Name	**Sinem Aslan**
E-mail	siinem@gmail.com
Nationality	Turkish
Date of birth	04/05/1980

Work experience

• Dates (from – to)	**August.2020– in Progress**
• Name and address of employer	Department of Environmental Sciences, Informatics and Statistics, Mestre, Venezia, Italy
• Type of business or sector	Research center / Academia
• Occupation or position held	Research associate
• Main activities and responsibilities	I have been working on analyzing time-series data for the project of analysis of resilience of Venice lagoon to climate change affects and disasters using machine learning approaches.

• Dates (from – to)	**July.2004 - in progress**
• Name and address of employer	International Computer Institute, Ege University, Izmir, Turkey
• Type of business or sector	Academia
• Occupation or position held	Research assistant
• Main activities and responsibilities	I served as an assistant for the courses of "Discrete Mathematics for Computer Science", "Digital Image Processing", "Database Management Systems", "Multimedia Systems", "Information Retrieval", "Computer vision"

• Dates (from – to)	**July.2019 – July.2020**
• Name and address of employer	Department of Environmental Sciences, Informatics and Statistics, Mestre, Venezia, Italy
• Type of business or sector	Research center / Academia
• Occupation or position held	Postdoctoral fellow
• Main activities and responsibilities	I worked on three research topics at DAIS: 1) Classification of Ancient Roman Coins using Graph Transduction Games; 2) Unsupervised Domain Adaptation using Graph Transduction Games; 3) Weakly-supervised Semantic Segmentation using Constrained Dominant Sets

• Dates (from – to)	**May.2018 - May.2019**
• Name and address of employer	European Centre for Living Technologies, Ca' Foscari University of Venice, Ca' Bottacin, Dorsoduro 3911, Venezia, Italy
• Type of business or sector	Research center / Academia
• Occupation or position held	Visiting postdoctoral scholar
• Main activities and responsibilities	I worked on three research topics at ECLT: 1) Classification of Ancient Roman Coins using Graph Transduction Games; 2) Unsupervised Domain Adaptation using Graph Transduction Games; 3) Weakly-supervised Semantic Segmentation using Constrained Dominant Sets

• Dates (from – to)	**March.2017 - March.2018**
• Name and address of employer	IVL, Department of Informatics, Systems and Communication, University of Milano-Bicocca, Milano, Italy
• Type of business or sector	Academia
• Occupation or position held	Postdoctoral fellow
• Main activities and responsibilities	I worked on segmentation and semantic segmentation of food images to be used for automatic dietary monitoring.

• Dates (from – to)	**Jan.2014 - Feb.2015**
• Name and address of employer	BUSIM: Signal and Image Processing Laboratory, Electrical and Electronics Engineering Department, Boğaziçi University, Istanbul, Turkey.
• Type of business or sector	Academia
• Occupation or position held	Visiting researcher
• Main activities and responsibilities	I proceed my PhD studies, which was on model-driven visual dictionaries, at BUSIM laboratory under supervision of Prof. Dr. Bulent Sankur.

• Dates (from – to)	**July.2003 - July.2004**
• Name and address of employer	ALKIM Publishing House – Ankara, Turkey
• Type of business or sector	Publishing
• Occupation or position held	Translator (Part-time)
• Main activities and responsibilities	I worked at the English to Turkish translation project of the book of "Beginning Visual C#, Wrox, 2002"

Education and training

• Dates (from – to)	**2007-2016**
• Name and type of organisation providing education and training	International Computer Institute, Ege University, Izmir, Turkey
• Principal subjects/occupational skills covered	I attended to the following courses during my PhD term: *Digital Image Processing; Video Coding, Decoding and Transmission; Information Retrieval Systems; Algorithmic Complexity Analysis; Computer Architecture; Natural Language Processing; Cryptology; Neural Networks.* I studied my PhD thesis (Semantic Interest Point Detection) under supervision of Prof. Bulent Sankur and Prof. Turhan Tunali.
• Title of qualification awarded	Ph.D.
• Dates (from – to)	**2003 - 2007**
• Name and type of organisation providing education and training	International Computer Institute, Ege University, Izmir, Turkey
• Principal subjects/occupational skills covered	I attended to the following courses during my MSc term: *Discrete Structures for Computer Science; Database Management Systems; Data Structures and Algorithms; Programming Languages; Computer Organization; Operating Systems; Advanced Computer Networks I; Information Systems; Fundamental Algorithmic Techniques; Advanced Computer Graphics; Advanced Probability and Statistics; Multimedia Systems; Advanced Programming with Java; Network Security.* I studied my MSc thesis (A Comparative Study of Feature Metrics for Classification of Human Passport Photos) under supervision of Prof. Turhan Tunali.
• Title of qualification awarded	M.Sc.
• Dates (from – to)	**1998-2002**
• Name and type of organisation providing education and training	Department of Electronics Engineering, Ankara University, Ankara, Turkey
• Principal subjects/occupational skills covered	Thesis: VoIP, A Literature Survey
• Title of qualification awarded	B.Sc.
• Dates (from – to)	**Oct.19 – 23. 2016**
• Name and type of organisation providing education and training	Nesin Mathematics Village - Mathematical Foundations of Machine Learning (https://personal.eur.nl/birbil/MK/), Sirince, Turkey
• Principal subjects/occupational skills covered	Mathematical methods, i.e., Bayesian statistic and probability models, Monte Carlo simulation, optimization techniques and Distributed and parallel computing, used in machine vision applications are presented at the 5-day workshop.
• Title of qualification awarded	Participant
• Dates (from – to)	**July 14–20.2013**
• Name and type of organisation providing education and training	International Computer Vision Summer School (ICVSS), Calabria, Italy
• Principal subjects/occupational skills covered	Courses were delivered by world renowned experts in the field, from both academia and industry, and covered both theoretical and practical aspects of real Computer Vision problems as well as examples of their successful commercialization.
• Title of qualification awarded	Participant

• Dates (from – to)	**July 9–13.2012**
• Name and type of organisation providing education and training	Biomedical Image Analysis Summer School (BIOMED), Paris, France
• Principal subjects/occupational skills covered	Tutorial and advanced imaging lectures were given by the leading researchers of the area.
• Title of qualification awarded	Participant
• Dates (from – to)	**May 17–20.2012**
• Name and type of organisation providing education and training	The Chamber of Electrical Engineers (EMO) Academic Camp - State of Art in Signal and Image Processing, Izmir, Turkey
• Principal subjects/occupational skills covered	Lectures about latest issues and approaches in Signal and Image Processing were given by leading researchers in the field.
• Title of qualification awarded	Participant
• Dates (from – to)	**Jan 16–18.2012**
• Name and type of organisation providing education and training	Mathematics and Image Analysis (MIA 2012), Paris, France
• Principal subjects/occupational skills covered	The scientific program includes invited conferences at the interface between applied mathematics (PDE's, Statistical Methods, Sparsity, Level Sets, Variational Methods, etc.) and new developments in various areas of computer vision, graphics and imaging.
• Title of qualification awarded	Participant

Publications

https://scholar.google.com.tr/citations?user=3YOjOJsAAAAJ

[SCI Indexed] Journal Papers:

Emre Kavur, Sinem Gezer, Mustafa Barış, **Sinem Aslan**, Pierre-Henri Conze, Vladimir Groza, Duc Duy Pham, Soumick Chatterjee et al. "*CHAOS Challenge--Combined (CT-MR) Healthy Abdominal Organ Segmentation*." Medical Image Analysis, April 2021, DOI: 10.1016/j.media.2020.101950

Sinem Aslan, Gianluigi Ciocca, Davide Mazzini, Raimondo Schettini. "*Benchmarking Algorithms for Food Localization and Semantic Segmentation.*" International Journal on Machine learning and Cybernetics, pp. 1-21, 2020.

Sinem Aslan, Sebastiano Vascon, and Marcello Pelillo. "*Two sides of the same coin: Improved ancient coin classification using Graph Transduction Games*." Pattern Recognition Letters, vol. 131, pp. 158-165, 2020.

Sinem Aslan, Ceyhun B. Akgül, Bülent Sankur, E. Turhan Tunalı, *Exploring visual dictionaries: A model-driven perspective*, Journal of Visual Communication and Image Representation, vol. 49, pp.315-331, 2017.

[SCI Indexed] Journal Papers under review:

Yasin, Sana, Syed Asad Hussain, **Sinem Aslan,** Imran Raza, Muhammad Muzammel, and Alice Othmani. "Neural Networks based approaches for Major Depressive Disorder and Bipolar Disorder Diagnosis using EEG signals: A review." arXiv preprint arXiv:2009.13402 (2020). **[Under review].**

Federica Zennaro, Elisa Furlan, Christian Simeoni, Silvia Torresan, **Sinem Aslan**, Andrea Critto, and Antonio Marcomini, Machine learning methods for climate change risk assessment: a comparative review." **[Under review].**

[Other International] Journal Papers:

Sinem Aslan, Turhan Tunali, A Simple and Adaptive Data Rate Control Scheme for Distributed Compressive Video Sensing,
Dokuz Eylul University Faculty Of Engineering Journal of Science and Engineering, 21(62), pp. 685-696, 2019.

Chapters in Books:

Alice Ahlem Othmani, Sreetama Basu, Amulya Nidhi Shrivastava, **Sinem Aslan**, Francesco De Carli, Amesefe Delase Afua, ASM Shihavuddin, Amine Nait-Ali, B*iometrics from Cellular Imaging*, Series in BioEngineering. Springer, Singapore, 2019.

Refereed Conference Papers:

Sinem Aslan, and Luc Steels, *Identifying Centres of Interest in Paintings Using Alignment and Edge Detection, A case study on a work by Luc Tuymans,* FAPER workshop of ICPR 2021

Sebastiano Vascon, **Sinem Aslan**, Gianluca Bigaglia, Lorenzo Giudice, Marcello Pelillo, *Transductive Visual Verb Sense Disambiguation*. In Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision, pp. 3050-3059. 2021.

Sinem Aslan, and Marcello Pelillo. *Weakly Supervised Semantic Segmentation Using Constrained Dominant Sets*. In International Conference on Image Analysis and Processing, pp. 425-436. Springer, Cham, 2019.

Sebastiano Vascon, **Sinem Aslan**, Alessandro Torcinovich, Twan van Laarhoven, Elena Marchiori, Marcello Pelillo, *Unsupervised Domain Adaptation using Graph Transduction Games*, IEEE International Joint Conference on Neural Networks (IJCNN), pp. 1-8, 2019.

Aysen Degerli, **Sinem Aslan,** Mehmet Yamac, Bulent Sankur, Moncef Gabbouj, *Compressively Sensed Image Recognition*, The 7th European Workshop on Visual Information Processing (EUVIP), 2018 [Best paper candidate].

Sinem Aslan, Sebastiano Vascon, Marcello Pelillo, *Ancient Coin Classification Using Graph Transduction Games*, 4th IEEE International Conference on Metrology for Archaeology and Cultural Heritage, 2018.

Sinem Aslan, Gianluigi Ciocca, Raimondo Schettini*, Semantic Food Segmentation for Automatic Dietary Monitoring*, IEEE 8th International Conference on Consumer Electronics - Berlin (ICCE-Berlin), 2018.

Sinem Aslan, Gianluigi Ciocca, Raimondo Schettini, *Semantic Segmentation of Food Images for Automatic Dietary Monitoring Systems*, 26th IEEE Signal Processing and Communication Application Conference (SIU), 2018.

Sinem Aslan, Gianluigi Ciocca, Raimondo Schettini, *On Comparing Color Spaces for Food Segmentation*, New Trends in Image Analysis and Processing – 19th Int. Conf. on Image Analysis and Processing (ICIAP). Lecture Notes in Computer Science, vol 10590. Springer, 2017.

Sinem Aslan, Mehmet Yamaç, Bülent Sankur*, A DCT-based multiscale binary descriptor robust to complex brightness changes*, 24th European Signal Processing Conference (EUSIPCO), ISBN: 978-0-9928-6266-4, at Budapest, Hungary, 2016.

Sinem Aslan, Ceyhun B. Akgül, Bülent Sankur, E. Turhan Tunalı, *A novel study on developing a model-driven visual dictionary*, 24th IEEE Signal Processing and Communication Application Conference (SIU), pp. 2081-2084, 2016.

Sinem Aslan, Ceyhun B. Akgül, Bülent Sankur, E. Turhan Tunalı, *SymPaD: Symbolic Patch Descriptor*, 10th Int. Conf. on Computer Vision Theory and Applications (VISAPP/VISIGRAPP), ISBN: 978-989-758-089-5, pages 266-271, at Berlin, Germany, 2015.

Sinem Aslan, Ceyhun B. Akgül, Bülent Sankur, *Symbolic feature detection for image understanding*, Proc. SPIE 9024, Image Processing: Machine Vision Applications VII, Vol. 902406, doi:10.1117/12.2040783, at San Francisco, United States, 2014.

Sinem Aslan, E. Turhan Tunalı, *Joint compressive video coding and analysis With Hidden Markov model based weighted reconstruction*, 21st IEEE Signal Processing and Communication Application Conference (SIU), pp. 1-4, 2013. [IEEE Best paper candidate

Bahar Karaoğlan, **Sinem Aslan**, Erdem Karayer, *The Zipfian distributions on term×document matrix*, 1st Int. Conf. on Analysis and Applied Mathematics (ICAAM), Vol. 1470, No. 1, pp. 247-250, 2012.

Sinem Aslan, E. Turhan Tunalı, *A comparative study of compressed sensing video encoding GOP patterns for stereo distributed video coding*, 20th IEEE Signal Processing and Communication Application Conference (SIU), pp. 1-4, 2012.

Sinem Aslan, Yigit Uzer, Orhan Isik, Melih Altun, Muhammed Cinsdikici, *A simple and improvable method for face region extraction*, 23rd Int. Symp. on Computer and Information Sciences (ISCIS), 2008.

Sinem Aslan, E. Turhan Tunalı, Muhammed Cinsdikici, *A Comparative Study of Feature Metrics for Classification of Human Passport Photos*, 15th IEEE Signal Processing and Communication Application Conference (SIU), pp. 1-4, 2007.

Languages

Turkish (mother tongue)

English (C2)
Reading: Excellent
Writing: Excellent
Verbal: Excellent

Italian (B2)
Reading: Good
Writing: Good
Verbal: Good

Social skills
and competences
Living and working with other people, in multicultural environments, in positions where communication is important and situations where teamwork is essential (for example culture and sports), etc.

[2012 - 2013] I started a book club (https://ubekitapklubu.wordpress.com) at the department where we were organizing monthly meetings to discuss the books of that month.

[Aug-Sept.2006] - I worked as a volunteer for one month in a multicultural environment in Montendre (a small town near to Bordeaux, France) for the restoration of the town's castle.

[1999 – 2002] - I was a member of the dance club of Hacettepe University in Ankara, Turkey during my Bachelor period. Since then I'm dancing tango.

Organizational skills
and competences
Coordination and administration of people, projects and budgets; at work, in voluntary work (for example culture and sports) and at home, etc.

I was at the organizing committee of:
- "*25th European Association for Education in Electrical and Information Engineering (EAEEIE) Annual Conference*" held in Izmir, Turkey between May 30-June 1, 2014
- "*CHAOS - Combined (CT-MR) Healthy Abdominal Organ Segmentation challenge*" that was held in the ISBI conference in Venice, Italy on April 11, 2019.

Technical skills
and competences
With computers, specific kinds of equipment, machinery, etc.

Expert on Mathworks MATLAB, Python, LaTeX,
Fluent with Mac OS

Artistic skills
and competences
Music, writing, design, etc.

I have been drawing and painting. Two exhibitions that I participated are:
- [June-July.2010] - I participated to "Soyer Culture and Art Factory" Art Exhibition in Izmir, Turkey with 2 oil paintings.
- [May-June.2009] - I participated to "Ugur Mumcu Cultural Center Trainees" Art Exhibition in Izmir, Turkey with 3 oil paintings.
- [Since Sept.2018] – Have been participating to figure / life drawing classes in Venice.

Other skills
and competences
Competences not mentioned above.

- I have been serving as a reviewer (already reviewed 108 manuscripts: https://publons.com/researcher/1453034/sinem-aslan/) for the journals of IEEE Transactions on Image Processing, Springer Multimedia Tools and Applications, Springer Pattern Analysis and Applications; Springer, Signal, Image and Video Processing; IET Image Processing; IET Computer Vision; Turkish Journal of Electrical Engineering & Computer Sciences; Pattern Recognition Letters.

- I have been a TPC member of conferences IEEE Signal Processing, Communication and Applications Conference SIU (Turkey), ICIAP 2019, CVPR 2020, ICPR 2020, WACV 2020, VISART 2020.

- I am at the editorial board of Elsevier Array.

Driving licence(s)	B, B1, D1, F, M
Additional information	Seminars that I gave:

- **[May.2020]** - European Centre for Living Technology (ECLT), University Ca' Foscari of Venice, Italy, *Automatic visual analysis of ancient coins.*
- **[Oct.2018]** - Institute of the National Research Council of Italy CNR, Pisa, Italy, *Graph Transduction and Model-driven Visual Dictionary Construction with Applications in Ancient Coin Classification and Computer Vision.*
- **[May.2018]** - Dokuz Eylül University, Electrical & Electronics Engineering Department, Izmir, Turkey, *Visual dictionaries and Semantic segmentation with DCNNs.*
- **[Jan.2018]** - European Centre for Living Technology (ECLT), University Ca' Foscari of Venice, Italy, *Image understanding: Visual dictionaries and Semantic segmentation.*
- **[Nov.2017]** - Faculty of Science and Technology of University Paris-Est Créteil (UPEC), Paris, France, *Exploring visual dictionaries: A model driven perspective.*

Grants that I won:

- **TUBITAK 2219**-Research Grant in the frame of International Postdoctoral Research Scholarship Program of The Scientific and Technological Research Council of Turkey (TUBITAK), May.2018-May.2020, "Semantic segmentation by deep learning supervised by bounding box and scribble annotations", Ca' Foscari University of Venice, ECLT.
- **TUBITAK 2224A-**Travel Grant, 2016, for presenting our paper "S. Aslan, M.Yamac, B.Sankur, A DCT-based multiscaled binary descriptor invariant to complex brightness changes" at EUSIPCO conference in Budapest, Hungary.
- **TUBITAK 2224A-**Travel Grant, 2013, for participating to the ICVSS 2013 summer school in Calabria, Italy.

References:
Available upon request.