

**Adaptive spatial resolution selection for stereoscopic video compression with MV-HEVC : A frequency based approach.** / Aflaki, Payman; Hannuksela, Miska M.; Gabbouj, Moncef.  
2014 IEEE International Symposium on Multimedia, ISM 2014, 10-12 Dec. 2014, Taichung. The Institute of Electrical and Electronics Engineers, Inc., 2015. p. 267-270.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**An evaluation framework for cross-platform mobile app development tools : A case analysis of adobe PhoneGap framework.** / Ahti, Ville; Hyrynsalmi, Sami; Nevalainen, Olli.  
Computer Systems and Technologies 17th International Conference, CompSysTech 2016 - Proceedings. Vol. 1164 Association for Computing Machinery, 2016. p. 41-48.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Keyframe-based video summarization with human in the loop.** / Ainasoja, Antti E.; Hietanen, Antti; Lankinen, Jukka; Kämäräinen, Joni-Kristian.  
VISIGRAPP 2018 - Proceedings of the 13th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications . Vol. 4 SCITEPRESS, 2018. p. 287-296.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Smartphone teleoperation for self-balancing telepresence robots.** / Ainasoja, Antti E.; Pertuz, Said; Kämäräinen, Joni-Kristian.  
VISIGRAPP 2019 - Proceedings of the 14th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications. ed. / Andreas Kerren; Christophe Hurter; Jose Braz. SCITEPRESS, 2019. p. 561-568.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**TraQuMe : A tool for measuring the gaze tracking quality.** / Akkil, Deepak; Isokoski, Poika; Kangas, Jari; Rantala, Jussi; Raisamo, Roope.  
Proceedings of the Symposium on Eye Tracking Research and Applications, ETRA 2014. Association for Computing Machinery, 2014. p. 327-330.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Viewing simulation of integral imaging display based on wave optics.** / Akpinar, Ugur; Sahin, Erdem; Gotchev, Atanas.  
2018 - 3DTV-Conference: The True Vision - Capture, Transmission and Display of 3D Video, 3DTV-CON 2018. IEEE, 2018. 8478568.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Understanding animals : A critical challenge in ACI.** / Aspling, Fredrik; Juhlin, Oskar; Väätäjä, Heli.  
NordiCHI 2018: Revisiting the Life Cycle - Proceedings of the 10th Nordic Conference on Human-Computer Interaction. ACM, 2018. p. 148-160.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Probabilistic saliency estimation.** / Aytekin, Caglar; Iosifidis, Alexandros; Gabbouj, Moncef.  
In: Pattern Recognition, Vol. 74, 2018, p. 359-372.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Deep multiresolution color constancy.** / Aytekin, Caglar; Nikkanen, Jarno; Gabbouj, Moncef.  
2017 IEEE International Conference on Image Processing, ICIP 2017 - Proceedings. IEEE COMPUTER SOCIETY PRESS, 2018. p. 3735-3739.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Modeling and estimation of signal-dependent and correlated noise.** / Azzari, Lucio; Borges, Lucas Rodrigues; Foi, Alessandro.  
Denosing of Photographic Images and Video: Fundamentals, Open Challenges and New Trends. SPRINGER-VERLAG LONDON LTD, 2018. p. 1-36 (Advances in Computer Vision and Pattern Recognition).  
Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

**Urban 3D segmentation and modelling from street view images and LiDAR point clouds.** / Babahajiani, Pouria; Fan, Lixin; Kämäräinen, Joni-Kristian; Gabbouj, Moncef.

In: Machine Vision and Applications, Vol. 28, No. 7, 2017, p. 679–694.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Effects of extrinsic noise are promoter kinetics dependent.** / Bahrudeen, Mohamed N.M.; Startceva, Sofia; Ribeiro, Andre S.

Proceedings of the 2017 9th International Conference on Bioinformatics and Biomedical Technology, ICBBT 2017. ACM, 2017. p. 44-47.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Dynamics analysis of a redundant parallel manipulator driven by elastic cables.** / Bedoustani, Y. B.; Taghirad, H. D.; Aref, M. M.

2008 10th International Conference on Control, Automation, Robotics and Vision, ICARCV 2008. 2008. p. 536-542 4795575.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Color game : A collaborative social robotic game for icebreaking; Towards the design of robotic ambiances as part of smart building services.** / Beheshtian, Nasim; Kaipainen, Kirsikka; Kähkönen, Kalle; Ahtinen, Aino.

AcademicMindtrek 2020 - Proceedings of the 23rd International Academic Mindtrek Conference: January 2020, Tampere. ACM, 2020. p. 10-19.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Compressive sensed video recovery via iterative thresholding with random transforms.** / Belyaev, Evgeny; Codreanu, Marian; Juntti, Markku; Egiazarian, Karen.

In: IET Image Processing, Vol. 14, No. 6, 2020, p. 1187-1200.

Research output: Contribution to journal › Article › Scientific › peer-review

**An image guided treatment platform for prostate cancer photodynamic therapy.** / Betrouni, N.; Colin, P.; Puech, P.; Villers, A.; Mordon, S.

2013 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2013. 2013. p. 370-373 6609514.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Multi-factor authentication for wearables : Configuring system parameters with risk function.** / Bezzateev, Sergey; Afanasyeva, Aleksandra; Voloshina, Natalia; Ometov, Aleksandr.

Proceedings of the 2nd International Conference on Advanced Wireless Information, Data, and Communication Technologies, AWICT 2017. ACM, 2017.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Data-driven stream mining systems for computer vision.** / Bhattacharyya, Shuvra S.; Van Der Schaar, Mihaela; Atan, Onur; Tekin, Cem; Sudusinghe, Kishan.

Advances in Computer Vision and Pattern Recognition. Vol. 68 SPRINGER-VERLAG LONDON LTD, 2014. p. 249-264 (Advances in Computer Vision and Pattern Recognition; Vol. 68).

Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

**Application-specific instruction processor for extracting local binary patterns.** / Boutellier, Jani; Lundbom, Ismo; Janhunen, Janne; Ylimainen, Jori; Hannuksela, Jari.

DASIP 2012 - Proceedings of the 2012 Conference on Design and Architectures for Signal and Image Processing. 2012. p. 82-89 6385363.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Improved weighted prediction based color gamut scalability in SHVC.** / Bugdayci Sansli, Döne; Aminlou, Alireza; Ugur, Kemal; Hannuksela, Miska M.; Gabbouj, Moncef.

2014 IEEE Visual Communications and Image Processing Conference, VCIP 2014. The Institute of Electrical and Electronics Engineers, Inc., 2015. p. 201-204 7051539.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Satisfaction and willingness to consume immersive journalism : Experiment of differences between VR, 360 video, and article.** / Bujic, Mila; Hamari, Juho.  
AcademicMindtrek 2020 - Proceedings of the 23rd International Academic Mindtrek Conference: January 2020, Tampere. ACM, 2020. p. 120-125.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**The Finnish you – An interactive storytelling application for an airport environment.** / Burova, Alisa; Kelling, Chelsea; Hakulinen, Jaakko; Kallioniemi, Pekka; Keskinen, Tuuli; Turunen, Markku; Väättäjä, Heli.  
Mindtrek 2018 - Proceedings of the 22nd International Academic Mindtrek Conference. ACM, 2018. p. 182-191.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Promoting local culture and enriching airport experiences through interactive storytelling.** / Burova, Alisa; Kelling, Chelsea; Keskinen, Tuuli; Hakulinen, Jaakko; Kallioniemi, Pekka; Väättäjä, Heli; Turunen, Markku.  
MUM 2019 - 18th International Conference on Mobile and Ubiquitous Multimedia, Proceedings. ed. / Giulio Jacucci; Fabio Paterno; Michael Rohs; Carmen Santoro. Association for Computing Machinery, 2019. 3365640 (ACM International Conference Proceeding Series).  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Convolutional low-resolution fine-grained classification.** / Cai, Dingding; Chen, Ke; Qian, Yanlin; Kämäräinen, Joni-Kristian.  
In: Pattern Recognition Letters, Vol. 119, 03.2019, p. 166-171.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Design space exploration and implementation of RVC-CAL applications using the TURNUS framework.** / Casale-Brunet, S.; Bezati, E.; Alberti, C.; Roquier, G.; Mattavelli, M.; Janneck, J. W.; Boutellier, J.  
DASIP 2013 - Proceedings of the 2013 Conference on Design and Architectures for Signal and Image Processing. 2013. p. 341-342 6661566.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**A Primal Neural Network for Online Equality-Constrained Quadratic Programming.** / Chen, Ke; Zhang, Zhaoxiang.  
In: Cognitive Computation, Vol. 10, No. 2, 2018, p. 381-388.  
Research output: Contribution to journal > Article > Scientific > peer-review

**"The superhero of the university" : Experience-driven design and field study of the university guidance robot.** / Chowdhury, Aparajita; Ahtinen, Aino; Kaipainen, Kirsikka.  
AcademicMindtrek 2020 - Proceedings of the 23rd International Academic Mindtrek Conference: January 2020, Tampere. ACM, 2020. p. 1-9.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Salient event detection in basketball mobile videos.** / Cricri, Francesco; Mate, Sujeet; Curcio, Igor D D; Gabbouj, Moncef.  
Proceedings - 2014 IEEE International Symposium on Multimedia, ISM 2014. The Institute of Electrical and Electronics Engineers, Inc., 2015. p. 63-70 7032995.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Bandwidth reduction of omnidirectional viewport-dependent video streaming via subjective quality assessment.** / Curcio, Igor D.D.; Toukoma, Henri; Naik, Deepa.  
AltMM 2017 - Proceedings of the 2nd International Workshop on Multimedia Alternate Realities, co-located with MM 2017. ACM, 2017. p. 9-14.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Subjective evaluation of Super Multi-View compressed contents on high-end light-field 3D displays.** / Dricot, Antoine; Jung, Joel; Cagnazzo, Marco; Pesquet, Béatrice; Dufaux, Frédéric; Kovács, Péter; Adhikarla, Vamsi Kiran.  
In: Signal Processing: Image Communication, Vol. 39, No. Part B, 2015, p. 369-385.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Two-time coherence of pulse trains and the integrated degree of temporal coherence.** / Dutta, Rahul; Friberg, Ari T.; Genty, Goery; Turunen, Jari.  
In: Journal of the Optical Society of America A: Optics Image Science and Vision, Vol. 32, No. 9, 2015, p. 1631-1637.

Research output: Contribution to journal › Article › Scientific › peer-review

**Rate-distortion based reversible watermarking for JPEG images with quality factors selection.** / Efimushkina, T.; Egiazarian, K.; Gabbouj, M.

2013 4th European Workshop on Visual Information Processing, EUVIP 2013, Paris, France, 10.-12.2013. University of Paris 13, 2013. p. 94-99 6623958 (European Workshop on Visual Information Processing).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Patterns for controlling chaos in a startup.** / Eloranta, Veli-Pekka.

VikingPLOP 2014 Proceedings of the 8th Nordic Conference on Pattern Languages of Programs. Vol. 2014-April Association for Computing Machinery, 2014. p. 1-8 (ACM International Conference Proceeding Series).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**360 panorama super-resolution using deep convolutional networks.** / Fakour-Sevom, Vida; Guldogan, Esin; Kämäräinen, Joni-Kristian.

VISIGRAPP 2018 - Proceedings of the 13th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications . Vol. 4 SCITEPRESS, 2018. p. 159-165.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Foveated Nonlocal Self-Similarity.** / Foi, Alessandro; Boracchi, Giacomo.

In: International Journal of Computer Vision, Vol. 120, No. 1, 2016, p. 78–110.

Research output: Contribution to journal › Article › Scientific › peer-review

**Performance analysis of single-query 6-DoF camera pose estimation in self-driving setups.** / Fu, Junsheng; Pertuz, Said; Matas, Jiri; Kämäräinen, Joni-Kristian.

In: Computer Vision and Image Understanding, Vol. 186, 09.2019, p. 58-73.

Research output: Contribution to journal › Article › Scientific › peer-review

**Light field reconstruction using shearlet transform in tensorflow.** / Gao, Yuan; Koch, Reinhard; Bregovic, Robert; Gotchev, Atanas.

2019 IEEE International Conference on Multimedia and Expo Workshops, ICMEW 2019. IEEE, 2019.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Parametric exploration of cellular swelling in a computational model of cortical spreading depression.** / Genocchi, Barbara ; Cunha, Andre; Jain, Soumil; Hyttinen, Jari; Lenk, Kerstin; Ellingsrud, Ada Johanne.

42nd Annual International Conferences of the IEEE Engineering in Medicine and Biology Society: Enabling Innovative Technologies for Global Healthcare, EMBC 2020. IEEE, 2020. p. 2491-2495 (Annual International Conference of the IEEE Engineering in Medicine and Biology Society; Vol. 2020-July).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Viewport-dependent delivery schemes for stereoscopic panoramic video.** / Ghaznavi-Youvalari, Ramin; Hannuksela, Miska M.; Aminlou, Alireza; Gabbouj, Moncef.

3DTV-CON 2017 - 3D True Vision v2: Research and Applications in Future 3D Media. IEEE, 2018. p. 1-4.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**On the control of the KNTU CDRPM : A cable driven redundant parallel manipulator.** / Gholami, Pooneh; Aref, Mohammad M.; Taghirad, Hamid D.

2008 IEEE/RSJ International Conference on Intelligent Robots and Systems, IROS. 2008. p. 2404-2409 4650740.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Face typing : Vision-based perceptual interface for hands-free text entry with a scrollable virtual keyboard.** / Gizatdinova, Yulia; Spakov, Öleg; Surakka, Veikko.

2012 IEEE Workshop on the Applications of Computer Vision, WACV 2012. 2012. p. 81-87 6162997.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Facial expression classification based on local spatiotemporal edge and texture descriptors.** / Gizatdinova, Yulia; Surakka, Veikko; Zhao, Guoying; Mäkinen, Erno; Raisamo, Roope.

Selected Papers from the Proceedings of the 7th International Conference on Methods and Techniques in Behavioral Research - Digital Edition, MB'10. 2011. 21.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Reducing the number of unit tests with design by contract.** / Hakonen, Harri; Hyrynsalmi, Sami; Järvi, Antero.

Computer Systems and Technologies - 12th International Conference, CompSysTech'11 - Proceedings. Vol. 578 2011. p. 161-166.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Bayesian receiver operating characteristic metric for linear classifiers.** / Hassan, Syeda Sakira; Huttunen, Heikki; Niemi, Jari; Tohka, Jussi.

In: Pattern Recognition Letters, Vol. 128, 01.12.2019, p. 52-59.

Research output: Contribution to journal › Article › Scientific › peer-review

**Simple gaze gestures and the closure of the eyes as an interaction technique.** / Heikkilä, Henna; Räihä, Kari Jouko. Proceedings - ETRA 2012: Eye Tracking Research and Applications Symposium. 2012. p. 147-154.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Learnings from the Finnish game industry.** / Helenius, Marko; Kettunen, Petri; Frank, Lauri.

Proceedings of the 10th Travelling Conference on Pattern Languages of Programs, VikingPLoP 2016. ACM, 2016. a12.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Sparse modelling and predictive coding of subaperture images for lossless plenoptic image compression.** / Helin, Petri; Astola, Pekka; Rao, Bhaskar; Tabus, Ioan.

2016 3DTV-Conference: The True Vision - Capture, Transmission and Display of 3D Video, 3DTV-CON 2016. IEEE COMPUTER SOCIETY PRESS, 2016.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Recording and analyzing in-browser programming sessions.** / Helminen, Juha; Ihanola, Petri; Karavirta, Ville.

Proceedings - 13th Koli Calling International Conference on Computing Education Research, Koli Calling 2013. 2013. p. 13-22.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Automatic image-based detection and inspection of paper fibres for grasping.** / Hirvonen, Juha; Kallio, Pasi.

In: IET Computer Vision, Vol. 9, No. 4, 01.08.2015, p. 588-594.

Research output: Contribution to journal › Article › Scientific › peer-review

**Three patterns for user involvement in startups.** / Hokkanen, Laura; Leppänen, Marko.

Proceedings of the 20th European Conference on Pattern Languages of Programs, EuroPLoP 2015. ACM, 2015. a51.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**User Experience Study of 360° Music Videos on Computer Monitor and Virtual Reality Goggles.** / Holm, Jukka; Väänänen, Kaisa; Remans, Mohammad Mushfiqur Rahman.

Information Visualization - Biomedical Visualization and Geometric Modelling and Imaging, IV 2019. ed. / Ebad Banissi; Anna Ursyn; Mark W. McK. Bannatyne; Nuno Datia; Joao Moura Pires; Rita Francese; Muhammad Sarfraz; Theodor G Wyeld; Fatma Bouali; Gilles Venturin; Hanane Azzag; Mustapha Lebbah; Marjan Trutschl; Urska Cvek; Heimo Muller; Minoru Nakayama; Sebastian Kernbach; Loredana Caruccio; Michele Risi; Ugo Erra; Autilia Vitiello; Veronica Rossano. IEEE, 2019. p. 81-87 (Proceedings of the International Conference on Information Visualisation).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**User experience of stereo and spatial audio in 360° live music videos.** / Holm, Jukka; Väänänen, Kaisa; Battah, Anas.

AcademicMindtrek 2020 - Proceedings of the 23rd International Academic Mindtrek Conference: January 2020, Tampere. ACM, 2020. p. 134-141.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Social and privacy aspects of a system for collaborative public expression.** / Holopainen, Jussi; Lucero, Andrés; Saarenpää, Hannamari; Nummenmaa, Timo; Ali, Abdallah El; Jokela, Tero.  
Proceedings of the 8th International Conference on Advances in Computer Entertainment Technology, ACE 2011. 2011. 23.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Asymmetrie luminance based filtering for stereoscopic video compression.** / Homayouni, Maryam; Aflaki, Payman; Hannuksela, Miska M.; Gabbouj, Moncef.  
2014 International Conference on 3D Imaging (IC3D). IEEE, 2015.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**A survey on aims and environments of diversification and obfuscation in software security.** / Hosseinzadeh, Shohreh; Rauti, Sampsa; Laurén, Samuel; Mäkelä, Jari Matti; Holvitie, Johannes; Hyrynsalmi, Sami; Leppänen, Ville.  
Computer Systems and Technologies 17th International Conference, CompSysTech 2016 - Proceedings. Vol. 1164 Association for Computing Machinery, 2016. p. 113-120.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Lossless compression of regions-of-interest from retinal images.** / Hukkanen, Jenni; Astola, Pekka; Tabus, Ioan.  
EUVIP 2014 - 5th European Workshop on Visual Information Processing. The Institute of Electrical and Electronics Engineers, Inc., 2015.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Model selection for linear classifiers using Bayesian error estimation.** / Huttunen, Heikki; Tohka, Jussi.  
In: Pattern Recognition, Vol. 48, No. 11, 11.2015, p. 3739-3748.

Research output: Contribution to journal › Article › Scientific › peer-review

**Gaze gestures or dwell-based interaction?** / Hyrskykari, Aulikki; Istance, Howell; Vickers, Stephen.  
Proceedings - ETRA 2012: Eye Tracking Research and Applications Symposium. 2012. p. 229-232.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Multi-modal dense video captioning.** / Iashin, Vladimir; Rahtu, Esa.

Proceedings - 2020 IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops, CVPRW 2020. IEEE, 2020. p. 4117-4126 (IEEE Computer Society Conference on Computer Vision and Pattern Recognition Workshops).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**How to study programming on mobile touch devices - Interactive Python code exercises.** / Ihantola, Petri; Helminen, Juha; Karavirta, Ville.

Proceedings - 13th Koli Calling International Conference on Computing Education Research, Koli Calling 2013. 2013. p. 51-58.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**On the kernel Extreme Learning Machine classifier.** / Iosifidis, Alexandros; Tefas, Anastasios; Pitas, Ioannis.  
In: Pattern Recognition Letters, Vol. 54, 01.03.2015, p. 11-17.

Research output: Contribution to journal › Article › Scientific › peer-review

**The MOBISERV-AIIA eating and drinking multi-view database for vision-based assisted living.** / Iosifidis, A.; Marami, E.; Tefas, A.; Pitas, I.; Lyroudia, K.

In: Journal of Information Hiding and Multimedia Signal Processing, Vol. 6, No. 2, 01.03.2015, p. 254-273.

Research output: Contribution to journal › Article › Scientific › peer-review

**Kernel reference discriminant analysis.** / Iosifidis, Alexandros; Tefas, Anastasios; Pitas, Ioannis.  
In: Pattern Recognition Letters, Vol. 49, 01.11.2014, p. 85-91.

Research output: Contribution to journal › Article › Scientific › peer-review

**Discriminant Bag of Words based representation for human action recognition.** / Iosifidis, Alexandros; Tefas, Anastasios; Pitas, Ioannis.

In: Pattern Recognition Letters, Vol. 49, 01.11.2014, p. 185-192.

Research output: Contribution to journal › Article › Scientific › peer-review

**Semi-supervised classification of human actions based on neural networks.** / Iosifidis, Alexandros; Tefas, Anastasios; Pitas, Ioannis.

Proceedings - International Conference on Pattern Recognition. The Institute of Electrical and Electronics Engineers, Inc., 2014. p. 1336-1341.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Active classification for human action recognition.** / Iosifidis, Alexandros; Tefas, Anastasios; Pitas, Ioannis.

2013 IEEE International Conference on Image Processing, ICIP 2013 - Proceedings. 2013. p. 3249-3253 6738669.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**View-independent human action recognition based on multi-view action images and discriminant learning.** / Iosifidis, Alexandros; Tefas, Anastasios; Pitas, Ioannis.

2013 IEEE 11th IVMSWP Workshop: 3D Image/Video Technologies and Applications, IVMSWP 2013 - Proceedings. 2013.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Multi-view action recognition based on action volumes, fuzzy distances and cluster discriminant analysis.** / Iosifidis, Alexandros; Tefas, Anastasios; Pitas, Ioannis.

In: Signal Processing, Vol. 93, No. 6, 06.2013, p. 1445-1457.

Research output: Contribution to journal › Article › Scientific › peer-review

**Dynamic action recognition based on dynemes and Extreme Learning Machine.** / Iosifidis, Alexandros; Tefas, Anastasios; Pitas, Ioannis.

In: Pattern Recognition Letters, Vol. 34, No. 15, 2013, p. 1890-1898.

Research output: Contribution to journal › Article › Scientific › peer-review

**Sparse extreme learning machine classifier exploiting intrinsic graphs.** / Iosifidis, Alexandros; Tefas, Anastasios; Pitas, Ioannis.

In: Pattern Recognition Letters, Vol. 65, 01.11.2015, p. 192-196.

Research output: Contribution to journal › Article › Scientific › peer-review

**Nyström-based approximate kernel subspace learning.** / Iosifidis, Alexandros; Gabbouj, Moncef.

In: Pattern Recognition, 09.2016, p. 190-197.

Research output: Contribution to journal › Article › Scientific › peer-review

**Big Media Data Analysis.** / Iosifidis, Alexandros; Tefas, Anastasios; Pitas, Ioannis; Gabbouj, Moncef.

In: Signal Processing: Image Communication, Vol. 59, 01.11.2017, p. 105-108.

Research output: Contribution to journal › Editorial › Scientific › peer-review

**The validity of using non-representative users in gaze communication research.** / Istance, Howell; Vickers, Stephen; Hyrskykari, Aulikki.

Proceedings - ETRA 2012: Eye Tracking Research and Applications Symposium. 2012. p. 233-236.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Full search equivalent fast block matching using orthonormal tree-structured haar transform.** / Ito, Izumi; Egiazarian, Karen

ISPA 2017 - 10th International Symposium on Image and Signal Processing and Analysis. IEEE COMPUTER SOCIETY PRESS, 2017. p. 177-182.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Opportunities and Challenges of Mobile Applications as "Tickets-to-Talk": A Scenario-Based User Study.** /

Jarusriboonchai, Pradthana; Olsson, Thomas; Ojala, Jarno; Väänänen-Vainio-Mattila, Kaisa.

Proceedings of the 13th International Conference on Mobile and Ubiquitous Multimedia, MUM2014, November 25-28, 2014, Melbourne, Australia. New York, NY : ACM, 2014. p. 89-97 (International conference on mobile and ubiquitous multimedia).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Paraxial light beams in structured anisotropic media.** / Jisha, Chandroth P.; Alberucci, Alessandro.

In: Journal of the Optical Society of America A: Optics and Image Science, and Vision, Vol. 34, No. 11, 01.11.2017, p. 2019-2024.

Research output: Contribution to journal › Article › Scientific › peer-review

**Innovation challenges as a novel multidisciplinary learning platform.** / Jokiniemi, Sini; Myllärniemi, Jussi; Poranen, Timo; Vuorenmaa, Marika.

AcademicMindtrek 2020 - Proceedings of the 23rd International Academic Mindtrek Conference: January 2020, Tampere. ACM, 2020. p. 145-148.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Who is moving - User or device? Experienced quality of mobile 3D video in vehicles.** / Jumisko-Pyykkö, Satu; Markopoulos, Panos; Hannuksela, Miska M.

ACE 2015 - 12th Advances in Computer Entertainment Technology Conference, Proceedings. ACM, 2015. 13.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Model for landmark highlighting in mobile web services.** / Kallioniemi, Pekka; Turunen, Markku.

Proceedings of the 11th International Conference on Mobile and Ubiquitous Multimedia, MUM 2012. 2012. 25.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Haptic feedback to gaze events.** / Kangas, Jari; Rantala, Jussi; Majaranta, Päivi; Isokoski, Poika; Raisamo, Roope.

Proceedings of the Symposium on Eye Tracking Research and Applications, ETRA 2014. Association for Computing Machinery, 2014. p. 11-18.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**The Effect of Light Field Reconstruction and Angular Resolution Reduction on the Quality of Experience.** / Kara, Peter A.; Kovacs, Peter T.; Vagharshakyan, Suren; Martini, Maria G.; Barsi, Attila; Balogh, Tibor; Chuchvara, Aleksandra; Chehaibi, Ahmed.

2016 12th International Conference on Signal-Image Technology & Internet-Based Systems (SITIS). IEEE, 2017. p. 781-786.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Evaluation of visual object trackers on equirectangular panorama.** / Kart, Ugur; Kämäräinen, Joni Kristian; Fan, Lixin; Gabbouj, Moncef.

VISIGRAPP 2018 - Proceedings of the 13th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications . Vol. 5 SCITEPRESS, 2018. p. 25-32.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Sparse approximations in complex domain based on BM3D modeling.** / Katkovnik, Vladimir; Ponomarenko, Mykola; Egiazarian, Karen.

In: Signal Processing, Vol. 141, 01.12.2017, p. 96-108.

Research output: Contribution to journal › Article › Scientific › peer-review

**Implications of audio and narration in the user experience design of virtual reality.** / Kelling, Chelsea; Karhu, Jussi; Kauhanen, Otto; Turunen, Markku; Väättäjä, Heli; Lindqvist, Vesa.

Mindtrek 2018 - Proceedings of the 22nd International Academic Mindtrek Conference. ACM, 2018. p. 258-261.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Community driven artificial intelligence development for robotics.** / Kertész, Csaba; Turunen, Markku.

Doctoral Consortium on Informatics in Control, Automation and Robotics, DCINCO 2015; in conjunction with the 12th International Conference on Informatics in Control, Automation and Robotics, ICINCO. SCITEPRESS, 2015. p. 3-10.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review



**Color-tone similarity of digital images.** / Kikuchi, Hisakazu; Kataoka, S.; Muramatsu, S.; Huttunen, Heikki.  
2013 IEEE International Conference on Image Processing, ICIP 2013 - Proceedings. 2013. p. 393-397.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Implementation of a low-complexity low-latency arbitrary resampler on GPUs.** / Kim, Scott C.; Bhattacharyya, Shuvra S.  
2014 IEEE Dallas Circuits and Systems Conference: Enabling an Internet of Things - From Sensors to Servers, DCAS 2014. Institute of Electrical and Electronics Engineers Inc., 2014. 6965333.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**An efficient GPU implementation of an arbitrary resampling polyphase channelizer.** / Kim, Scott C.; Plishker, William L.; Bhattacharyya, Shuvra S.  
DASIP 2013 - Proceedings of the 2013 Conference on Design and Architectures for Signal and Image Processing. 2013. p. 231-238 6661548.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**GPU-based acceleration of symbol timing recovery.** / Kim, Scott C.; Plishker, William L.; Bhattacharyya, Shuvra S.; Cavallaro, Joseph R.  
DASIP 2012 - Proceedings of the 2012 Conference on Design and Architectures for Signal and Image Processing. 2012. p. 273-280 6385393.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Demographic differences in accumulated types of capital in massively multiplayer online role-playing games.** / Korkeila, Henry; Koivisto, Jonna; Hamari, Juho.  
AcademicMindtrek 2020 - Proceedings of the 23rd International Academic Mindtrek Conference: January 2020, Tampere. ACM, 2020. p. 74-82.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**The visual object tracking VOT2013 challenge results.** / Kristan, Matej; Pflugfelder, Roman; Leonardis, Aleš; Matas, Jiri; Porikli, Fatih; Čehovin, Luka; Nebehay, Georg; Fernandez, Gustavo; Vojíš, Tomáš; Gatt, Adam; Khajenezhad, Ahmad; Salahledin, Ahmed; Soltani-Farani, Ali; Zarezade, Ali; Petrosino, Alfredo; Milton, Anthony; Bozorgtabar, Behzad; Li, Bo; Chan, Chee Seng; Heng, Cherkeng; Ward, Dale; Kearney, David; Monekosso, Dorothy; Karaimer, Hakki Can; Rabiee, Hamid R.; Zhu, Jianke; Gao, Jin; Xiao, Jingjing; Zhang, Junge; Xing, Junliang; Huang, Kaiqi; Lebeda, Karel; Cao, Lijun; Maresca, Mario Edoardo; Lim, Mei Kuan; ELHelw, Mohamed; Felsberg, Michael; Remagnino, Paolo; Bowden, Richard; Goecke, Roland; Stolkin, Rustam; Lim, Samantha Yue Ying; Maher, Sara; Poullot, Sebastien; Wong, Sebastien; Satoh, Shin'ichi; Chen, Weihua; Hu, Weiming; Zhang, Xiaoqin; Li, Yang; Niu, Zhiheng.  
Proceedings - 2013 IEEE International Conference on Computer Vision Workshops, ICCVW 2013. Institute of Electrical and Electronics Engineers Inc., 2013. p. 98-111 6755885.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Goofy Mus, grumpy Mur and dirty Muf : Talking playful seats with personalities.** / Kultima, Annakaisa; Nummenmaa, Timo; Tyni, Heikki; Alha, Kati; Mayra, Frans.  
ACE 2014 - 11th Advances in Computer Entertainment Technology Conference, Workshops Proceedings. Vol. 11-14-November-2014 Association for Computing Machinery, 2014. a9.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Local feature based unsupervised alignment of object class images.** / Lankinen, Jukka; Kamarainen, Joni Kristian.  
BMVC 2011 - Proceedings of the British Machine Vision Conference 2011. British Machine Vision Association, BMVA, 2011.  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

**Multi-sensor next-best-view planning as matroid-constrained submodular maximization.** / Lauri, Mikko; Pajarinen, Joni; Peters, Jan; Frintrop, Simone.  
In: IEEE Robotics and Automation Letters, Vol. 5, No. 4, 2020, p. 5323-5330.  
Research output: Contribution to journal > Article > Scientific > peer-review

**Long-term tracking through failure cases.** / Lebeda, Karel; Hadfield, Simon; Matas, Jiri; Bowden, Richard.  
Proceedings - 2013 IEEE International Conference on Computer Vision Workshops, ICCVW 2013. Institute of Electrical and Electronics Engineers Inc., 2013. p. 153-160 6755891.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Two patterns for minimizing human resources in a startup.** / Leppänen, Marko.  
VikingPLoP 2014 Proceedings of the 8th Nordic Conference on Pattern Languages of Programs (VikingPLoP) . ACM, 2014. 4.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Four patterns for internal startups.** / Leppänen, Marko; Hokkanen, Laura.  
Proceedings of the 20th European Conference on Pattern Languages of Programs, EuroPLoP 2015. ACM, 2015. a5.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Patterns for subsidiaries as innovation tools.** / Leppänen, Marko; Hokkanen, Laura.  
Proceedings of the 10th Travelling Conference on Pattern Languages of Programs, VikingPLoP 2016. ACM, 2016. a7.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Low power design methodology for signal processing systems using lightweight dataflow techniques.** / Li, Lin; Fanni, Tiziana; Viitanen, Timo; Xie, Renjie; Palumbo, Francesca; Raffo, Luigi; Huttunen, Heikki; Takala, Jarmo; Bhattacharyya, Shuvra S.  
DASIP 2016 - Proceedings of the 2016 Conference on Design and Architectures for Signal and Image Processing. IEEE COMPUTER SOCIETY PRESS, 2017. p. 82-89.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**A preliminary network analysis on steam game tags : Another way of understanding game genres.** / Li, Xiaozhou; Zhang, Boyang.  
AcademicMindtrek 2020 - Proceedings of the 23rd International Academic Mindtrek Conference: January 29-30, 2020, Tampere, Finland. ACM, 2020. p. 65-73.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**The use of advanced imaging technology in welfare technology solutions - Some ethical aspects.** / Lilja, Kari K.; Palomäki, Jari.  
3DTV-CON 2017 - 3D True Vision v2: Research and Applications in Future 3D Media. IEEE, 2018. p. 1-4.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Real-time human pose estimation with convolutional neural networks.** / Linna, Marko; Kannala, Juho; Rahtu, Esa.  
VISIGRAPP 2018 - Proceedings of the 13th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications. Vol. 5 SCITEPRESS, 2018. p. 335-342.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Game postmortems vs. developer Reddit AMAs : Computational analysis of developer communication.** / Lu, Chien; Peltonen, Jaakko; Nummenmaa, Timo.  
Proceedings of the 14th International Conference on the Foundations of Digital Games, FDG 2019. ed. / Foaad Khosmood; Johanna Pirker; Thomas Apperley; Sebastian Deterding. ACM, 2019. 22.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**'Aie-studio' - A pragmatist aesthetic approach for procedural sound design.** / Luhtala, Matti; Turunen, Markku; Hakulinen, Jaakko; Keskinen, Tuuli.  
Proceedings of the 8th Audio Mostly: A Conference on Interaction with Sound, AM 2013 - In Cooperation with ACM SIGCHI. Association for Computing Machinery, 2013. 7.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Systematic literature review on user logging in virtual reality.** / Luoto, Antti.  
Mindtrek 2018 - Proceedings of the 22nd International Academic Mindtrek Conference. ACM, 2018. p. 110-117.  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Log analysis of 360-degree video users via MQTT.** / Luoto, Antti.

ICGDA 2019: Proceedings of the 2019 2nd International Conference on Geoinformatics and Data Analysis . ACM, 2019. p. 130-137.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Stereoscopic video description for human action recognition.** / Mademlis, Ioannis; Iosifidis, Alexandros; Tefas, Anastasios; Nikolaidis, Nikos; Pitas, Ioannis.

IEEE SSCI 2014 - 2014 IEEE Symposium Series on Computational Intelligence - CIMSIVP 2014: 2014 IEEE Symposium on Computational Intelligence for Multimedia, Signal and Vision Processing, Proceedings. The Institute of Electrical and Electronics Engineers, Inc., 2015.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Information wall : Evaluation of a gesture-controlled public display.** / Mäkelä, Ville; Heimonen, Tomi; Luhtala, Matti; Turunen, Markku.

ACE 2014 - 11th Advances in Computer Entertainment Technology Conference, Proceedings. Vol. 2014-November Association for Computing Machinery, 2014. p. 228-231.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Analysis of accommodation cues in holographic stereograms.** / Mäkinen, Jani; Sahin, Erdem; Gotchev, Atanas.

2018 - 3DTV-Conference: The True Vision - Capture, Transmission and Display of 3D Video, 3DTV-CON 2018. IEEE, 2018. 8478586.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Identification of Parkinson's Disease Utilizing a Single Self-recorded 20-step Walking Test Acquired by Smartphone's Inertial Measurement Unit.** / Mehrang, Saeed; Jauhainen, Milla; Pietilä, Julia; Puustinen, Juha; Ruokolainen, Jari; Nieminen, Hannu.

40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2018. Vol. 2018-July Institute of Electrical and Electronics Engineers Inc., 2018. p. 2913-2916 8512921.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Dominant Rotated Local Binary Patterns (DRLBP) for texture classification.** / Mehta, Rakesh; Egiazarian, Karen.

In: Pattern Recognition Letters, Vol. 71, 2016, p. 16-22.

Research output: Contribution to journal › Article › Scientific › peer-review

**Image-Based Localization Using Hourglass Networks.** / Melekhov, Iaroslav; Ylioinas, Juha; Kannala, Juho; Rahtu, Esa.

2017 IEEE International Conference on Computer Vision Workshops, ICCVW 2017. IEEE, 2018. p. 870-877.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**DGC-Net : Dense geometric correspondence network.** / Melekhov, Iaroslav; Tiulpin, Aleksei; Sattler, Torsten; Pollefeys, Marc; Rahtu, Esa; Kannala, Juho.

2019 IEEE Winter Conference on Applications of Computer Vision, WACV 2019. IEEE, 2019. p. 1034-1042 (IEEE Winter Conference on Applications of Computer Vision).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Barriers for bridging interpersonal gaps : Three inspirational design patterns for increasing collocated social interaction.** / Mitchell, Robb; Olsson, Thomas.

C&T 2017 - 8th International Conference on Communities and Technologies, Conference Proceedings. ACM, 2017. p. 2-10.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Facilitating the first move : Exploring inspirational design patterns for aiding initiation of social encounters.** / Mitchell, Robb; Olsson, Thomas.

C&T 2019 - 9th International Conference on Communities and Technologies, Conference Proceedings. ed. / Hilda Tellioglu; Florian Cech. ACM, 2019. p. 283-294.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Controlled experiments comparing fault-tree-based safety analysis techniques.** / Mouaffo, Adrien; Taibi, Davide; Jamboti, Kavyashree.

18th International Conference on Evaluation and Assessment in Software Engineering, EASE 2014. Association for Computing Machinery (ACM), 2014. a46.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**On the Layer Selection in Small-Scale Deep Networks.** / Muravev, Anton; Raitoharju, Jenni; Gabbouj, Moncef.

2018 7th European Workshop on Visual Information Processing (EUVIP). IEEE, 2018.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Ensembles of dense and dense sampling descriptors for the HEP-2 cells classification problem.** / Nanni, Loris; Lumini, Alessandra; dos Santos, Florentino Luciano Caetano; Paci, Michelangelo; Hyttinen, Jari.

In: Pattern Recognition Letters, Vol. 82, 15.10.2016, p. 28-35.

Research output: Contribution to journal › Article › Scientific › peer-review

**Soft robotic gripper with compliant cell stacks for industrial part handling.** / Netzev, Metodi; Angleraud, Alexandre; Pieters, Roel.

In: IEEE Robotics and Automation Letters, Vol. 5, No. 4, 01.10.2020, p. 6821-6828.

Research output: Contribution to journal › Article › Scientific › peer-review

**Social human-robot interaction in the wild : A workshop proposal for academic mindtrek 2020.** / Niemelä, Marketta; Ahtinen, Aino; Turunen, Markku.

AcademicMindtrek 2020 - Proceedings of the 23rd International Academic Mindtrek Conference: January 2020, Tampere. ACM, 2020. p. 168-169.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

**Deep Learning Case Study for Automatic Bird Identification.** / Niemi, Juha; Tanttu, Juha.

In: Applied Sciences (Switzerland), Vol. 8, No. 11, 2089, 29.10.2018.

Research output: Contribution to journal › Article › Scientific › peer-review

**Need to touch, wonder of discovery, and social capital : Experiences with interactive playful seats.** / Nummenmaa, Timo; Tyni, Heikki; Kultima, Annakaisa; Alha, Kati; Holopainen, Jussi.

ACE 2015 - 12th Advances in Computer Entertainment Technology Conference, Proceedings. Vol. 16-19-November-2015 Association for Computing Machinery, 2015. 10.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Social features in hybrid board game marketing material.** / Nummenmaa, Timo; Kankainen, Ville.

Proceedings of the 14th International Conference on the Foundations of Digital Games, FDG 2019. ed. / Foaad Khosmood; Johanna Pirker; Thomas Apperley; Sebastian Deterding. ACM, 2019. 67.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Designing for experiences with socially interactive robots.** / Obaid, Mohammad; Kaipainen, Kirsikka; Ocnareescu, Ioana; Ahtinen, Aino.

NordiCHI 2018: Revisiting the Life Cycle - Proceedings of the 10th Nordic Conference on Human-Computer Interaction. ACM, 2018. p. 948-951.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Probabilistic approach to physical object disentangling.** / Pajarinen, Joni; Arenz, Oleg; Peters, Jan; Neumann, Gerhard.

In: IEEE Robotics and Automation Letters, Vol. 5, No. 4, 2020, p. 5510-5517.

Research output: Contribution to journal › Article › Scientific › peer-review

**Distant speech separation using predicted time-frequency masks from spatial features.** / Pertilä, Pasi; Nikunen, Joonas.

In: Speech Communication, Vol. 68, 2015, p. 97-106.

Research output: Contribution to journal › Article › Scientific › peer-review

**Image database TID2013 : Peculiarities, results and perspectives.** / Ponomarenko, Nikolay; Jin, Lina; Ieremeiev, Oleg; Lukin, Vladimir; Egiazarian, Karen; Astola, Jaakko; Vozel, Benoit; Chehdi, Kacem; Carli, Marco; Battisti, Federica; Jay Kuo, C. C.

In: Signal Processing: Image Communication, Vol. 30, 01.01.2015, p. 57-77.

Research output: Contribution to journal › Article › Scientific › peer-review

**Revisiting gray pixel for statistical illumination estimation.** / Qian, Yanlin; Pertuz, Said; Nikkanen, Jarno; Kämäräinen, Joni-Kristian; Matas, Jiri.

VISIGRAPP 2019 - Proceedings of the 14th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications. ed. / Andreas Keren; Christophe Hurter; Jose Braz. SCITEPRESS, 2019. p. 36-46.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Fast fourier color constancy and grayness index for ISPA illumination estimation challenge.** / Qian, Yanlin; Chen, Ke; Yu, Huanglin.

ISPA 2019 - 11th International Symposium on Image and Signal Processing and Analysis. ed. / Sven Loncaric; Robert Bregovic; Marco Carli; Marko Subasic. IEEE, 2019. p. 352-354 (International Symposium on Image and Signal Processing and Analysis, ISPA; Vol. 2019-September).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Tut MUVIS image retrieval system proposal for MSR-Bing challenge 2014.** / Raitoharju, J.; Zhang, H.; Ozan, E. C.; Waris, M. A.; Faisal, M.; Cao, G.; Roininen, M.; Ahmad, I.; Shetty, R.; Uhlmann, S.; Samiee, K.; Kiranyaz, S.; Gabbouj, M.

IEEE International Conference on Multimedia and Expo, ICME 2014, Chengdu, China, July 14-18, 2014. Piscataway : Institute of Electrical and Electronics Engineers IEEE, 2014. p. 1-6.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Benchmark database for fine-grained image classification of benthic macroinvertebrates.** / Raitoharju, Jenni; Riabchenko, Ekaterina; Ahmad, Iftikhar; Iosifidis, Alexandros; Gabbouj, Moncef; Kiranyaz, Serkan; Tirronen, Ville; Ärje, Johanna; Kärkkäinen, Salme; Meissner, Kristian.

In: Image and Vision Computing, Vol. 78, 01.10.2018, p. 73-83.

Research output: Contribution to journal › Article › Scientific › peer-review

**Gaussian mixture models for signal mapping and positioning.** / Raitoharju, M.; Garcia-Fernández, F.; Hostettler, R.; Piché, R.; Särkkä, S.

In: Signal Processing, Vol. 168, 107330, 01.03.2020.

Research output: Contribution to journal › Article › Scientific › peer-review

**Automatic word count estimation from daylong child-centered recordings in various language environments using language-independent syllabification of speech.** / Räsänen, Okko; Seshadri, Shreyas; Karadayi, Julien; Riebling, Eric; Bunce, John; Cristia, Alejandrina; Metze, Florian; Casillas, Marisa; Rosemberg, Celia; Bergelson, Erika; Soderstrom, Melanie.

In: Speech Communication, Vol. 113, 01.10.2019, p. 63-80.

Research output: Contribution to journal › Article › Scientific › peer-review

**User Positioning in mmW 5G Networks Using Beam-RSRP Measurements and Kalman Filtering.** / Rastorgueva-Foi, Elizaveta; Costa, Mário; Koivisto, Mike; Leppänen, Kari; Valkama, Mikko.

2018 21st International Conference on Information Fusion, FUSION 2018. IEEE, 2018. p. 1150-1156 8455289.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Robotic process automation - Creating value by digitalizing work in the private healthcare?** / Ratia, M.; Myllärniemi, J.; Helander, N.

Mindtrek 2018 - Proceedings of the 22nd International Academic Mindtrek Conference. ACM, 2018. p. 222-227.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Patterns for safety system bus architecture.** / Rauhamäki, Jari.

Proceedings of the 10th Travelling Conference on Pattern Languages of Programs, VikingPLoP 2016. ACM, 2016. a4.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Generative part-based Gabor object detector.** / Riabchenko, Ekaterina; Kämäräinen, Joni-Kristian.

In: Pattern Recognition Letters, Vol. 68, No. P1, 15.12.2015, p. 1-8.

Research output: Contribution to journal › Article › Scientific › peer-review

**A comparison of security assurance support of agile software development methods.** / Rindell, Kalle; Hyrynsalmi, Sami; Leppänen, Ville.

Computer Systems and Technologies - 16th International Conference, CompSysTech 2015: Proceedings. Vol. 1008 Association for Computing Machinery, 2015. p. 61-68.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Is Texture Denoising Efficiency Predictable?** / Rubel, Oleksii; Lukin, Vladimir; Abramov, Sergey; Vozel, Benoit; Pogrebnyak, Oleksiy; Egiazarian, Karen.

In: International Journal of Pattern Recognition and Artificial Intelligence, Vol. 32, No. 1, 1860005, 2018.

Research output: Contribution to journal › Article › Scientific › peer-review

**Exploring the use of deprecated PHP releases in the wild internet : Still a LAMP issue?** / Ruohonen, Jukka; Hyrynsalmi, Sami; Leppänen, Ville.

6th International Conference on Web Intelligence, Mining and Semantics, WIMS 2016. Association for Computing Machinery, 2016. 26.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Input magnitude data setting in error-reduction algorithm for one-dimensional discrete phase retrieval problem.** / Rusu, Corneliu; Astola, Jaakko.

ISSCS 2019 - International Symposium on Signals, Circuits and Systems. IEEE, 2019. 8801743.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Calculation of the scalar diffraction field from curved surfaces by decomposing the three-dimensional field into a sum of Gaussian beams.** / Şahin, Erdem; Onural, Levent.

In: Journal of the Optical Society of America A: Optics Image Science and Vision, Vol. 30, No. 3, 2013, p. 527-536.

Research output: Contribution to journal › Article › Scientific › peer-review

**Scalar diffraction field calculation from curved surfaces via Gaussian beam decomposition.** / Şahin, Erdem; Onural, Levent.

In: Journal of the Optical Society of America A: Optics Image Science and Vision, Vol. 29, No. 7, 01.07.2012, p. 1459-1469.

Research output: Contribution to journal › Article › Scientific › peer-review

**Olfactory display prototype for presenting and sensing authentic and synthetic odors.** / Salminen, Katri; Rantala, Jussi; Isokoski, Poika; Lehtonen, Marko; Müller, Philipp; Karjalainen, Markus; Väliäho, Jari; Kontunen, Anton; Nieminen, Ville; Leivo, Joni; Telembeci, Anca Andreea; Lekkala, Jukka; Kallio, Pasi; Surakka, Veikko.

ICMI 2018 - Proceedings of the 2018 International Conference on Multimodal Interaction. ACM, 2018. p. 73-77.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Mixed reality with multimodal head-mounted pico projector.** / Sand, Antti; Rakkolainen, Ismo.

Proceedings of the Virtual Reality International Conference on Laval Virtual, VRIC 2013. 2013. 14.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Efficient Solving of Markov Decision Processes on GPUs Using Parallelized Sparse Matrices.** / Sapio, Adrian; Bhattacharyya, Shuvra S.; Wolf, Marilyn.

2018 Conference on Design and Architectures for Signal and Image Processing, DASIP 2018. IEEE COMPUTER SOCIETY PRESS, 2018. p. 13-18 (Conference on Design and Architectures for Signal and Image Processing, DASIP).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**BM3D image denoising using heterogeneous computing platforms.** / Sarjanoja, Sampsa; Boutellier, Jani; Hannuksela, Jari.

DASIP 2015 - Proceedings of the 2015 Conference on Design and Architectures for Signal and Image Processing. Vol. 2015-December IEEE COMPUTER SOCIETY PRESS, 2015. 7367257.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Reading on-screen text with gaze-based auto-scrolling.** / Sharmin, Selina; Špakov, Oleg; Rähkä, Kari Jouko.

Proceedings of the 2013 Conference on Eye Tracking South Africa, ETSA 2013. 2013. p. 24-31.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**The effect of region of interest size on textural parameters.** / Sikiö, Minna; Holli-Helenius, Kirsi K.; Ryymin, Pertti; Dastidar, Prasun; Eskola, Hannu; Harrison, Lara.

2015 9th International Symposium on Image and Signal Processing and Analysis (ISPA) . IEEE, 2015. p. 149-153.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Liking the game : How can spectating motivations influence social media usage at live esports events?** / Sjöblom, Max; Hassan, Lobna; Macey, Joseph; Törhönen, Maria; Hamari, Juho.

Proceedings of the 9th International Conference on Social Media and Society, SMSociety 2018. ACM, 2018. p. 160-167.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Interaction strategies for an affective conversational agent.** / Smith, Cameron; Crook, Nigel; Dobnik, Simon; Charlton, Daniel; Boye, Johan; Pulman, Stephen; Santos de la Camara, Raul; Turunen, Markku; Benyon, David; Bradley, Jay; Gambäck, Björn; Hansen, Preben; Mival, Oli; Webb, Nick; Cavazza, Marc.

In: Presence: Teleoperators and Virtual Environments, Vol. 20, No. 5, 10.2011, p. 395-411.

Research output: Contribution to journal › Article › Scientific › peer-review

**Multimodal subspace support vector data description.** / Sohrab, Fahad; Raitoharju, Jenni; Iosifidis, Alexandros; Gabbouj, Moncef.

In: Pattern Recognition, Vol. 110, 107648, 2020.

Research output: Contribution to journal › Article › Scientific › peer-review

**PIVO : Probabilistic inertial-visual odometry for occlusion-robust navigation.** / Solin, Arno; Cortés, Santiago; Rahtu, Esa; Kannala, Juho.

Proceedings - 2018 IEEE Winter Conference on Applications of Computer Vision, WACV 2018. IEEE, 2018. p. 616-625.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Inertial Odometry on Handheld Smartphones.** / Solin, Arno; Cortes, Santiago; Rahtu, Esa; Kannala, Juho.

2018 21st International Conference on Information Fusion, FUSION 2018. IEEE, 2018. p. 1361-1368 8455482.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Image-based characterization of the pulp flows.** / Sorokin, M.; Strokina, N.; Eerola, T.; Lensu, L.; Karttunen, K.; Kalviainen, H.

In: Pattern Recognition and Image Analysis, Vol. 26, No. 3, 01.07.2016, p. 630-637.

Research output: Contribution to journal › Article › Scientific › peer-review

**Real-time hidden gaze point correction.** / Špakov, Oleg; Gizatdinova, Yulia.

Proceedings of the Symposium on Eye Tracking Research and Applications, ETRA 2014. Association for Computing Machinery, 2014. p. 291-294.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Look and lean : Accurate head-assisted eye pointing.** / Špakov, Oleg; Isokoski, Poika; Majaranta, Päivi.

Proceedings of the Symposium on Eye Tracking Research and Applications, ETRA 2014. Association for Computing Machinery, 2014. p. 35-42.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Comparison of eye movement filters used in HCI.** / Špakov, Oleg.

Proceedings - ETRA 2012: Eye Tracking Research and Applications Symposium. 2012. p. 281-284.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Comparison of gaze-to-objects mapping algorithms.** / Špakov, Oleg.

Proceedings of the 1st Conference on Novel Gaze-Controlled Applications, NGCA'11. 2011. 6.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Detection of bubbles as concentric circular arrangements.** / Strokina, Nataliya; Matas, Jiri; Eerola, Tuomas; Lensu, Lasse; Kälviäinen, Heikki.

In: Machine Vision and Applications, Vol. 27, No. 3, 04.2016, p. 387-396.

Research output: Contribution to journal › Article › Scientific › peer-review

**Microservices in agile software development : A workshop-based study into issues, advantages, and disadvantages.** /

Taibi, Davide; Lenarduzzi, Valentina; Pahl, Claus; Janes, Andrea.

Proceedings of the XP2017 Scientific Workshops, XP 2017. Vol. Part F129907 Association for Computing Machinery, 2017. a23.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Operationalizing the experience factory for effort estimation in agile processes.** / Taibi, D.; Lenarduzzi, V.; Diebold, P.; Lunesu, I.

Proceedings of the 21st International Conference on Evaluation and Assessment in Software Engineering, EASE 2017.

Vol. Part F128635 Association for Computing Machinery, 2017. p. 31-40.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Comparing communication effort within the scrum, scrum with Kanban, XP, and Banana development processes.** / Taibi, Davide; Lenarduzzi, Valentina; Ahmad, Muhammad Ovais; Liukkunen, Kari.

Proceedings of the 21st International Conference on Evaluation and Assessment in Software Engineering, EASE 2017.

Vol. Part F128635 Association for Computing Machinery, 2017. p. 258-263.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**The Accuracy of Atrial Fibrillation Detection from Wrist Photoplethysmography. A Study on Post-Operative Patients.** / Tarniceriu, Adrian; Harju, Jarkko; Yousefi, Zeinab Rezaei; Vehkaoja, Antti; Parak, Jakub; Yli-Hankala, Arvi; Korhonen, Ilkka.

40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2018. Vol. 2018-July IEEE, 2018. p. 4844-4847 8513197.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Digging deeper into egocentric gaze prediction.** / Tavakoli, Hamed R.; Rahtu, Esa; Kannala, Juho; Borji, Ali.

2019 IEEE Winter Conference on Applications of Computer Vision, WACV 2019. IEEE, 2019. p. 273-282 (IEEE Winter Conference on Applications of Computer Vision).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Deep audio-visual saliency : Baseline model and data.** / Tavakoli, Hamed Rezazadegan; Borji, Ali; Kannala, Juho; Rahtu, Esa.

Proceedings ETRA 2020 Short Papers - ACM Symposium on Eye Tracking Research and Applications, ETRA 2020. ed. / Stephen N. Spencer. ACM, 2020. 3.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Multilinear class-specific discriminant analysis.** / Thanh Tran, Dat; Gabbouj, Moncef; Iosifidis, Alexandros.

In: Pattern Recognition Letters, Vol. 100, 01.12.2017, p. 131-136.

Research output: Contribution to journal › Article › Scientific › peer-review

**Eigen Posture Based Fall Risk Assessment System Using Kinect.** / Tripathy, Soumya Ranjan; Chakravarty, Kingshuk; Sinha, Aniruddha.

40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBC 2018. Vol. 2018-July IEEE, 2018. p. 1-4 8513263.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review



**ICface : Interpretable and controllable face reenactment using GANs.** / Tripathy, Soumya; Kannala, Juho; Rahtu, Esa. 2020 IEEE Winter Conference on Applications of Computer Vision, WACV 2020. IEEE, 2020. p. 3374-3383 (IEEE Winter Conference on Applications of Computer Vision).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Dual Structured Convolutional Neural Network with Feature Augmentation for Quantitative Characterization of Tissue Histology.** / Valkonen, Mira; Kartasalo, Kimmo; Liimatainen, Kaisa; Nykter, Matti; Latonen, Leena; Ruusuvuori, Pekka. 2017 IEEE International Conference on Computer Vision Workshops, ICCVW 2017. IEEE, 2018. p. 27-35.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Guidelines for development and evaluation of usage data analytics tools for human-machine interactions with industrial manufacturing systems.** / Varsaluoma, Jari; Väättäjä, Heli; Heimonen, Tomi; Tiitinen, Katariina; Hakulinen, Jaakko; Turunen, Markku; Nieminen, Harri.

Mindtrek 2018 - Proceedings of the 22nd International Academic Mindtrek Conference. ACM, 2018. p. 172-181.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Sparse sampling for real-time ray tracing.** / Viitanen, Timo; Koskela, Matias; Immonen, Kalle; Mäkitalo, Markku; Jääskeläinen, Pekka; Takala, Jarmo.

VISIGRAPP 2018 - Proceedings of the 13th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications . Vol. 1 SCITEPRESS, 2018. p. 295-302.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Anthropometric clothing measurements from 3D body scans.** / Yan, Song; Wirta, Johan; Kämäräinen, Joni-Kristian.

In: Machine Vision and Applications, Vol. 31, No. 1-2, 7, 2020.

Research output: Contribution to journal › Article › Scientific › peer-review

**Hierarchical deformable part models for heads and tails.** / Yancheshmeh, Fatemeh Shokrollahi; Chen, Ke; Kämäräinen, Joni-Kristian.

VISIGRAPP 2018 - Proceedings of the 13th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications . Vol. 5 SCITEPRESS, 2018. p. 45-55.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Visibility-Aware Part Coding for Vehicle Viewing Angle Estimation.** / Yang, Dan; Qian, Yanlin; Cai, Dingding; Yan, Song; Kämäräinen, Joni-Kristian; Chen, Ke.

9th International Conference on Information Science and Technology, ICIST 2019. IEEE, 2019. p. 65-70.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Looking for a five-legged sheep : Identifying enterprise architects' skills and competencies.** / Ylinen, M.; Pekkola, Samuli. Proceedings of the 19th Annual International Conference on Digital Government Research: Governance in the Data Age, DG.O 2018. ACM, 2018. a58.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Multi-view predictive latent space learning.** / Yuan, Jirui; Gao, Ke; Zhu, Pengfei; Egiazarian, Karen.

In: Pattern Recognition Letters, 2018.

Research output: Contribution to journal › Article › Scientific › peer-review

**Automated design of networks of transport-triggered architecture processors using dynamic dataflow programs.** / Yviquel, Hervé; Boutellier, Jani; Raulet, Mickaël; Casseau, Emmanuel.

In: Signal Processing: Image Communication, Vol. 28, No. 10, 11.2013, p. 1295-1302.

Research output: Contribution to journal › Article › Scientific › peer-review

**Decoding complexity reduction in projection-based light-field 3D displays using self-contained HEVC tiles.** / Zare, Alireza; Kovacs, Peter Tamas; Aminlou, Alireza; Hannuksela, Miska M.; Gotchev, Atanas.

2016 3DTV-Conference: The True Vision - Capture, Transmission and Display of 3D Video, 3DTV-CON 2016. IEEE COMPUTER SOCIETY PRESS, 2016.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Real-time online drilling vibration analysis using data mining.** / Zare, Marzieh; Huova, Mikko; Visa, Ari; Launis, Sirpa.  
Proceedings of the 2019 2nd International Conference on Data Science and Information Technology, DSIT 2019. ACM, 2019. p. 175-180.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Adaptive sampling for compressed sensing based image compression.** / Zhu, Shuyuan; Zeng, Bing; Gabbouj, Moncef.  
In: Journal of Visual Communication and Image Representation, Vol. 30, 01.07.2015, p. 94-105.

Research output: Contribution to journal › Article › Scientific › peer-review

**End-to-end learning for video frame compression with self-attention.** / Zou, Nannan; Zhang, Honglei; Cricri, Francesco; Tavakoli, Hamed R.; Lainema, Jani; Aksu, Emre; Hannuksela, Miska; Rahtu, Esa.  
Proceedings - 2020 IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops, CVPRW 2020. IEEE, 2020. p. 580-584 (IEEE Computer Society Conference on Computer Vision and Pattern Recognition Workshops).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review