEGOU
- 2013 – 2014 **Postdoctoral researcher**, *Télécom SudParis*, ARTEMIS Team, Evry, France
- Advisor: Titus ZAHARIA
- 2009 – 2012 **Research engineer**, *Télécom SudParis*, ARTEMIS Team, Evry, France
- Advisors: Françoise PRETEUX and Titus ZAHARIA
- 2009 **Bachelor thesis internship**, *Télécom SudParis*, ARTEMIS Team, Evry, France
- Designed and developed a MPEG-7 compatible multimedia web-based search engine
- 2008 **Internship**, *Schlumberger*, Drilling and Measurements, Hassi Messaoud, Algeria
- Analyzed and optimized the maintenance and repair chain in a rig workshop
- 2007 **Internship**, *Tenaris Silcotub*, Logistics Department, Zalau, Romania
- Designed and developed a database for managing factory storehouse daily operations

Teaching

- 2023 **ICCV 2023 Tutorial** on *The Many Faces of Reliability of Deep Learning for Real-World Deployment* with T.H. Vu, S. Li, D. Dai, P. Dokania, and P. Pérez

- 2022 **ECCV 2022 Tutorial** on *Self-Supervision on Wheels: Advances in Self-Supervised Learning from Autonomous Driving Data* with S. Gidaris, P. Pérez, V. Guizilini, A. Gaidon, D. de Martini, P. Newman, A. W. Harley, and K. Fragkiadaki
- 2021 **CVPR 2021 Tutorial** on *Leave Those Nets Alone: Advances in Self-Supervised Learning* with S. Gidaris, J.B. Alayrac, A. Recasens, M. Caron, A. van den Oord and R. Arandjelović
- 2020 **CVPR 2020 Tutorial** on *Towards Annotation-Efficient Learning: Few-Shot, Self-Supervised, and Incremental Learning Approaches* with S. Gidaris, K. Alahari and R. Arandjelović
- 2019 – 2023 *Deep Learning - Do It Yourself!* at Ecole Polytechnique along with M. Lelarge (50-80 participants)
- 2017 *Deep Learning - Do It Yourself!* at ENS Paris along with M. Lelarge and F. Krzakala (80 participants)

Honors and Awards

- 2023 Outstanding Reviewer: CVPR, NeurIPS
- 2022 Outstanding Reviewer: ECCV, NeurIPS, BMVC
- 2021 Outstanding Reviewer: CVPR, NeurIPS
- 2020 Outstanding Reviewer: CVPR, ECCV, NeurIPS
- 2017 Outstanding Reviewer: ICCV, BMVC
- 2016 Outstanding Reviewer: ACCV
- 2007 – 2008 Orange Education Program Scholarship
- 2006 – 2008 Roberto Rocca Education Program Scholarship

Community Service

- Area Chair MVA [2021-23], BMVC [2023], WACV [2024]
- Conference Reviewer CVPR [2015-23], ICCV [2015-23], ECCV [2016-22], NeurIPS [2020-23], BMVC [2017, 2022], ICLR [2018-19], ICRA [2021-22], ACCV [2016]
- Journal Reviewer TPAMI [2016-23], IJCV [2016-21], CVIU [2016-23]

Workshop Organization

- 2023 **ICCV 2023 Workshop** BRAVO: roBustness and Reliability of Autonomous Vehicles in the Open-world
ICCV 2023 Workshop on Uncertainty Quantification for Computer Vision
- 2022-2023 **Deep Learning Indaba Workshop** on Weakly Supervised Computer Vision

Various Activities

- 2014 Co-organizer of the micro-Workshop on Computer Vision Rennes (90 participants)
- 2010 – 2013 Member of the Administrative Council of SEFI (European Society for Engineering Education); network of institutions in higher education from 47 countries
- 2009 – 2011 Student representative in the EUGENE (EUropean and Global Engineering Education) Academic Network); network of 78 European universities and companies
- 2005 – 2010 Volunteering activity at BEST (Board of European Students of Technology).

- 2007 – 2008 Vice-President for Corporate Relations of Local BEST Group Bucharest. Managed the fund raising strategy and activities of a team of 50 students
- 2006 – 2007 Coordinator of *JobShop*[®] Bucharest - jobfair gathering 103 companies and approx. 5.000 participants. Managed a team of 40-50 students

Skills Overview

- Programming *Experience* in Python, C, C++, Lua, Matlab, Javascript. *Familiar* with PHP, Java
- Libraries *Experience* in PyTorch, Torch, MatConvNet, OpenCV, Scikit-Learn, jQuery, Django
- Teaching Qualification Maître de Conférences, Section 27 - Informatique (2015)
- Languages **English** - Fluent; **French** - Fluent; **Romanian** - Native; **Italian** - Basic