W08 – 5th Transferring and Adapting Source Knowledge in Computer Vision and 2nd VisDA Challenge

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The aim of TASK-CV workshop was bringing together computer vision researchers working in the areas of domain adaptation, knowledge transfer and in all the other aspects of life-long learning (e.g. incremental, zero-shot, active, open-set learning, etc.) and their applications (e.g. biomedical, robotics, multimedia, autonomous driving, etc.). This was the 5th edition of the workshop and the audience participation demonstrated that it still attracts a wide attention: the discussed topics are relevant for the community as also indicated by the presence of more than 40 ECCV papers with the words *Adapt or Transfer* in the title. The organizing committee chose the invited speakers with the goal of offering an overview on the most recent results as well as technical and theoretical insights on the topics of the workshop. We were proud to have four guests. Prof. Nicolas Courty explained how the optimal transport theory can be applied effectively for deep domain adaptation. The talk of Prof. Samory Kpotufe focused on knowledge transfer metrics and presented a new relative measure able to quantitatively evaluate the continuum from easy to hard transfer tasks. Prof. Mingsheng Long presented his works on deep domain adaptation that take into consideration multiple and conditional domain adversaries, and discussed also novel scenarios such as partial and open set domain adaptation. Finally, Ming-Yu Liu presented his research work at Nvidia discussing in particular a multimodal image translation approach able to decompose the images in their content and style parts to then produce new images with a controlled visual domain. The workshop got 9 paper submissions, out of which the program committee accepted 6 papers. All the manuscripts were evaluated by at least two reviewers and the two papers with the highest acceptance score were presented as short orals. According to an internal voting, the work by Shkodrani et al. received the best paper award while the work by Mancini et al. received the honorable mention award, respectively supported by our sponsors Naver Labs Europe and Amazon. The remaining 4 papers were presented as posters together with 6 further papers invited from the main conference. Half of the workshop was also dedicated to the *Visual Domain Adaptation* (VisDA) challenge, currently at its 2nd edition. This year the international competition focused on synthetic-to-real visual domain shifts and included two tracks on object detection and open-set image classification. The research

groups that produced the top three results of the challenge were invited to present their work with a short talk and to participate to the poster session.

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Tatiana Tommasi
David Vázquez
Kate Saenko
Ben Usman
Xingchao Peng
Judy Hoffman
Neela Kaushik
Antonio M. López
Wen Li
Francesco Orabona