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International Researcher IDs

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Publons / Web Of Science ResearcherID: M-2256-2016

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Education Information

Doctorate, Universite Paris 5, Ufr Mathematique Et Informatique, France 1990 - 1993

Postgraduate, Middle East Technical University, Faculty of Engineering, Elektrik-Elektronik Mühendisliği Bölümü, Turkey 1988 - 1990

Undergraduate, Middle East Technical University, Faculty of Engineering, Elektrik-Elektronik Mühendisliği Bölümü, Turkey 1983 - 1987

Foreign Languages

English, C2 Mastery

French, C1 Advanced

Dissertations

Doctorate, Reseaux de Neurones Aleatoires et Textures, Universite Paris 5, Ufr Mathematique Et Informatique, 1993

Postgraduate, Image Processing of Ottoman Documents, Middle East Technical University, Faculty of Engineering, Elektrik-Elektronik Mühendisliği Bölümü, 1990

Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Engineering, Department of Computer Engineering, 2005 - Continues

Associate Professor, Virginia Polytechnic Institute and State University, Virginia Bioinformatics Institute, 2004 - 2005

Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Computer Engineering, 1998 - 2005

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Computer Engineering, 1993 - 1998

Lecturer, Middle East Technical University, Faculty of Engineering, Department of Computer Engineering, 1993 - 1993

Academic and Administrative Experience

Middle East Technical University, Presidency Office, 2010 - 2016

Middle East Technical University, Presidency Office, 2008 - 2010

Middle East Technical University, Faculty of Engineering, Department of Computer Engineering, 2007 - 2008

Orta Doğu Teknik Üniversitesi, Faculty of Engineering, Department of Computer Engineering, 2001 - 2004

Middle East Technical University, Faculty of Engineering, Department of Computer Engineering, 1996 - 1997

Advising Theses

ATALAY M. V., Distance matrices as protein representations, Postgraduate, M.DİNÇ(Student), 2022

ATALAY M. V., Implementation of crossbar web service for interactive visualizations of biological networks, Postgraduate, A.Atakan(Student), 2020

Atalay M. V., Multi-view subcellular localization prediction of human proteins, Postgraduate, G.ÖZSARI(Student), 2019

Atalay M. V., Enzyme prediction with word embedding approach, Postgraduate, E.AKIN(Student), 2019

Atalay M. V., A customized force-directed layout algorithm with genetic algorithm techniques for biological graphs whose vertices have enzyme commission attributes, Postgraduate, F.AKSOYDAN(Student), 2019

ATALAY M. V., Deep learning for prediction of drug-target interaction space and protein functions, Doctorate, A.Süreyya(Student), 2019

ATALAY M. V., ATALAY R., Prediction of enzymatic properties of protein sequences based on the enzyme commission nomenclature, Postgraduate, A.DALKIRAN(Student), 2017

ATALAY M. V., A customized force-directed layout algorithm for biological graphs whose vertices have enzyme commission attributes, Postgraduate, H.FEHMİ(Student), 2015

ATALAY M. V., ATALAY R., An extension to GOPred to annotate Swiss-Prot and TrEMBL sequences for all gene ontology categories and EC numbers, Postgraduate, A.SÜREYYA(Student), 2015

ATALAY M. V., Mining microarray data for biologically important gene sets, Doctorate, G.KIRÇIÇEĞİ(Student), 2012

ATALAY M. V., Network structure based pathway enrichment system to analyze pathway activities, Doctorate, Z.İŞİK(Student), 2011

ATALAY M. V., Automatic reconstruction of photorealistic 3-D building models from satellite and ground-level images, Doctorate, E.SÜMER(Student), 2011

ATALAY M. V., Vision-based hand interface systems in human computer interaction, Doctorate, S.GENÇ(Student), 2010

Atalay M. V., Vision based Hand Interface Systems in Human Computer Interaction, Doctorate, S.Genç(Student), 2010

ATALAY M. V., Automated biological data acquisition and integration using machine learning techniques, Doctorate, L.ÇARKACIOĞLU(Student), 2009

ATALAY M. V., Prediction of enzyme classes in a hierarchical approach by using SPMAP, Postgraduate, A.GÜL(Student), 2009

ATALAY M. V., Subsequence feature maps for protein function annotation, Doctorate, Ö.SİNAN(Student), 2008

ATALAY M. V., Hybrid CDN P2P architecture for multimedia streaming, Doctorate, K.ÖZTOPRAK(Student), 2008

ATALAY M. V., A programming framework to implement rule-based target detection in images, Postgraduate, Y.ŞAHİN(Student), 2008

CAN T., ATALAY M. V., A classification system for the problem of protein subcellular localization, Postgraduate, G.ALAY(Student), 2007

ATALAY M. V., Improving interactive classification of satellite image content, Postgraduate, G.TEKKAYA(Student), 2007

ATALAY M. V., A clustering method for the problem of protein subcellular localization, Postgraduate, P.BEZEK(Student), 2006

ATALAY M. V., Interactive classification of satellite image content based on query by example, Postgraduate, O.DALAY(Student), 2006

ATALAY M. V., Image-based extraction of material reflectance properties of a 3D object, Postgraduate, M.ERKUT(Student), 2003

ATALAY M. V., Prediction of protein subcellular localization using global protein sequence feature, Postgraduate,

B.BOZKURT(Student), 2003

ATALAY M. V., Texture classification and retrieval using random neural network model, Postgraduate, A.TEKE(Student), 2003

ATALAY M. V., Reconstruction of a 3D human head model from images, Doctorate, R.ZARE(Student), 2003

ATALAY M. V., Fast object tracking by fusing adaptive background models and mean-shift analysis, Postgraduate, Ö.TÜZEL(Student), 2003

ATALAY M. V., Silhouette-based 3D reconstruction by energy minimization, Postgraduate, E.MENĞİ(Student), 2003

ATALAY M. V., Prediction of protein subcellular localization based on primary sequence data, Postgraduate, M.ÖZARAR(Student), 2003

ATALAY M. V., Vision-based human-computer interaction using laser pointer, Postgraduate, İAYKUT(Student), 2003

ATALAY M. V., Shortest path analysis in dynamic transportation networks by expert systems: A case study in Ankara, Bahçelievler district by using genetic algorithms, Postgraduate, G.EKE(Student), 2003

ATALAY M. V., Prediction of protein subcellular localization based on primary sequence data, Postgraduate, M.Özarar(Student), 2003

ATALAY M. V., Towards finding optimal mixture of subspaces for data classification, Doctorate, M.ELHAFIZ(Student), 2003

ATALAY M. V., Texture discrimination and segmentation of remotely sensed imagery by using adaptive subband decomposition, Postgraduate, M.YAMAN(Student), 2003

ATALAY M. V., Comparison of photo-consistency measured used in the voxel coloring algorithm, Postgraduate, O.ÖZÜN(Student), 2002

Atalay V., Relative consistency of projective reconstructions obtained from an image pair., Postgraduate, B.Otlu(Student), 2002

ATALAY M. V., Cognitive and computational aspects of gender estimation from faces, Postgraduate, M.KORAY(Student), 2002

Atalay V., A hybrid approach for Turkish optical character recognition., Postgraduate, G.Kırçıçeği(Student), 2002

ATALAY M. V., Appearance reconstruction of three dimensional models from real images., Postgraduate, U.YILMAZ(Student), 2002

HALICI U., ATALAY M. V., 3 D reconstruction of rigid objects from multiple calibrated views, Doctorate, A.YAŞAR(Student), 2002

ATALAY M. V., A Hybrid approach for Turkish optical character recognition, Postgraduate, G.KIRÇİÇEĞİ(Student), 2002

ATALAY M. V., Contextual post processing for Turkish optical character recognition., Postgraduate, S.JULAŞ(Student), 2002

Atalay V., Comparison of photo-consistency measures used in the voxel coloring algorithm., Postgraduate, O.Özün(Student), 2002

ATALAY M. V., Relative consistency of projective reconstructions obtained from an image pair, Postgraduate, B.OTLU(Student), 2002

ATALAY M. V., Image mosaicing, Postgraduate, A.ÖZZEYBEK(Student), 2000

ATALAY M. V., Segmentation of human face, Postgraduate, S.BASKAN(Student), 2000

Atalay V., Texture extraction and reconstruction from multiple images, Postgraduate, S.Genç(Student), 1999

ATALAY M. V., Texture extraction and reconstruction from multiple images, Postgraduate, S.GENÇ(Student), 1999

ATALAY M. V., An SGML viewer for form document images, Postgraduate, E.ARSLAN(Student), 1998

ATALAY M. V., A Form document image parser, Postgraduate, E.DİNCEL(Student), 1998

ATALAY M. V., Form document identification based on hierarchical tree representation, Postgraduate, P.DUYGULU(Student), 1998

ATALAY M. V., Two matching algorithms for aerial images, Postgraduate, D.ÇULHA(Student), 1998

Atalay V., Two matching algorithms for aerial images., Postgraduate, D.Çulha(Student), 1998

ATALAY M. V., A New method for road finding in aerial images based on self organization and perceptual grouping principles, Postgraduate, A.YAŞAR(Student), 1996

ATALAY M. V., A Matching algorithm based linear features, Postgraduate, M.UĞUR(Student), 1996

Atalay V., A matching algorithm based on linear features, Postgraduate, M.Uğur(Student), 1996

Jury Memberships

Award, TÜSEB Teşvik Ödülü, Middle East Technical University, October, 2020

Award, TÜSEB Teşvik Ödülü, Middle East Technical University, October, 2020

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Drug Repurposing Approach to Identify Candidate Drug Molecules for Hepatocellular Carcinoma**
Baser T., Rifaioglu A. S., ATALAY M. V., Atalay R. C.
International Journal of Molecular Sciences, vol.25, no.17, 2024 (SCI-Expanded)
- II. **Hybrid deep learning models with data fusion approach for electricity load forecasting**
Özen S., YAZICI A., ATALAY M. V.
Expert Systems, 2024 (SCI-Expanded)
- III. **Online embedding and clustering of evolving data streams**
Zubaroglu A., Atalay M. V.
STATISTICAL ANALYSIS AND DATA MINING, vol.16, no.1, pp.29-44, 2023 (SCI-Expanded)
- IV. **POWER CONSUMPTION FORECASTING BY HYBRID DEEP ARCHITECTURES WITH DATA FUSION**
Özen S., ATALAY M. V.
Computing and Informatics, vol.42, no.1, pp.126-156, 2023 (SCI-Expanded)
- V. **SLPred: a multi-view subcellular localization prediction tool for multi-location human proteins**
ÖZSARI G., Rifaioglu A. S., ATAKAN A., DOĞAN T., Martin M. J., Atalay R. C., ATALAY M. V.
BIOINFORMATICS, vol.38, no.17, pp.4226-4229, 2022 (SCI-Expanded)
- VI. **CROssBAR: comprehensive resource of biomedical relations with knowledge graph representations.**
DOĞAN T., Atas H., Joshi V., ATAKAN A., Rifaioglu A. S., NALBAT E., Nightingale A., Saidi R., Volynkin V., Zellner H., et al.
Nucleic acids research, vol.49, no.16, 2021 (SCI-Expanded)
- VII. **Crowdsourced mapping of unexplored target space of kinase inhibitors**
Cichonska A., Ravikumar B., Allaway R. J., Wan F., Park S., Isayev O., Li S., Mason M., Lamb A., Tanoli Z., et al.
NATURE COMMUNICATIONS, vol.12, no.1, 2021 (SCI-Expanded)
- VIII. **MDeePred: Novel multi-channel protein featurization for deep learning-based binding affinity prediction in drug discovery**
Rifaioglu A., Atalay R. C., KAHRAMAN D. C., DOĞAN T., Martin M., ATALAY M. V.
Bioinformatics, vol.37, no.5, pp.693-704, 2021 (SCI-Expanded)
- IX. **Data stream clustering: a review**
Zubaroglu A., Atalay V.
ARTIFICIAL INTELLIGENCE REVIEW, vol.54, no.2, pp.1201-1236, 2021 (SCI-Expanded)
- X. **iBioProVis: interactive visualization and analysis of compound bioactivity space**
Dönmez A., Rifaioglu A. S., Acar A. C., Doğan T., Cetin-Atalay R., Atalay V.
BIOINFORMATICS, vol.36, no.14, pp.4227-4230, 2020 (SCI-Expanded)
- XI. **DEEPScreen: high performance drug-target interaction prediction with convolutional neural networks using 2-D structural compound representations**
RİFAİOĞLU A. S., NALBAT E., Atalay V., Martin M. J., Cetin-Atalay R., DOĞAN T.
CHEMICAL SCIENCE, vol.11, no.9, pp.2531-2557, 2020 (SCI-Expanded)
- XII. **The CAFA challenge reports improved protein function prediction and new functional annotations for hundreds of genes through experimental screens**
Zhou N., Jiang Y., Bergquist T., Lee A., Kacsoh B., Crocker A., Lewis K., Georghiou G., Nguyen H., Hamid M., et al.
GENOME BIOLOGY, vol.20, no.1, 2019 (SCI-Expanded)
- XIII. **DEEPred: Automated Protein Function Prediction with Multi-task Feed-forward Deep Neural Networks**
RİFAİOĞLU A. S., Dogan T., Martin M. J., Cetin-Atalay R., Atalay V.

SCIENTIFIC REPORTS, vol.9, 2019 (SCI-Expanded)

- XIV. **ECPred: a tool for the prediction of the enzymatic functions of protein sequences based on the EC nomenclature**
Dalkıran A., Rifaiođlu A. S., Martin M. J., Cetin-Atalay R., Atalay M. V., Dogan T.
BMC BIOINFORMATICS, vol.19, 2018 (SCI-Expanded)
- XV. **EClerize: A customized force-directed graph drawing algorithm for biological graphs with EC attributes**
Danaci H. F., Cetin-Atalay R., ATALAY M. V.
JOURNAL OF BIOINFORMATICS AND COMPUTATIONAL BIOLOGY, vol.16, no.4, 2018 (SCI-Expanded)
- XVI. **Recent applications of deep learning and machine intelligence on in silico drug discovery: methods, tools and databases.**
Rifaiođlu A. S., Atas H., Martin M., Cetin-Atalay R., Atalay V., Dogan T.
Briefings in bioinformatics, 2018 (SCI-Expanded)
- XVII. **Large-scale automated function prediction of protein sequences and an experimental case study validation on PTEN transcript variants**
RİFAİOĐLU A. S., Dogan T., Sarac O. S., ERSAHİN T., Saidi R., ATALAY M. V., MARTİN M. J., Cetin-Atalay R.
PROTEINS-STRUCTURE FUNCTION AND BIOINFORMATICS, vol.86, no.2, pp.135-151, 2018 (SCI-Expanded)
- XVIII. **HandVR: a hand-gesture-based interface to a video retrieval system**
Genc S., Bastan M., GÜDÜKBAY U., Atalay V., GÜDÜKBAY U.
SIGNAL IMAGE AND VIDEO PROCESSING, vol.9, no.7, pp.1717-1726, 2015 (SCI-Expanded)
- XIX. **Identification of Novel Reference Genes Based on MeSH Categories**
Ersahin T., ÇARKACIOĐLU L., CAN T., Konu O., Atalay V., Cetin-Atalay R.
PLOS ONE, vol.9, no.3, 2014 (SCI-Expanded)
- XX. **A signal transduction score flow algorithm for cyclic cellular pathway analysis, which combines transcriptome and CHIP-seq data**
Isik Z., Ersahin T., Atalay V., AYKANAT C., Cetin-Atalay R.
MOLECULAR BIOSYSTEMS, vol.8, no.12, pp.3224-3231, 2012 (SCI-Expanded)
- XXI. **GOPred: GO Molecular Function Prediction by Combined Classifiers**
Sarac O. S., Atalay V., Cetin-Atalay R.
PLOS ONE, vol.5, no.8, 2010 (SCI-Expanded)
- XXII. **Prediction of enzyme classes in a hierarchical approach by using SPMaP**
Yaman A., Atalay V., Atalay R.
NEW BIOTECHNOLOGY, vol.27, 2010 (SCI-Expanded)
- XXIII. **Bi-k-bi clustering: mining large scale gene expression data using two-level biclustering**
Carkacioglu L., Atalay R. C., KONU KARAKAYALI Ö., Atalay V., CAN T.
INTERNATIONAL JOURNAL OF DATA MINING AND BIOINFORMATICS, vol.4, no.6, pp.701-721, 2010 (SCI-Expanded)
- XXIV. **Subsequence-based feature map for protein function classification**
Sarac O. S., Guersoy-Yuezueguellue O., Cetin-Atalay R., Atalay V.
COMPUTATIONAL BIOLOGY AND CHEMISTRY, vol.32, no.2, pp.122-130, 2008 (SCI-Expanded)
- XXV. **Experimental study on the sensitivity of autocalibration to projective camera model parameters**
Hassanpour R., Atalay V.
OPTICAL ENGINEERING, vol.45, no.4, 2006 (SCI-Expanded)
- XXVI. **Implicit motif distribution based hybrid computational kernel for sequence classification**
Atalay V., Cetin-Atalay R.
BIOINFORMATICS, vol.21, no.8, pp.1429-1436, 2005 (SCI-Expanded)
- XXVII. **Camera auto-calibration using a sequence of 2D images with small rotations**
Hassanpour R., Atalay V.
PATTERN RECOGNITION LETTERS, vol.25, no.9, pp.989-997, 2004 (SCI-Expanded)
- XXVIII. **Almost autonomous training of mixtures of principal component analyzers**
Musa M., de Ridder D., Duin R., Atalay V.

- PATTERN RECOGNITION LETTERS, vol.25, no.9, pp.1085-1095, 2004 (SCI-Expanded)
- XXIX. **Vision-based continuous Graffiti (TM)-like text entry system**
Erdem I., Erdem M., Atalay V., Cetin A.
OPTICAL ENGINEERING, vol.43, no.3, pp.553-558, 2004 (SCI-Expanded)
- XXX. **A hierarchical representation of form documents for identification and retrieval**
Duygulu P., Atalay V.
International Journal on Document Analysis and Recognition, vol.5, no.1, pp.17-27, 2003 (SCI-Expanded)
- XXXI. **Silhouette-based 3-D model reconstruction from multiple images**
Mulayim A., Yilmaz U., Atalay V.
IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART B-CYBERNETICS, vol.33, no.4, pp.582-591, 2003 (SCI-Expanded)
- XXXII. **Ore-age: a hybrid system for assisting and teaching mining method selection**
Guray C., Celebi N., Atalay V., Pasamehmetoglu A.
EXPERT SYSTEMS WITH APPLICATIONS, vol.24, no.3, pp.261-271, 2003 (SCI-Expanded)
- XXXIII. **Prediction of protein subcellular localization based on primary sequence data**
Ozarar M., Atalay V., Atalay R.
COMPUTER AND INFORMATION SCIENCES - ISCIS 2003, vol.2869, pp.611-618, 2003 (SCI-Expanded)
- XXXIV. **Texture segmentation using the mixtures of principal component analyzers**
Musa M., Duin R., de Ridder D., Atalay V.
COMPUTER AND INFORMATION SCIENCES - ISCIS 2003, vol.2869, pp.505-512, 2003 (SCI-Expanded)
- XXXV. **Projection based method for segmentation of human face and its evaluation**
Baskan S., Bulut M., Atalay V.
PATTERN RECOGNITION LETTERS, vol.23, no.14, pp.1623-1629, 2002 (SCI-Expanded)
- XXXVI. **Vision-based single-stroke character recognition for wearable computing**
Ozer O., Ozun O., Tuzel C., Atalay V., Cetin A.
IEEE INTELLIGENT SYSTEMS & THEIR APPLICATIONS, vol.16, no.3, pp.33-37, 2001 (SCI-Expanded)
- XXXVII. **Matching algorithm based on Godel coding scheme**
Dicle N., Atalay V.
Proceedings of SPIE - The International Society for Optical Engineering, vol.3974, pp.576-583, 2000 (SCI-Expanded)
- XXXVIII. **Subband domain coding of binary textual images for document archiving**
Gerek O., Cetin A., Tewfik A., Atalay V.
IEEE TRANSACTIONS ON IMAGE PROCESSING, vol.8, no.10, pp.1438-1446, 1999 (SCI-Expanded)
- XXXIX. **Repulsive attractive network for baseline extraction on document images**
Oztop E., Mulayim A., Atalay V., Yarman-Vural F.
SIGNAL PROCESSING, vol.75, no.1, pp.1-10, 1999 (SCI-Expanded)
- XL. **A matching algorithm based on linear features**
Atalay V., Yilmaz M.
PATTERN RECOGNITION LETTERS, vol.19, no.9, pp.857-867, 1998 (SCI-Expanded)

Articles Published in Other Journals

- I. **Data Centric Molecular Analysis and Evaluation of Hepatocellular Carcinoma Therapeutics Using Machine Intelligence-Based Tools**
Cetin-Atalay R., Kahraman D. C., Nalbat E., Rifaioğlu A. S., Atakan A., Dönmez A., Atas H., Atalay M. V., Acar A. C., Doğan T.
JOURNAL OF GASTROINTESTINAL CANCER, vol.52, no.4, pp.1266-1276, 2021 (ESCI)
- II. **Multi-task Deep Neural Networks in Protein Function Prediction**
RİFAİOĞLU A. S., doğan t., Martin M. J., ATALAY R., ATALAY M. V.
arXiv, 2017 (Non Peer-Reviewed Journal)

III. **An Image-Based Inexpensive 3D Scanner**

Yilmaz U., Mülayim A. Y., Atalay V.

International Journal of Image and Graphics, vol.3, no.2, pp.235-263, 2003 (ESCI)

IV. **Computer vision based mouse**

Erdem A., Erdem E., Yardimci Y., Atalay V., Cetin A. E.

ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings, vol.4, pp.4178, 2002 (Scopus)

Books & Book Chapters

I. **Forecasting of Product Quality Through Anomaly Detection**

Dinc M., Ertekin Bolelli Ş., Ozkan H., Meydanli C., Atalay M. V.

in: Machine Learning and Knowledge Discovery in Databases, Cellier P., Driessens K., Editor, Springer-Verlag, Basel, pp.357-366, 2020

Refereed Congress / Symposium Publications in Proceedings

I. **Novel isoxazole- piperazine derivatives inhibit the stemness of HCC cells**

NALBAT E., İBİŞ K., ÇALIŞKAN B., BANOĞLU E., ATALAY M. V., ATALAY R.

AASLD-TASL Digital Hepatology Meeting, Ankara, Turkey, 15 January 2022, pp.5-6

II. **In vitro validation of drug-target interactions revealed in silico by Comprehensive Resource of Biomedical Relations with Network Representations and Deep Learning (CROSSBAR) in HCC**

NALBAT E., RİFAİOĞLU A. S., DOĞAN T., Martin M. J., Cetin-Atalay R., ATALAY M. V.

AACR Annual Meeting, ELECTR NETWORK, 22 - 24 June 2020, vol.80

III. **Comparison of predictive models for forecasting timeseries data**

Özen S., Atalay V., YAZICI A.

3rd International Conference on Big Data Research, ICBDR 2019, Cergy-Pontoise, France, 20 - 21 November 2019, pp.172-176

IV. **Online embedding and clustering of data streams**

Zubaroglu A., Atalay V.

3rd International Conference on Big Data Research, ICBDR 2019, Cergy-Pontoise, France, 20 - 21 November 2019, pp.142-146

V. **Forecasting of Product Quality Through Anomaly Detection** Mehmet Dinç,

Dinc M., ERTEKİN BOLELLİ Ş., Ozkan H., Meydanli C., ATALAY M. V.

2nd International Conference on Digital Transformation and Smart Systems, Ankara, Turkey, 23 - 25 October 2019

VI. **Receptor-Ligand Binding Affinity Prediction via Multi-Channel Deep Chemogenomic Modeling**

Atalay M. V., Rifaioğlu A. S., Atalay R., Doğan T., Martin M.

The International Symposium on Health Informatics and Bioinformatics (HIBIT 2019), İzmir, Turkey, 17 - 18 October 2019

VII. **Forecasting of Product Quality Through Anomaly Detection**

Dinc M., ERTEKİN BOLELLİ Ş., Ozkan H., Meydanli C., ATALAY M. V.

ECML/PKDD 2019 Workshop on Io Stream for Data Driven Predictive Maintenance, Würzburg, Germany, 16 September 2019

VIII. **iBioProVis: Interactive Visualization and Analysis of Compound Bioactivity Space**

Dönmez A., RİFAİOĞLU A. S., ACAR A. C., DOĞAN T., Martin M. J., ATALAY R., ATALAY M. V.

27th Conference on Intelligent Systems for Molecular Biology and 18th European Conference on Computational Biology, Basel, Switzerland, 21 - 25 July 2019

IX. **CROSSBAR: Comprehensive Resource of Biomedical Relations with Network Representations and Deep Learning", Oral presentation**

Atalay M. V., Doğan T., Atalay R., Nalbat E., Rifaioğlu A. S., Ataş H., Martin M.

27th Conference on Intelligent Systems for Molecular Biology and 18th European Conference on Computational Biology, Basel, Switzerland, 21 - 25 July 2019

- X. **Drug-Target Interaction Prediction with Deep Convolutional Neural Networks Using Compound Images**
RİFAİOĞLU A. S., ATALAY M. V., Martin M. J., ATALAY R., Doğan T.
26th Conference on Intelligent Systems for Molecular Biology, Chicago, United States Of America, 6 - 10 July 2018
- XI. **Automated Negative Gene Ontology Based Functional Predictions for Proteins with UniGOPred**
Doğan T., RİFAİOĞLU A. S., Saidi R., Martin M. J., ATALAY M. V., ATALAY R.
26th Conference on Intelligent Systems for Molecular Biology, Chicago, United States Of America, 6 - 10 July 2018
- XII. **Investigation of Multi-task Deep Neural Networks in Automated Protein Function Prediction**
RİFAİOĞLU A. S., Martin M. J., ATALAY R., ATALAY M. V., Doğan T.
ISMB/ECCB 2017: 25th Annual International Conference on Intelligent Systems for Molecular Biology, Prag, Czech Republic, 21 - 25 July 2017
- XIII. **Prediction of Enzymatic Properties of Protein Sequences Based on the EC Nomenclature**
DALKIRAN A., Doğan T., RİFAİOĞLU A. S., ATALAY M. V., Martin M. J., ATALAY R.
ISMB/ECCB 2017: 25th Annual International Conference on Intelligent Systems for Molecular Biology, Prag, Czech Republic, 21 - 25 July 2017
- XIV. **Prediction of Enzymatic Properties of Protein Sequences Based on the EC Nomenclature**
DALKIRAN A., RİFAİOĞLU A. S., Doğan T., ATALAY M. V., Martin M. J., ATALAY R.
10th The International Symposium on Health Informatics and Bioinformatics (HIBIT 2017), Kalkanlı, Cyprus (Kktc), 28 - 30 June 2017, pp.37
- XV. **Investigation of Multitask Deep Neural Networks for Protein Function Prediction**
RİFAİOĞLU A. S., Martin M. J., ATALAY R., ATALAY M. V., Doğan T.
10th The International Symposium on Health Informatics and Bioinformatics (HIBIT 2017), Erdemli, Cyprus (Kktc), 28 - 30 June 2017
- XVI. **EClerize: A Customized Force-Directed Layout Algorithm for Biological Networks with EC Attributes**
Danacı H. F., ATALAY R., ATALAY M. V.
GLBIO 2017: Great Lakes Bioinformatics Conference, Şikago, United States Of America, 15 - 17 May 2017
- XVII. **UniGOPred: A Large Scale Automated GO Term Annotation System for UniProtKB**
RİFAİOĞLU A. S., Doğan T., SARAÇ Ö. S., Saidi R., ATALAY M. V., Martin M. J., ATALAY R.
GLBIO 2017: Great Lakes Bioinformatics Conference, Şikago, United States Of America, 15 - 17 May 2017
- XVIII. **ECPred: An Automated Enzymatic Function Prediction Tool Based on Combination of Different Classifiers**
DALKIRAN A., RİFAİOĞLU A. S., Doğan T., ATALAY M. V., Martin M. J., ATALAY R.
GLBIO 2017: Great Lakes Bioinformatics Conference, May 15-17, Şikago, United States Of America, 15 - 17 May 2017
- XIX. **UniGOPred and ECPred Automated Function Prediction Tools Based on A Combination of Different Classifiers**
Rifaioğlu A., Dogan T., SARAÇ Ö. S., ATALAY M. V., Martin M., ATALAY R.
ISMB Automated FunctionPrediction-SIG, 11 July 2015
- XX. **Discriminative Modeling of Cell Signaling as Bayesian Networks**
Yaman A. G., ACAR A. F., Atalay V., Cetin-Atalay R.
2nd International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO), Granada, Nicaragua, 7 - 09 April 2014, pp.1617
- XXI. **Genetic variants within endotoxin signaling pathway association with asthma and atopy phenotypes**
ŞAHİNER Ü. M., YAVUZ S., Buyuktiryaki B., BİR BEN E., Topaloglu E., TUNCER A., Yaman A., Atalay R., Atalay V., Sackesen C., et al.
31st Congress of the European-Academy-of-Allergy-and-Clinical-Immunology (EAACI), Geneva, Switzerland, 16 - 20 June 2012, vol.67, pp.469
- XXII. **Association of asthma with polymorphisms in the endotoxin signaling pathway**

- ŞAHİNER Ü. M., YAVUZ S., Buyuktiryaki B., BİRBEN E., Topaloglu E., TUNCER A., Yaman A., Atalay R., Atalay V., Sackesen C., et al.
31st Congress of the European-Academy-of-Allergy-and-Clinical-Immunology (EAACI), Geneva, Switzerland, 16 - 20 June 2012, vol.67, pp.469-470
- XXIII. **Single nucleotide polymorphisms in the endotoxin signaling pathway and their relationship with in vitro IgE synthesis**
ŞAHİNER Ü. M., YAVUZ S., Buyuktiryaki B., BİRBEN E., Topaloglu E., Yaman A., TUNCER A., Atalay R., Atalay V., Sackesen C., et al.
31st Congress of the European-Academy-of-Allergy-and-Clinical-Immunology (EAACI), Geneva, Switzerland, 16 - 20 June 2012, vol.67, pp.467-468
- XXIV. **Genetic variants within the endotoxin signaling pathway and their effects on in-vitro IgE synthesis**
ŞAHİNER Ü. M., YAVUZ S., Buyuktiryaki B., BİRBEN E., Topaloglu E., Yaman A., TUNCER A., Atalay R., Atalay V., Sackesen C., et al.
30th Congress of the European-Academy-of-Allergy-and-Clinical-Immunology (EAACI), İstanbul, Turkey, 11 - 15 June 2011, vol.66, pp.115
- XXV. **Genetic variants within the endotoxin signaling pathway and asthma: an association study**
ŞAHİNER Ü. M., YAVUZ S., Buyuktiryaki B., BİRBEN E., Topaloglu E., TUNCER A., Yaman A., Atalay R., Atalay V., Sackesen C., et al.
30th Congress of the European-Academy-of-Allergy-and-Clinical-Immunology (EAACI), İstanbul, Turkey, 11 - 15 June 2011, vol.66, pp.60
- XXVI. **Data and model driven hybrid approach to activity scoring of cyclic pathways**
IŞIK Z., ATALAY M. V., Aykanat C., Çetin-Atalay R.
25th International Symposium on Computer and Information Sciences, ISCIS 2010, London, England, 22 - 24 September 2010, vol.62 LNEE, pp.91-94
- XXVII. **Which Shape Representation Is the Best for Real-Time Hand Interface System?**
Genc S., Atalay V.
5th International Symposium on Visual Computing, Nevada, United States Of America, 30 November - 02 December 2009, vol.5875, pp.1-3
- XXVIII. **Evaluation of Signaling Cascades Based on the Weights from Microarray and CHIP-seq Data**
Isik Z., Atalay V., Cetin-Atalay R.
3rd International Workshop on Machine Learning in Systems Biology (MLSB), Ljubljana, Slovenia, 5 - 06 September 2009, vol.8, pp.44-54
- XXIX. **Short Time Series Microarray Data Analysis and Biological Annotation**
Soekmen Z., Atalay V., Atalay R. C.
IEEE 16th Signal Processing and Communications Applications Conference, Aydın, Turkey, 20 - 22 April 2008, pp.533-534
- XXX. **HP2SLs: a database for subcellular localizations of human proteome**
Bilen B., Atalay V., Ozturk M., Cetin-Atalay R.
31st Congress of the Federation-of-European-Biochemical-Societies (FEBS), İstanbul, Turkey, 24 - 29 June 2006, vol.273, pp.248
- XXXI. **CAPRIS: a database for cancer gene promoter related motif search**
Iskar M., Erdem A., Erdem E., Dickerman A., Ozturk M., Atalay V., Cetin-Atalay R.
31st Congress of the Federation-of-European-Biochemical-Societies (FEBS), İstanbul, Turkey, 24 - 29 June 2006, vol.273, pp.248
- XXXII. **A novel model-based method for feature extraction from protein sequences for classification**
Sarac O. S., Atalay V., Atalay R. C.
IEEE 14th Signal Processing and Communications Applications, Antalya, Turkey, 16 - 19 April 2006, pp.129-131
- XXXIII. **Prediction of protein subcellular localization based on primary sequence data**
Ozarar M., Atalay V., Atalay R.
IEEE 12th Signal Processing and Communications Applications Conference, Kusadasi, Turkey, 28 - 30 April 2004, pp.118-120

- XXXIV. **Texture classification and retrieval using random neural network model**
Teke A., Atalay V.
6th Biennial IEEE Southwest Symposium on Image Analysis and Interpretation (SSIAI 2004), Nevada, United States Of America, 28 - 30 March 2004, pp.109-113
- XXXV. **Image-based extraction of material reflectance properties of a 3D rigid object**
Erdem M., Erdem I., Yilmaz U., Atalay V.
IEEE 12th Signal Processing and Communications Applications Conference, Kusadasi, Turkey, 28 - 30 April 2004, pp.245-248
- XXXVI. **Change detection in aerial images**
Borchani M., Cloppet F., Atalay V., Stamon G.
1st Canadian Conference on Computer and Robot Vision, London, Canada, 17 - 19 May 2004, pp.354-360
- XXXVII. **Ore-age: An intelligent assisting and tutoring system for mining method selection**
Guray C., Celebi N., Atalay V., Gunhan A.
Proceedings of the Seventh IASTED International Conference on Artificial Intelligence and Soft Computing, Banff, Canada, 14 - 16 July 2003, vol.7, pp.313-320
- XXXVIII. **Computer vision based unistroke keyboard system and mouse for the handicapped**
Erdem M., Erdem I., Atalay V., Cetin A.
4th International Conference on Multimedia and Expo (ICME 2003), Maryland, United States Of America, 6 - 09 July 2003, pp.765-768
- XXXIX. **Camera auto-calibration using a sequence of 2D images with small rotations and translations**
Hassanpour R., Atalay V.
17th International Symposium on Computer and Information Sciences, Florida, United States Of America, 28 - 30 October 2002, pp.215-219
- XL. **A character recognizer for Turkish language**
Korkmaz S., Akinici G., Atalay V.
7th International Conference on Document Analysis and Recognition (ICDAR 2003), Edinburgh, Saint Helena, 3 - 06 August 2003, pp.1238-1241
- XLI. **Appearance reconstruction of three dimensional models from real images**
Yilmaz U., Mulayim A., Atalay V.
17th International Symposium on Computer and Information Sciences, Florida, United States Of America, 28 - 30 October 2002, pp.76-80
- XLII. **Texture segmentation by using adaptive polyphase subband decomposition**
Yaman M., Atalay V., Turker M., Cetin E., Gerek O.
17th International Symposium on Computer and Information Sciences, Florida, United States Of America, 28 - 30 October 2002, pp.81-85
- XLIII. **Computer vision based unistroke keyboards**
Erdem A., Erdem E., Atalay V., Cetin A.
17th International Symposium on Computer and Information Sciences, Florida, United States Of America, 28 - 30 October 2002, pp.210-214
- XLIV. **Reconstruction of three dimensional models from real images**
Yilmaz U., Mulayim A., Atalay V.
1st International Symposium on 3D Data Processing Visualization and Transmission, Padua, Italy, 19 - 21 June 2002, pp.554-557
- XLV. **Computer vision based mouse**
Erdem A., Erdem E., Yardimci Y., Atalay V., Cetin A.
IEEE International Conference on Acoustics, Speech, and Signal Processing, Florida, United States Of America, 13 - 17 May 2002, pp.4178
- XLVI. **Head modeling with camera auto-calibration and deformation**
Hassanpour R., Atalay V.
International Fall Workshop on Vision Modeling and Visualization 2000, Erlangen, Germany, 20 - 22 November 2002, pp.3-11

- XLVII. PCA for gender estimation: Which eigenvectors contribute?**
Balci K., Atalay V.
16th International Conference on Pattern Recognition (ICPR), QUEBEC CITY, Canada, 11 - 15 August 2002, pp.363-366
- XLVIII. An automated differential blood count system**
Ongun G., Halici U., Leblebicioglu K., Atalay V., Beksac M., Beksac S.
23rd Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society, İstanbul, Turkey, 25 - 28 October 2001, vol.23, pp.2583-2586
- XLIX. Feature extraction and classification of blood cells for an automated differential blood count system**
ONGUN G., Halici U., Leblebicioglu K., Atalay V., Beksac M., Beksac S.
International Joint Conference on Neural Networks (IJCNN 01), Washington, Kiribati, 15 - 19 July 2001, pp.2461-2466
- L. Multi-baseline stereo correction for silhouette-based 3D model reconstruction from multiple images**
Mulayim A., Atalay V.
Conference on 3-Dimensional Image Capture and Applications IV, San-Jose, Costa Rica, 24 - 25 January 2001, vol.4298, pp.143-154
- LI. Segmentation of human face using gradient-based approach**
Baskan S., Bulut M., Atalay V.
Conference on Machine Vision Applications in Industrial Inspection IX, San-Jose, Costa Rica, 22 - 23 January 2001, vol.4301, pp.52-63
- LII. Automated contour detection in blood cell images by an efficient snake algorithm**
ONGUN G., Halici U., Leblebiciolu K., Atalay V., Beksac S., BEKSAÇ M.
Proceedings of the 3th World Congress of Nonlinear Analysts (WCNA 2000), Catania, Italy, 19 - 26 July 2000, vol.47, pp.5839-5847
- LIII. A matching algorithm based on Godel coding scheme**
Dicle N., Atalay V.
Conference on Image and Video Communications and Processing 2000, San-Jose, Costa Rica, 25 - 28 January 2000, vol.3974, pp.576-583
- LIV. A hierarchical representation of form documents for identification and retrieval**
Duygulu P., Atalay V.
7th Annual Document Recognition and Retrieval Conference, San-Jose, Costa Rica, 26 - 27 January 2000, vol.3967, pp.128-139
- LV. Texture based image retrieval by combining multiple tools**
Borchani M., Atalay V., Stamon G.
International Conference on Imaging Science, Systems, and Technology (CISST 2000), Nevada, United States Of America, 26 - 29 June 2000, pp.659-664
- LVI. Hierarchical representation of form documents for identification and retrieval**
Duygulu P., Atalay V.
Proceedings of the 2000 Document Recognition and Retrieval VII, San-Jose, Costa Rica, 26 - 27 January 2000, vol.3967, pp.128-139
- LVII. Texture extraction from photographs and rendering with dynamic texture mapping**
Genç S., Atalay V.
10th International Conference on Image Analysis and Processing, ICIAP 1999, Venice, Italy, 27 - 29 September 1999, pp.1055-1058
- LVIII. An SGML based viewer for form documents**
Atalay V., Arslan E.
5th International Conference on Document Analysis and Recognition, ICDAR 1999, Bangalore, India, 20 - 22 September 1999, pp.201-204
- LIX. Learning by optimization in random neural networks**
Atalay V.
13th International Symposium on Computer and Information Sciences (ISCIS 98), BELEK ANTALYA, Turkey, 26 -

28 October 1998, vol.53, pp.143-148

- LX. **A heuristic algorithm for hierarchical representation of form documents**
Duygulu P., Atalay V., Dincel E.
14th International Conference on Pattern Recognition, Brisbane, Australia, 16 - 20 August 1998, pp.929-931
- LXI. **Estimation of rotation between two frames of a scene**
Atalay V., Yilmaz M.
Visual Information Processing VII, Florida, United States Of America, 13 - 14 April 1998, vol.3387, pp.252-260
- LXII. **An automated blood cell analysis and classification system**
Ongun G., Halici U., Leblebicioglu K., Atalay V., Erkmn A., Beksac S., Beksac M., Erol A.
13th International Symposium on Computer and Information Sciences (ISCIS 98), BELEK ANTALYA, Turkey, 26 - 28 October 1998, vol.53, pp.222-227
- LXIII. **Unsupervised texture based image segmentation by simulated annealing using Markov random field and Potts models**
Goktepe M., Atalay V., Yalabik N., Yalabik C.
14th International Conference on Pattern Recognition, Brisbane, Australia, 16 - 20 August 1998, pp.820-822
- LXIV. **Repulsive attractive network for baseline extraction on document images**
Oztop E., Mulayim A., Atalay V., YarmanVural F.
1997 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 97), Munich, Germany, 21 - 24 April 1997, pp.3181-3184
- LXV. **Unsupervised segmentation of gray level Markov model textures with hierarchical self organizing maps**
Goktepe M., Yalabik N., Atalay V.
13th International Conference on Pattern Recognition, ICPR 1996, Vienna, Austria, 25 - 29 August 1996, vol.4, pp.90-94
- LXVI. **TEXTURE GENERATION WITH THE RANDOM NEURAL NETWORK MODEL**
ATALAY V., GELENBE E., YALABIK N.
INTERNATIONAL CONF ON ARTIFICIAL NEURAL NETWORKS (ICANN-91), Espoo, Finland, 24 - 28 June 1991, pp.111-116

Supported Projects

ATALAY M. V., NALBAT E., Project Supported by Higher Education Institutions, Izoksazol türevli antikanser özelliikli bileşiklerin karaciğer kanseri kök hücreleri üzerindeki etki mekanizmasının incelenmesi, 2021 - 2024

ATALAY M. V., HAMANAKA R., Project Supported by Higher Education Institutions, Drug Discovery for SerineGlycine OneCarbon Pathway Enzymes SHMT2 and MTHFD2 by Deep Learning and Machine Learning, 2022 - 2022

Atalay M. V., TÜBİTAK International Bilateral Joint Cooperation Program Project, Comprehensive Resource of Biomedical Relations with Deep Learning and Network Representations, 2017 - 2020

ATALAY M. V., ATALAY R., DALKIRAN A., RİFAİOĞLU A. S., Project Supported by Higher Education Institutions, Protein İşlevlerinin Altdizi Analizi ile Büyük Ölçekte Öngörme Yöntemleri, 2017 - 2017

ATALAY M. V., TUBİTAK Project, Altdizi Analizine Dayalı Genom Anlamlandırması, 2005 - 2007

Scientific Refereeing

14th Symposium on Health Informatics and Bioinformatics, Conference Paper (Abstract), September 2021

IEEE/ACM TRANSACTIONS ON COMPUTATIONAL BIOLOGY AND BIOINFORMATICS, SCI Journal, May 2021

PLOS ONE, SCI Journal, November 2020

TUBİTAK Project, 1507 - TÜBİTAK SME R&D Start Support Program, Middle East Technical University, Turkey, November 2020

BMC BIOINFORMATICS, SCI Journal, October 2020

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Middle East Technical University, Turkey, October 2020

TUBITAK Project, 1511 - TUBITAK Priority Fields Research Technology Development and Innovation PDP, Middle East Technical University, Turkey, October 2020

IEEE TRANSACTIONS ON NEURAL NETWORKS AND LEARNING SYSTEMS, SCI Journal, September 2020

TUBITAK Project, 1002 - Quick Support Program, Middle East Technical University, Turkey, September 2020

IEEE-ACM TRANSACTIONS ON COMPUTATIONAL BIOLOGY AND BIOINFORMATICS, SCI Journal, August 2020

BRIEFINGS IN BIOINFORMATICS, SCI Journal, August 2020

BRIEFINGS IN BIOINFORMATICS, SCI Journal, July 2020

PEERJ, Journal Indexed in SCI-E, July 2020

JOURNAL OF BIOMOLECULAR STRUCTURE & DYNAMICS, SCI Journal, July 2020

TUBITAK Project, 1511 - TUBITAK Priority Fields Research Technology Development and Innovation PDP, Middle East Technical University, Turkey, July 2020

TUBITAK Project, 1507 - TÜBİTAK SME R&D Start Support Program, Middle East Technical University, Turkey, July 2020

BRIEFINGS IN BIOINFORMATICS, SCI Journal, June 2020

PLOS ONE, SCI Journal, May 2020

BRIEFINGS IN BIOINFORMATICS, SCI Journal, May 2020

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Middle East Technical University, Turkey, May 2020

TUBITAK Project, 1005 - National New Ideas and Products Research Support Program, Middle East Technical University, Turkey, May 2020

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Middle East Technical University, Turkey, May 2020

TUBITAK Project, 1507 - TÜBİTAK SME R&D Start Support Program, Middle East Technical University, Turkey, April 2020

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