CV

Sule Yildirim Yayilgan

August 2023

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1 My personal information

*First name, Family name: SULE, YILDIRIM-YAYILGAN *Age: 50 years *Sex: F *Nationality: Turkish URL for personal web site: https://www.ntnu.edu/employees/sule.yildirim

2 Academic Degrees

Postdoc, Computer Science Norwegian University of Science and Technology, Trondheim, Norway 2004 Ph.D., Computer Science International Computer Institute, Ege University, Izmir, Turkey 2002 M.Sc., Computer Engineering Ege University, Izmir, Turkey 1995 B.Sc., Computer Engineering Ege University, Izmir, Turkey 1993

3 Employment History

2021- Professor, Department of Information Security and Communication Technology, NTNU, Gjøvik, Norway

2016- Associate Professor, Department of Information Security and Communication Technology, NTNU, Gjøvik, Norway

2016 Associate Professor, Faculty of Computer Science and Media Technology, NTNU

2009-2015 Associate Professor, Faculty of Computer Science and Media Technology, Gjøvik University College (GUC), Norway

2005-2009 Head of Department, Department of Computer Science, Hedmark University College (HIHM), Norway

2005-2009 Game Programming Study Programme Responsible, HIHM, Norway

2008-2009 Coordinator of Administrative Data Management Study in collaboration with Studies enteret $^1,\,\rm HIHM$

2004-2005 Associate Professor, Department of Computer Science, Hedmark University College (HIHM), Norway

4 Visiting Positions

5/2018-5/2018 Visiting Professor, University of Pardubice, Czech Republic

12/2016-12/2016 Visiting Professor, University of Tirana, Albania

6/2008-06/2008 Visiting Professor, Northwestern University, Chicago, USA

9/2000-8/2001 Visiting Scholar, Carnegie Mellon University (CMU), Robotics Institute

9/1999-12/1999 Exchange PhD Student, Department of Computer Science (IDI), NTNU, Norway

5 Awards

- 2020 NTNUs mentorprogram for kvinnelige førsteamanuenser og førstelektorer
- 2020 Pedagogisk Mappe Utvikling Certificate
- 2020 Certificate of completion of the course Horizon2020 Proposal Writing Focus: IMPACT, Organized by NFR in cooperation with Europe Media Trainings
- 2018 Certificates of the Deep Learning course (6 months duration), Coursera
- 2015 With Zenun Kastrati, Ali Shariq Imran and Fisnik Dalipi awarded the 2015 HCI best paper award for [1].
- 2006 Leadership certificate from Confex Leader Development Programme, Oslo

¹http://www.studiesenteret.no

- 2002 First Prize Winner with PhD work in Category of Physical and Mathematical Sciences, EBILTEM (EGE University Science and Technology Center)², Project Competition and Exhibition, November. The evaluation committee included people from industry.
- 2000-2001 NATO A-2 Research Scholarship from the Scientific and Technical Research Council of Turkey. I visited Carnegie Mellon University, Robotics Institute, USA.
- 1999 Visiting Researcher Scholarship from the Research Council of Norway and the Ministry of Education in Turkey under a cultural relations program between Norway and Turkey. I was awarded one of two scholarships given among 45 applicants. I visited Norwegian University of Science and Technology, Sep. Dec.

 $^{^{2} \}rm http://www.ebiltem.ege.edu.tr/eng-0/Homepage.html$

6 Scholarly and Professional Duties

6.1 Editorial Board

- 2022 Special issue on "Simulation Modelling of Smart Grid Security and Dependability", Electronics, MDPI, Guest Editor
- 2020-2021 Intelligent Technologies and Applications, Series ISSN 1865-0929, Editor
- 2020 Artificial Intelligence in Gastrointestinal Endoscopy, Editorial Board Member
- 2020 Special issue on "Digital Crime Evidence Collection and Ontologies", Journal of Imaging, MDPI, Guest Editor
- 2020- American Journal of Information Science and Technology, Editorial Board Member
- \bullet 2020- Computational Intelligence and Machine Learning (CI Machine Learning), Editorial Board Member 3
- 2020- International Journal of Automation, Artificial Intelligence and Machine Learning (IJAAIML), Editorial Board Member.
- 2020- Advanced Molecular Imaging and Interventional Radiology, Ocimum Science Publishers, Editorial Board Member
- 2020- Ant Publishing, Editorial Board Member
- 2018- Machine Learning Research, Science Publishing Group, Editorial Board Member
- 2015- International Journal of Science, Innovation and New Technology (IJSINT), Editorial, Advisory and Academic Board Member
- 2011 Book: Ubiquitous Multimedia and Mobile Agents: Models and Implementations published by IGI Publishing, USA, ISBN13: 9781613501078, August, Editorial Advisory Board.
- 2010 Proceedings of the second Norwegian Artificial Intelligence Symposium, 22 November, GUC, Tapir Akademisk Forlag (ISBN 978-82-519-2704-8), Editor
- 2007 Book ISBN: 1-60132-023-X (ICAI'07 Volume I)"Proceedings of the 2007 International Conference on Artificial Intelligence, Associated Editor
- 2007 Book ISBN: 1-60132-024-8 (ICAI'07 Volume II) "Proceedings of the 2007 International Conference on Artificial Intelligence, Associated Editor
- 2007 Book ISBN: 1-60132-025-6 (for the set of two volumes) "Proceedings of the 2007 International Conference on Artificial Intelligence (ICAI'07)", Associated Editor

6.2 Reviewer Board of Journals

- 2021- Online Social Networks and Media, Elsevier, E-ISSN:2468-6964, Reviewer
- 2020- The special issue "Machine Learning for IoT Applications and Digital Twins" in Sensors ⁴, Mansucsript Reviewer
- 2019 Neural Computing and Applications, Reviewer
- 2018- Police Practice and Research: An International Journal, Reviewer
- 2018- Journal Measurement, Reviewer
- 2018- Journal Applied Sciences, MDPI, Reviewer Board
- 2018 Machine Learning Research, Reviewer

³http://www.cimachinelearning.com

⁴(ISSN 1424-8220, IF 3.031, https://www.mdpi.com/journal/sensors)

- 2018 Book, Smart Micro-grid Systems Security and Privacy, Advances in Information Security, Reviewer
- 2011 International Journal of Computer Science and Applications, Reviewer
- 2011 Springer book, "Semantic Agent Systems: Foundations and Applications"

6.3 General, Co-, Publication, Program and Session Chairs

- 2022 ICARA: 9th International Conference on Automation, Robotics and Applications, 10-12 February, Abu Dhabi, United Arab Emirates, Publicity Chair
- 2023 APCS: The Asia Pacific Computer Systems Conference, 24-26 March, Program Chair
- 2022 ICICT: 5th International Conference on Information and Computer Technologie, 4-6 March, Zoom, Program Chair
- 2022 ICARA: 8th International Conference on Automation, Robotics and Applications, 18-20 February, Abu Dhabi, United Arab Emirates, Publicity Chair
- 2022 DSIT: 5th International Conference on Data Science and Information Technology, 22-24 July, Shanghai, China, Steering Committee Chair
- 2022 CTISC: 4th International Conference on Advances in Computer Technology, Information Science and Communications, 22-24 April, Suzhou, China, Publication Chair
- 2022 ICRCV: 4th International Conference on Robotics and Computer Vision, MEVE: International Conference on Mechanical Engineering and Vehicle Engineering, 25-27 September, Wuhan, China, Conference Program Co-Chair
- 2021 AIoT on Things (ICAAIoT): First International Conference on Artificial Intelligence of Things, 3-4 September, Cyprus, Turkey, Program Committee Chair
- 2021 SCI2K21: 2nd International Conference on "Social Networking and Computational Intelligence", 17-18 December, Bhopal, India, Program Co-Chair
- 2021 INTAP: International Conference on Intelligent Technologies and Applications, 28–30 September, Agder, Norway, General Co-Chair
- 2021 INTAP Track: AI and ML in Information Security, 11-13 October, Grimstad, Norway, General Co-Chair
- 2021 CTISC: 3rd International Conference on Advances in Computer Technology, Information Science and Communications, 23-25 April, Shanghai, China, Publication Chair
- 2021 ICRCV: 3rd International Conference on Robotics and Computer Vision, MEVE: International Conference on Mechanical Engineering and Vehicle Engineering, Program Co-Chair
- 2021 APCS: The Asia Pacific Computer Systems Conference, March 11-14, Kahului, Maui Island, United States, Program Chair
- 2021- ICICT: International Conference on Information and Computer Technologies, Program Chair http://www.icict.org/com.html
- 2020- INTAP: International Conference on Intelligent Technologies and Applications, 28–30 September, Gjovik, Norway, General Chair
- 2020- The 3rd International Conference on Robotics and Computer Vision (ICRCV) and The 2nd International Conference on Mechanical Engineering and Vehicle Engineering (MEVE), Nanjing, China, September 6-8, Conference Program Chair
- 2020- ICICT: International Conference on Information and Computer Technologies, Program Chair http://www.icict.org/com.html
- 2020 ACM- ICDDA: The International Conference on Compute and Data Analysis, 9-12 March, Program Chair

- 2020 CTISC: 2nd International Conference on Advances in Computer Technology, Information Science and Communications, Suzhou, China, 20-22 March, Publication Chair
- 2019 ACM- ICDDA: The International Conference on Compute and Data Analysis, Program Committee Chair
- 2019 ECNCT: International Conference on Electronics and Communication, Network and Computer Technology, 15-17 November, Shenzhen, China, Co-Chair
- 2007 ACSE- ICAI: International Conference on Artificial Intelligence, 25-28 June, Las Vegas, USA Session Chair

6.4 Organizer and Organizing Committee Member

- 2023 SAIDD: Symposium on AI, Data and Digitalization, 9-10 May, Sogndal, Norway, Organizing Committee Member
- 2021 ECODIS Workshop on Cybersecurity for Digital Substations, 12 March, Organizer
- 2021 Lying Pen of Scribes Workshop Scientific Imaging of the Dead Sea Scrolls, 22 February, Organizer
- 2021 GWRAI: Global Webinar on Robotics and Artificial Intelligence, 7-9 May, Organizing Committee Member
- 2020 "Supervisory Seminar for PHDICTKES Project", 28-29 October, Webinar, Organizer
- 2020 ISTRAI: World Conference on Robotics and Artificial Intelligence, 21-22 October, Rome, Italy, Organizing Committee Member
- 2020 InterSecure&ECODIS projects Cyber Security workshop, NTNU, 3-4 February, 35 Participants, Organizer
- 2020 SMILE project workshop, NTNU, December, Organizer
- 2019 Kunstig Intelligens: Hvem bestemmer, og kan det gå galt?⁵, Initiator and organizer together with Forskningsetisk utvalg ved NTNU, April, Literaturhuset
- 2017 Capsule Video Endoscopy Workshop of IQMED project, NTNU, 31 March, 15 participants, Organizer
- 2016 IC1206 meeting in Gjøvik, GUC, 40 participants, Organizer
- 2016 Artificial Intelligence and Its Applications conference co-organized by NTNU and IKT-Innlandet, 100 participants, Organizer
- 2011-2016 Academic Exchange for Progress Project ⁽⁶⁾ Workshops, 40 participants, 11 January-16 December, Albania, Macedonia, Kosova, Organizer and Speaker
- 2013 B. Blobel, F. Allaert, D. Kalra, P. Pharow, P. Ruotsalainen, S. Sauermann, S. Yildirim Yayilgan, Workshop "Reuse and Secondary use of Health Data (sponsored by EFMI)", Phealth, 26 June, 50 participants, France, Organizer and Speaker
- 2012 B. Blobel, F. Allaert, D. Kalra, P. Pharow, P. Ruotsalainen, S. Sauermann, S. Yildirim Yayilgan, Workshop "EHRs, Mobile Technologies and Policies on the Move to Pervasive Care", MIE, 27 August, 50 participants, Italy, Organizer and Speaker
- 2010 The Norwegian Artificial Intelligence Conference, November, 100 participants, Gjøvik, Organizer
- 2007 Workshop ECMMAI 2007 "Extending Computational Cognitive Modelling to Issues of Multi-Agent Interaction", within ICAI 07 (International Conference on Artificial Intelligence), 25-28 June, 70 participants, USA, Organizer

 $^{{}^{5}} https://litteraturhusetitrondheim.no/arrangement/kunstig-intelligens-hvem-bestemmer-og-kan-det-ga-galt/}{}^{6} http://aita-al.org/event/academic-exchange-for-progress/}$

6.5 International Advisory and Technical Program Committee Member

- 2023 ICAIP: The 7th International Conference on Advances in Image Processing, November 17-19, 2023, Beijing, China, Technical Program Committee Member
- 2023 ICCSCT: The 5th International Conference on Computer Systems and Communication Technology, November 24-25, Kuala Lumpur, Malaysia, Technical Program Committee Member
- 2022 ICCSCT: The 4th International Conference on Computer Systems and Communication Technology, November 25-26, virtual conference, Technical Program Committee Member
- 2022 SAMDE: International Symposium on Automation, Mechanical and Design Engineering, 16-18 December, Beijing, China, Technical Committee Member
- 2022 TICEC: 10th Ecuadorian Conference on Information and Communication Technologies, Program Committee Member
- 2022 ADIP: Asia Digital Image Processing Conference, 17-19 December, Osaka, Japan, Technical Program Committee Member
- 2022 GSERITA: The 2nd Global Summit and Expo on Robot Intelligence Technology and Applications, 19-21 September, Barcelona, Spain, Organizing Committee Member
- 2022 CVMI: International Conference on Computer Vision and Machine Intelligence, 12-13 August, IIIT Allahabad, Prayagraj, India, Technical Program Committee Member
- 2022 IDITR: International Conference on Innovations and Development of Information Technologies and Robotics, 27-29 May, Chengdu, China, International Technical Committee
- 2022 ICMSCE: The 5th International Conference on Mechatronics Systems and Control Engineering, 11-13 March, Chengdu, China, International Technical Committee Member
- 2021 The 5th International Workshop on Big Data Analytic for Cyber Crime Investigation and Prevention within IEEE International Conference on Big Data, 15-18 December, Orlando, Florida, USA, Technical Program Committee Member
- 2021 AIRC: 3rd International Conference on Artificial Intelligence, Robotics and Control, 8-10 December, The British University in Egypt, Cairo, Egypt, Technical Committee Member
- 2021 SOCO: 16th International Conference on Soft Computing Models in Industrial and Environmental Applications, 22-24 September, Bilbao, Spain, Program Committee Member
- 2021 ICAENS: 1st International Conference on Applied Engineering and Natural Sciences, 1-3 November, Konya, Turkey, Scientific Committee member
- 2021 TICEC: 9th Conference on Information and Communication Technologies of Ecuador, November 24-26, Ecuador, Scientific Program Committee
- 2021 IARIA:BRAININFO: The Sixth International Conference on Neuroscience and Cognitive Brain Information, July 18 22, Nice, France, Technical Program Committee Member
- 2021 IARIA:HEALTHINFO: The Sixth International Conference on Informatics and Assistive Technologies for Health-Care, Medical Support and Well being, October 03-07, Barcelona, Spain, Technical Program Committee Member
- 2021 IARIA: Cognitive: The Thirteenth International Conference on Advanced Cognitive Technologies and Applications, 18 22 April, 2021, Porto, Portugal, Technical Program Committee Member
- 2021 RCAE: 4th International Conference on Robotics, Control and Automation Engineering, Wuhan Institute of Technology (Liufang Campus), Wuhan, China, 4-6 November, Technical Program Committee Member
- 2021 AMEE: 4th International Conference on Advanced Mechanical and Electrical Engineering, Wuhan Institute of Technology (Liufang Campus), Wuhan, China, 4-6 November, Technical Program Committee Member

- 2021 ICSIPC: International Conference on Signal Image Processing and Communication, Chengdu, China, 16-18 April, Technical Program Committee Member
- 2021 Intelli
Sys: Intelligent Systems Conference, 2-3 September, virtual, Technical Program Committee Member
- 2021 Computing Conference 2021, 15-16 July, London + virtual, Technical Program Committee Member
- 2021 CCEAI: 5th International Conference on Control Engineering and Artificial Intelligence, 14-16 January, Phuket, Thailand, Technical Program Committee Member
- 2020 CyberHunt: International Workshop on Big Data Analytics for Cyber Threat Hunting, 10-13 December, Oslo.
- 2020 ICCSCT: The 3rd International Conference on Computer Systems and Communication Technology, August 20-21, Guangzhou, China, Technical Program Committee Member
- 2020-2021 ROBOVIS: International Conference on Robotics, Computer Vision, and Intelligent Systems, 4-6 November, virtual, Program Committee Member
- 2020 CRC: The 5th International Conference on Control, Robotics and Cybernetics, 16-18 October, Wuhan, China, Technical Program Committee Member
- 2020 IntelliSys: Intelligent Systems Conference, 3-4 September, Amsterdam, Netherland and virtual, Technical Program Committee Member
- 2020 The 4th International Workshop on Big Data Analytic for Cyber Crime Investigation and Prevention, IEEE International Conference on Big Data, 10-13 December, virtual, Technical Program Committee Member
- 2020 ICMAS: International Conference on Mechanical and Aerospace Systems, 12-14 December, The British University in Egypt, Cairo, Technical Program Committee Member
- 2020 UPCON: 7th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering⁷, 27-29 November, MNNIT Allahabad, India, Technical Program Committee Member of Machine Learning/Information System
- 2020 BCCA: The Second International Conference on Blockchain Computing and Applications, 2-5 November, Antalya, Turkey, Technical Program Committee Member
- 2020 CVIP: 5th International Conference on Computer Vision & Image Processing, 16-18 October, Allahabad, India, International Advisory and Technical Program Committee Member
- 2020-2021 ADIP: Asia Digital Image Processing Conference, 18-20 December, Kyoto, Japan, Technical Program Committee Member
- 2020 ITCVT: The Third International Workshop on Intelligent Transportation and Connected Vehicles Technologies, 20-24 April, Budapest, Hungary in conjunction with the 32th IEEE/IFIP Network Operations and Management Symposium (NOMS 2020), Technical Program Member
- 2020 ICAIML: International Conference on Artificial Intelligence & Machine Learning: Exploring the Impact, Advancement, Techniques and Applications, International Advisory Board Member
- 2020 LOD: The Sixth International Conference on Machine Learning, Optimization, and Data Science, 19-22 July, Certosa di Pontignano, Siena Tuscany, Italy, Program Committee (PC) Member
- 2020 IARIA-COGNITIVE: The Twelfth International Conference on Advanced Cognitive Technologies and Applications, 26-30 April, Nice, France, PC Member
- 2020-21 FTC: The Future Technologies Conference, Vancouver, Technical Program Member

⁷Http://www.mnnit.ac.in/upcon2020/

- 2018- IARIA- BRAININFO: International Conference on Neuroscience and Cognitive Brain Information, Technical Committee Member
- 2018- ICICT: International Conference on Information and Computer Technologies, Technical Committee Member
- 2018- ACM- ICDDA: The International Conference on Compute and Data Analysis, PC Member
- 2018- Springer- SECITC: International Conference on Information Technology and Communication Security, PC Member
- 2018- Springer- LOD: International Conference on Machine Learning, Optimization, and Data Science, PC Member
- 2017 IEEE- INTRICATE SEC: International Workshop on Security Intricacies in Cyber-Physical Systems and Services PC Member
- 2017 IARIA- SMGSP: Smart Micro-Grid Systems Security and Privacy, PC member
- 2017- IEEE- SSTM Track in WETICE: International Conference on Enabling Technologies: Infrastructure for Collaborative Enterprises, PC Member
- 2017- IARIA eTELEMED: International Conference on eHealth, Telemedicine, and Social Medicine, PC Member
- 2007- ESAS: The IEEE Workshop on Engineering Semantic Agent Systems, PC Member
- 2016- IARIA- WEB: International Conference on Building and Exploring Web Based Environments, PC Member
- 2016 IARIA- GLOBALHEALTH: International Conference on Global Health Challenges, PC Member
- 2013-15 IARIA- SEMAPRO: International Conference on Advances in Semantic Processing, Technical Program Committee
- 2009-10 SCS- SpringSim: Spring Simulation Multi-Conference, International Program Committee
- 2008-09 SCS- SummerSim: Summer Simulation Multiconference, International Program Committee

6.6 Reviewer in Conferences

- 2021 CTISC: 3rd International Conference on Advances in Computer Technology, Information Science and Communications, 23-25 April, Shanghai, China, Reviewer
- 2020- Asia Pacific Institute of Science and Engineering, https://www.apise.org/, Reviewer
- 2018- IEEE and EURASIP EUVIP: European Workshop on Visual Information Processing, Reviewer
- 2017 APR- SCIA: The Scandinavian Conference on Image Analysis, Reviewer
- 2016 IEEE/RSJ International Conference on Intelligent Robots and Systems, Reviewer
- 2015 IEEE-CVCS: Colour and Visual Computing Symposium, Reviewer
- 2012-16 ACM-WIMS: International Conference on Web Intelligence, Mining and Semantics, Reviewer
- 2012- EFMI-Phealth: International Conference on Wearable, Micro and Nano Technologies for Personalized Health, Reviewer
- 2009 ICKD: The International Conference on Knowledge Discovery, Reviewer
- 2008 EuroCogSci: The European Cognitive Science Conference, Reviewer

- 2007 19th Annual Space Design Competition at STAIF-2007 the Space Technology and Applications International Forum, The University of New Mexico, Albuquerque, 12 February, Judge
- 2005 ECML: European Conference on Machine Learning, Reviewer
- 2005 IKS: International Conference on Knowledge Systems, Reviewer

7 Grant Proposal Reviews

- 2019- Expert Evaluator of EU Horizon2020 Programme
- 2013- COST Expert to participate in the evaluations of COST activities

8 Membership

- 2022-2024 Regionalt redelighetsutvalg for Helse Midt-Norge RHF og NTNU
- 2021- Participant in Cost Action CA16101
- 2021- Member of Research Group Leaders Group, IIK
- 2020- Head of Research Group MR PET:Multidisciplinary Research group on Privacy and data protEcTion
- 2020- Trondheim ACM Women Chapter Member
- 2020- Management Committee Member from Norway to COST Action CA19102
- 2020- Member of IEEE and IEEE Computational Intelligence Society
- 2020- Member of the Management Board of the METICOS project
- 2019- Member of the Management Board of the Lying Pen of Scribes Project
- 2019- Member of the Ethics Board of the Lying Pen of Scribes project
- 2018- Member of the Research Ethics board of NTNU
- 2016- Member of the SMILE Horizon2020 Project management board
- 2018- Head of Ethics board of the Horizon2020 SMILE project
- 2018 Member of the advisory board of the Language teaching of immigrant children using robotics (LTICR) project
- 2017- Member, The International Association for Pattern Recognition (IAPR)
- 2016- Member of ECSO 'Support to SMEs, coordination with countries (in particular East EU) and regions' Working Group
- 2013-2017 Management Committee member of Cost action IC1206
- 2013 Steering committee deputy member, GUC
- 2015- Deputy member of CCIS Management Board, GUC and NTNU
- 2011- Member of the Norwegian Biometrics Laboratory, NTNU
- 2010- Steering committee member of Norwegian Artificial Intelligence Society, branch of the European Association for Artificial Intelligence (EurAI)
- \bullet 2008-2009 Coordinator of Administrative Data Management Study in collaboration with Studiesenteret, HIHM 8

⁸http://www.studiesenteret.no/

- 2006- Member of the Norwegian Association for Image Processing and Pattern Recognition (NO-BIM)
- 2005- Member of the Norwegian Association for Researchers (Forskerforbundet)
- 2006-2009 Head of Computer Science Dept. HIHM
- 2000- Graduate Student advisor for more than 27 + 5 (in progress) MSc, 2 + 2 (periods) + 4 in (progress) PhD, 10s of Postdoc and visiting researchers, NTNU, GUC, HIHM and EGE

9 Keynote Speaker, Invited Speaker, Speaker

- 2023 AI and CyberSecurity, The 6th International Conference on Information and Computer Technologies, 24-26 March, Raleigh, United States, Invited Speaker
- 2023 AI and CyberSecurity, 9th International Conference on Automation, Robotics and Applications, 10-12 February, Abu Dhabi, United Arab Emirates, Invited Speaker
- 2022 MR PET research group activities and PhD involvement, PhDICTKES workshop, 5 September, NTNU Gjøvik, Invited Speaker
- 2022 Privacy and data protection in energy infrastructure, Power System Operation and Analysis (PSOA) NTNU Group Meeting, 29 September, Invited Speaker
- 2022 Image Processing and Machine Learning at MRPET, ADIP: Asia Digital Image Processing Conference, 17-19 December, Osaka, Japan, Invited Speaker, http://www.adip.org/
- 2022 Cyber Security Concepts in Power Networks: Digital Substation Case Study from Norway, Second International Conference on Power, Control and Computing Technologies, (ICPC²T) 1 – 3 March, 2022, IEEE Bombay Section, Keynote Speaker
- 2021 Robotics and AIot: technical and ethical challenges, ICRES 2021: the sixth edition of the International Conference on Robot Ethics and Standards, Keynote Speaker
- 2021 Image Processing and Machine Learning in Healthcare, ADIP: Asia Digital Image Processing Conference, 18-20 December, Kyoto, Japan, Invited Speaker, http://www.adip.org/2021.html
- 2021 Artificial Intelligence and Machine Learning in Healthcare now and towards IoT, ISTRAI, 23-24 March, Czech Republic⁹, Keynote Speaker
- 2021 Preliminary Analysis of Digital Substation on Cyber Security, ECODIS Workshop on Cybersecurity for Digital Substations, 12 March, Speaker
- 2021 Material Analysis, Feature Extraction and Classification, Workshop Scientific Imaging of the Dead Sea Scrolls, 22 February, Speaker
- 2020 Co-supervision Experiences, Supervisory Seminar for PHDICTKES Project, 28-29 October, Webinar, Speaker
- 2020 Cybersecurity issues in digital substations a short review, InterSecure&ECODIS projects Cyber Security workshop, NTNU, 3-4 February, Speaker
- 2020 Artificial Intelligence and Machine Learning Activities and Results in Healthcare Research at IIK, Invited Speaker at Norwegian Open AI Lab., 6 November ¹⁰
- 2020 Kunstig intelligens/KI, maskinlæring/ML og dyp læring i maritim sektor. Hva er potensialet?, Course given at "Digitalisering og cyber sikkerhet" for GCE Blue Maritime Cluster, 9 October
- 2020 Cyber-Security Gaps in a Digital Substation: From Sensors to SCADA, ECODIS&Cybwin Workshop, 26 May

⁹https://inovscitech.com/speakers?conf_id=42

 $^{^{10} \}rm https://ntnu.cloud.panopto.eu/Panopto/Pages/Viewer.aspx?id=013feb63-7e23-46f8-8f1e-ac6b00db0cdbstart=undefined$

- 2020 Presentation of AI&DS Activities of my group, CISaR-NTNU workshop, 29 January, Gjøvik, Invited Speaker
- 2020 Implementing Biometrics at the Border Panel, Identity Week, 16-18 November, London & Virtual, Invited Speaker and Panelist
- 2020 ACM-W Ankara (ACM-W professional chapter of Turkey), the Grad Cohort 2020 Women Cohort, Invited Speaker and Head of Panel on Career paths, 11-12 April, Turkey (postponed due to corona pandemic)
- 2019 IoT & Security: Researchers' Perspective, IOT-OPEN.EU SUMMIT, 18 June, Brussels, Keynote Speaker
- 2019 ENEFM: 5th International Congress on Energy Efficiency and Energy Related Materials", 22-28 October, Mugla, Turkey, Invited Speaker
- 2019 International Conference on Intelligent Technologies and Applications INTAP, 6–8 November, Keynote Speaker
- 2019 2nd workshop of Human Rights in the Falstad Center and presented the SMILE Action technologies and the related challenges to Human Rights and privacy, 28 March, Invited Speaker
- 2015 PhD seminar of the university SEEU, Invited Speaker, Macedonia 2015
- 2013 Phealth, Tallinn Estonia, Session Speaker
- 2012 Secure Technologies: Where and Why?, NISLAB Opening, GUC, Speaker
- 2012 What is e-health its concepts, approaches and products? Velkon: Welfare Technology Conference, 3-4 October, Trondheim, Invited Speaker
- 2011 Identity management in sport event. Security, identity theft og misuse of biometric data. Development of technology and methods, National Identity Center (NID) conference, Oslo, Invited Sepaker
- 2011 PAMIT.com: Personalized AMbient Intelligent Travel COMpanion: Its Aim, Goals and Challenges, Welfare Technology Conference, 8-9 November, Trondheim, Invited Speaker
- 2011 The PAMIT.com approach: aim, goals, and challenges, Lyon, France, PHealth, July, Invited Speaker
- 2010 SCAM: Safer Children Internet Access, RFID-RNET Worskshop, 10-11 May, Oslo, Invited Speaker
- 2010 Robots, National Security day, Norwegian Center for Information Security (NorSIS) and GUC, 22 April, 08:00-10:00, Eidsiva building in Kallerud, Invited Speaker

10 Seminars and Colloquia

- Invited as an AI expert to a seminar organized by the Digital-Frontrunner Roundtable conversation, Robots, Automation and the Growth of Smart Machines, sponsored by Google and hosted by the Global Digital Foundation, May 10, 2017
- eDemocracy 2019 conference, Athens, 12-13 December
- Cristian Rocha et al. "Deep Learning and Radiomics", Northern Lights Deep Learning Workshop. Jan.2018
- AEP project workshops ¹¹ (2011 2015)
- EU Horizon meeting, MEDTECH Oslo, October 2015
- IC1206 workshops

¹¹http://aita-al.org/event/academic-exchange-for-progress/

- ID conference, Berlin, October 2013
- Border Technologies Management Summit, Istanbul, 1-4 July 2013
- Velkon 2012
- NID 2012, Oslo
- Idendity Conference, 2012, Oslo
- Biometri Forum, 10 November 2011, Oslo
- WIMS2011
- Paris Game AI Conference 22-
 23-24 June 2011, France
- Verdikt Conference, 1-2 November 2010, Oslo
- ICT2010 27 September 2010, Brussels
- Paris Game AI Conference 23-24 June 2010, France

11 Media

- Newspaper Article, Pakistan Daily Climax, related to INTAP2019
- NTNU expert in Artificial Intelligence for journalists ¹²
- $\bullet\,$ News in media EU Horizon SMILE Project, Oppland Arbeider Blad 13
- Article in Oppland Arbeiderblad [2] ¹⁴
- Expert opinion on 3D biometrics, TU (Tekniske Ukeblad) ¹⁵

12 Promotion, Recruitment, Thesis Evaluations

12.1 Promotion and Recruitment

- 2017- Member of many PhD and postdoc recruitment selection committees, at IIK, NTNU
- 2019 External committee member of evaluation of staff to docent promotion at Blekinge Institute of Technology, Sweden
- 2018 External committee member for the evaluation of applications for a PhD fellowship at OsloMet

12.2 PhD Theses

- 2020 Member of the PhD Evaluation Committee, Ismail Bezzine, PhD student at University Sorbonne Paris Nord [3]
- 2020 Head of PhD Evaluation Committee, Pawel Grzegorz Drozdowski, NTNU in accordance with the Norwegian PhD System [4]
- 2020 Head of PhD Evaluation Committee, Ambika Shrestha Chitrakar, NTNU in accordance with the Norwegian PhD System [5]
- 2019 Head of PhD Evaluation Committee, Pankaj Shivdayal Wasnik, NTNU in accordance with the Norwegian PhD System [6]
- 2016 Internal opponent of PhD Defense Committee, Guoqiang Li, NTNU in accordance with the Norwegian PhD System [7]
- 2016 Head of PhD Evaluation Committee, Soumik Mondal, NTNU in accordance with the Norwegian PhD System [8]

 $^{^{12} \}rm https://www.ntnu.no/forskning/eksperter/kunstig-intelligens$

¹³https://www.oa.no/ntnu-i-gjovik/gjovik/kallerud/ntnu-sikrer-seg-millioner-fra-eu/s/5-35-375838

 $^{^{14} \}rm https://www.oa.no/debatt/ntnu-i-gjovik/energibransjen/kan-du-klare-a-spare-mer-strom-enn-naboen/o/5-35-343681$ $^{15} \rm https://www.tu.no/$

12.3 PhD Midterm

• 2020 Member of the PhD midterm evaluation committee for Georgios Kavallieratos

12.4 MSc Theses

- 2018 Member of the evaluation committee of the MSc thesis by Johnny Offerdal, IDI [9]
- 2017 Member of the evaluation committee of the MSc thesis by Alina Beliakova, IDI [10]
- 2015 External member of evaluation committee of the MSc thesis by Yasar Mumtaz, Oslo University [11].

13 Invited Courses

- 2020 Kunstig intelligens/KI, maskinlæring/ML og dyp læring i maritim sektor. Hva er potensialet?, Course given at "Digitalisering og cyber sikkerhet" for GCE Blue Maritime Cluster, 9 October
- 2019 AI&IoT&Business, a 3 hour online lecture for the Information Resource Management (IRM3000R) BSc course at the University of South-Eastern Norway, 14 March
- 2018 10 days intense course "Artificial Intelligence" at University of Tirana to MSc students studying Information Security

14 Number of Citations to Publications

As of August, 2023, Google Scholar reports 1412 citations, h-index of 19, and an i10-index of 44.

15 Current and Future Research Interests

Current:

- AI, ML, deep learning, image processing, system analysis and design in Health.
- Smartgrids, smart microgrids, IoT, AI, ML, cybersecurity, data privacy, risk assessment in Energy.
- Privacy, ethics and regulatory frameworks, GDPR, questionnaires, interviews, ML, malware detection and classification in biometrics based systems such as border crossing technology at land borders, ski injury management systems and online social network design, development and analysis for supplying information security.
- Research based education, problem solving based education, distance learning.

Future research directions include:

- Addressing cybersecurity, data privacy, risk assessment, AI, and ML related challenges in IoT based smart (energy) grids and development of an AI based cybersecurity platform for IoT based smart power grids.
- Skin lesion classification, video capsule endoscopy image enhancement and classification, health system architecture design, mobile devices based health care systems.
- Criminal ontology development and reasoning on the ontology across application areas in information security.
- Developing AI systems that can act in an ethical and privacy preserving way.

16 Funded Project Grants

16.1 Recent and Current Projects

Year	Applicant's role	Budget (NTNU/Total)	Budget IIK	Project name	Funding agency
WP leader and one $496,875 € / 5M€$ 2017-2020 of the two initiators of the project and		496,875€	SMILE: A Smart Mobility Approach of European Border Security	SEC-14-BES-2016 Horizon2020	
2017-2020	Main applicant	718 507 NOK (Sentral EU) + 199 000 NOK	91,750€	INCENTIVE SMILE	NTNU (Sentral EU + IE faculty)
2020-2023	WP leader	~436,500 € / 5M€	436,500€	METICOS	Horizon2020
2020-2023	Main applicant	589,275+196,000 NOK	78,527€	INCENTIVE METICOS	NTNU
2017-2020	Main applicant	250,000 NOK	25,000€	INCENTIVE INTENSIVE	Horizon proposal which scored over 12, hence funded with incentives from NTNU
2019-2022	WP researcher	1,150,000 NOK / 9,600,000 NOK	115,000€	ECODIS: Engineering and Condition monitoring in Digital Substation	Research Council of Norway, ENERGIX IPN
2019-2022	WP leader	2,200,000 NOK / 9,600,000 NOK	220,000€	INTERSECURE: Research Counc Security of supply Norway, ENERG in smartgrids with IPN interacting digital systems	
2019–2024	WP leader	6,000,000 NOK/ 28,000,000 NOK (3M -IIK, 3M-IDI)	300,000€	The Lying Pen of Scribes	Research Council of Norway, FRIPRO Toppforsk
2020-2023	WP Key Researcher	83,645 €/ 909,347 € (300 KNOK funding to IIK)	30,000€	PhDICTKES	KA2 and Industry Project
2019 - 2020	Co-applicant	476.521 CZK / 476521 CZK (181 KNOK funding to IIK)	18,100€	MODUS 2: MObility for Development of UniversitieS	EU EEA Grants
2015 - 2022	Project Leader & Academic Host	333,920 € / 333,920 €	333,920€	4 projects granted: Two to Kosovo (UP and UBT) and two to UT	Erasmus+ Global Mobility
2011-2016	Project Leader & Academic Host	11,000,000 NOK /11,000,000 NOK	1,100,000€	AEP: Academic Exchange for Progress	Ministry of Foreign Affairs Norway
2020-2023	WP leader	10 MNOK / 10 MNOK (1 M€)	(free contribution, no funding to IIK)	MAAS: Multipara meter Active Antenna Sensor	Research Council of Norway,
2015–2019 WP leader 10 MNOK / 10 MNOK (3MNOK funding to IIK)		300,000€	IQMED: Image Quality enhancement in MEDical diagnosis, monitoring and treatment	Research Council of Norway	
2020-2023	WG Chair & MC member	Funding based on travels & STSMs /500,000 €	10,000€	LITHME: Language In The Human-Machine Era	COST European Cooperation in Science and Technology action OC-2019-1-23689
2013-2017	MC member	Funding based on travels & STSMs /500,000 € (to IIK)	10,000€	IC1206: De- identification for privacy protection in multimedia content	Cost Action
2016 –2024	Key Researcher of WP2 (Smart Microgrids)	Expected funding 3 MNOK for supervision of a PhD student to IIK	300,000€	CINELDI: Center for intelligent electricity	Research Council of Norway, FME programme
		<u>~5,919,523</u> €/20,276,646€	3,532,085€		,,

Assume 1 € = 10 NOK Total budget = 20,276,646€ + CINELDI Budget

16.2 Past Educational Projects

- SMILE Bee¹⁶: 2016-. This is a project run by Prof. Dr Youngbong Seo from the Innovation Center for Engineering Education, Pusan National University, Pusan, South Korea and the other partner is Prof. El Hasani from the Department of Telecommunications, Networks and Computer Science, Chouaib Doukkali University, Morocco. The project is about improving engineering education.
- COINS: 2013-2018. Research School of Computer and Information Security) ¹⁷
- FRISC: 2012-2016.Forum for Research and Innovation in Security and Communications ¹⁸ is a network of organisations working on security in Norway.
- CIMET: 2007–2014. Colour in Informatics and Media Technology is a collaborative multiple degree master programme funded by the EU over the Erasmus Mundus programme.
- COSI: 2015–2019. Colour in Science and Industry is a collaborative multiple degree master program funded by the EU over the Erasmus Mundus program
- Since 2012 in 3DMT ¹⁹, the University Jean Monnet Saint-Etienne (France) and NTNU are combining their skills and expertise to offer a two-year Master Course in 3D Multimedia Technology (3DMT).

16.3 Past Research Projects

- HUMDIG: 2019-2019. Human Rights and Dignity: Policies and technology transforming the human rights discourse on refugees, funded by SAMKUL programme.
- Ambulance Drone: 2017-2018. funded by NTNU
- LTICR: 2017-2018. Language Teaching of Immigrant Children Using Robotics is a pre-project funded by the NFR
- SWAN: 2016-2018. Secure Access Control over Wide Area Network funded by IKTPLUSS.
- ENERGIZING: 2016-2017. A simplified 3D modelling (BIM) with gaming for digital energy efficient drift, maintenance and rehabilitation of water bone heating systems is a research pre-project funded by RFF-Inland
- SKI: 2015-2015. Development of a pilot database for handling information on injured persons in alpine facilities is funded by the Regional Research Funds Norway, Inland (RFF-Inland)
- IC1206: 2013-2017. De-identification for privacy protection in multimedia content
- INFUSE: 2012-2015. Development of Intelligent Search Motor is a project funded by the EU Eurostars programme.
- SPEED: 2011-2012. Sport EvEnt iDentity Management is a project funded by RFF-Inland
- DRONE: 2010–2010. Mobile Distributed Agents for Investigating Scenes of Evidence is a small project funded by the NFR and GUC.
- Dictionary: 2008-, Modeling and Simulation Dictionary Project.
- GED: 2007-2009. A Game Engine Development: Towards a unified platform for game development
- Security: 2005. Security Issues in Adaptive Distributed Systems, funding from HIHM.

17 Teaching

17.1 Courses Taught

¹⁶http://projectbee.co.kr/

¹⁷https://coinsrs.no/

¹⁸https://www.frisc.no/

¹⁹http://master-3dmt.eu/

YEAR	Name	Level	Semester	ECTS	Place	Teaching Methods	Respon- sibility	Content	Students/Study Programme
2011-	IMT6171 Real-time AI for robotics and simulated environments	PhD	Spring	5	GUC and NTNU	Lectures	Main	Robotics and simulation control, decision making	3 (CS & IS)
2010-	IMT4305 Image Analysis and Processing	MSc	Fall	7.5	GUC and NTNU	Lectures and Labs	Main	Fundamentals, transformations, filtering, spatial and Fourier domain, Restoration, Reconstruction, Segmentation, recognition	15 (CS & IS)
2009-	IMT3591 Artificial Intelligence	BSc/ MSc	Spring	10	GUC, NTNU and UT	Lectures, labs, assignments and project	Main	Symbolic and 45 subsymbolic Al (CS & IS) algorithms, applications	
2009-	IMT4303 Content-based indexing and Retrieval	MSc	Fall	7.5	GUC and NTNU	Lectures, labs, assignments and project	Main	Algorithms, performance, query and feedback,Varied upto 45 (CIMET, COSI, 3DMT, MACS CS,IS)image, video, audio, MPEG-7	
2009- 2011	IMT3601 Game Programming	BSc	Fall	10	GUC and NTNU	Lectures, labs, assignments	Main	Design patterns, physics, graphics, characters, mechanics, project management etc.	40 (GP)
2009- 2012	TPD4168 Game Design	BSc	Fall	7.5	GUC	Lectures, labs, assignments	Main	Game development methodology, documentation, game mechanics, engines.	40 (GP)
2008- 2009	Mathematics 2	BSc	Fall	15	нінм	Lectures, labs, assignments	Main	Numbers, algebra, functions	15 (CS, GP)
2009	Operating Systems	BSc	Spring	10	HIHM	Lectures, labs, assignments	Main	File systems,30programs,(CS, GP)processes,threads,Windows, Linux,hardware	

2006- 2008	Data Structures and Algorithms	BSc	Fall and Spring 2006	10	HIHM	Lectures, labs, assignments	Main	Search and sort algorithms, recursion, complexity, travels, best path, minimum tree spanning	30 (CS, GP)
2007	Data Communications 2	BSc	Fall	10	нінм	Lectures, labs, assignments	Main	Communication protocols, serial and parallel communication, Ethernet, LAN, WAN- UTP and TCP protocols, WWW, HTTP.	35 (CS, GP)
2004	Sub-symbolic Artificial Intelligence Methods	MSc	Spring and Fall	7.5	NTNU	Lectures, labs, assignments	Lectured 80 % of the course	Neural Networks, genetic programming, self-organizing networks, applications	45 (CS)
2001- 2002	Data Structures and Algorithms	BSc	Fall	10	EGE	Lectures, labs, assignments	Main	Search and sort algorithms, recursion, complexity, travels, best path, minimum tree spanning	30 (CS)
2002	Discrete Structures for Computer Science	BSc	Fall	10	EGE	Lectures, labs, assignments	Main		30 (CS)
2000	15-440\640 Distributed Systems	MSc	Fall		CMU	Labs, assignments	Teaching Assistant	Communication and remote procedure call, caching, fault tolerance failures,	150 (CS)
1998	Introduction to Computer Sciences	BSc	Fall	10	EGE	Lectures, labs, assignments	Main		80 (CS)

17.2 Høgskole pedagogikk certificate



Karakterutskrift

Navn: Yildirim-Yayilgan, Sule Studieprogram: Høgskolepedagogikk

Fnr: 070771 23428

Studenten har oppnådd følgende resultater ved Høgskolen i Innlandet :

_			Studie-	
Emne		Termin	poeng	Karakter
Andre emne	r			
2HPED01	Høgskolepedagogikk	2008 vår	15	Bestått

<u>Sum: 15,0</u>

27. januar 2021 _

underskrift Happ i Inne. EL-States



Karakterutskrift

Navn: Yildirim-Yayilgan, Sule

Fnr: 070771 23428

Studiepoeng- og karaktersystem

Studieåret varer normalt 10 måneder. Et fullt studieår er beregnet til 1500 - 1800 arbeidstimer og 60 studiepoeng.

Det norske karaktersystemet består av to karakterskalaer: en skala med karakterene bestått og ikke bestått og en gradert bokstavkarakterskala fra A til E for bestått og F for ikke bestått. For den graderte skalaen gjelder følgende kvalitative beskrivelser:

Α	Fremragende	Fremragende prestasjon som klart utmerker seg. Kandidaten viser svært god vurderingsevne og stor grad av selvstendighet.
В	Meget god	Meget god prestasjon. Kandidaten viser meget god vurderingsevne og selvstendighet.
С	God	Jevnt god prestasjon som er tilfredsstillende på de fleste områder. Kandidaten viser god vurderingsevne og selvstendighet på de viktigste områdene.
D	Nokså god	En akseptabel prestasjon med noen vesentlige mangler. Kandidaten viser en viss grad av vurderingsevne og selvstendighet.
Е	Tilstrekkelig	Prestasjonen tilfredsstiller minimumskravene, men heller ikke mer. Kandidaten viser liten vurderingsevne og selvstendighet.
F	lkke bestått	Prestasjon som ikke tilfredsstiller de faglige minimumskravene. Kandidaten viser både manglende vurderingsevne og selvstendighet.

Karakterskalaen er brukt absolutt. Det vil si at vurderingene er kriteriebaserte.

17.3 Pedagogisk Mappe Utvikling Certificate



Norges teknisk-naturvitenskapelige universitet Fakultet for samfunnsvitenskap og teknologiledelse Institutt for pedagogikk og livslang læring, Uniped

Sule Yildirim Yayilgan

har gjennomført

Modul innenfor NTNUs program for utdanningsfaglig basiskompetanse

Innenfor NTNUs program for utdanningsfaglig basiskompetanse tilbys et utvalg valgfrie moduler. Modulene utvikles i samråd med Uniped, fagmiljøer på fakultetene og støtteenheter i henhold til krav og retningslinjer for modulutvikling. Studieprogramrådet for universitetspedagogikk har det faglige ansvaret for godkjenning av modultilbudet innenfor programmet.

Følgende modul er fullført/bestått våren 2020:

Utvikling av pedagogisk mappe (20 timer)

Beskrivelse av modulen:

Kravene til utdanningsfaglig kompetanse har blitt skjerpet gjennom endring i forskrift om tilsetting og opprykk i undervisnings- og forskerstillinger. Ved både søknad om stilling, og opprykk til stilling vil det være krav om at den utdanningsfaglige kompetansen dokumenteres i en samlet fremstilling i form av en pedagogisk mappe. I denne modulen vil deltakerne få mulighet til å starte arbeidet med å utvikle sin egen pedagogiske mappe. Vi vil legge til rette for diskusjoner og refleksjoner knyttet til hva utdanningsfaglig kompetanse kan være, hvordan denne kan utvikles over tid, og hvordan utviklingen kan dokumenteres og vurderes.

Det er viktig å påpeke at det å utvikle en pedagogisk mappe fra start vil ta mye mer tid enn de 20 timer i denne modulen.

Trondheim 23. juni 2020

Marte B. Johansen

Marte Bratseth Johansen modulansvarlig

lant K. Pettersen

Marit R. Pettersen førstekonsulent

18 Supervision

18.1 Supervised PhD theses

I have supervised two PhD students as principal supervisor (both completed). I have co-supervised 2 other PhD students for periods. I have an ongoing PhD student in Smartgrid Cybersecurity, an ongoing PhD student co-supervision for MAAS project, an ongoing PhD student recruitment for the METICOS project and an ongoing PhD student recruitment in the Lying Pen of Scribes project.

Zenun Kastrati: Dr. Kastrati defended his thesis for the degree of PhD at NTNU, in February 2018 [12]. I was the principal supervisor with Prof Rune Hjelsvold was a co-supervisor. The thesis resulted in 6 journal papers, 4 book chapters and 1 extended abstract.

Ahmed Mohammed Kedir: Dr. Kedir started his PhD work with working title "Capsule video endoscopy" [13] in January, 2016. I am the principal supervisor, and Prof. Marius Pedersen is the co-supervisor. The PhD thesis is defended on 03.12.19 successfully.

Doney Abraham: I supervise Doney Abraham's PhD work [14]. I am the principal supervisor.

Alireza Pourafzal: I co-supervise Alireza Pourafzal's PhD work together with Principal supervisor Prof. Michael Cheffena for the MAAS project [15].

Sarang Shaikh: He is the new PhD student recruited for the METICOS project. He is supervised by me as the main supervisor and two other colleagues as co-supervisors.

I have also co-supervised Ogerta Elezaj, Romina Muka and Linda Wendelberg for periods.

18.2 Supervised MSc theses

Since 2007, I have supervised a total of 30 master theses and 10 more are in supervision. Students were supervised at GUC, NTNU and several other international universities: Vegard Andreas Ovredal [16] Quentin Mouret and Maël Nedellec [17] Bendik Wermundsen Mork [18] with co-supervisor Dr. Mohamed Abomhara Claudia Haubold [19] Nan Zhang [20] Blend Arifaj [21] with co-supervisor Prof. Jon Hardeberg and Prof. Lule Ahmedi (UP) **Doney Abraham** [22] with co-supervisors Anahita Golrang [23] Nita Mulliqi visited NTNU during spring 2019 for 5 months with the Erasmus+ ICM scholarship + funding from my NTNU project budget [24] Thomas Hatlebrekke [25] Alexa Mosegui [26] Lam Yat Hong [27] Mao Ruiquan [28] Yang Du [29] Thomas Mellemseter [30] Ani Khachatryan [31] Margarita Khokhlova [32] Limamou Gueye [33] Vivek Sharma [34] Adnan Abdalla [35] Gerardo Diego Espinosa De La Riva [36] Kamer Vishi [37] Victor Torres [38] Sveinung Monsen [39] Sindre Berg Stene [40] Henning Veflingstad [41] Anders Oredson [42]

Ero Stig Karlsen [43] I also remotely supervised the following MSc students: Brigite Peposhi in University of Tirana ([44]) Houssam Hajoui in Université Chouaib Doukkali ([45]

18.3 Supervised MSc course projects

(research planning course ²⁰, research planning course ²¹, specialization project ²²)

Øystein Helle's specialization project in Fall 2020 on Privacy-preserving machine learning for health institutes.

Quentin Mouret's specialization project in Fall 2020 on Adversarial attacks against deep learning algorithms and mitigation methods.

Maël Nedellec's specialization project in Fall 2020 on Adversarial attacks against deep learning algorithms and mitigation methods.

Binu Melit Devassy's advance project work course in Fall 2018 together with Jon Yngve Hardeberg. He is a MSc student whom studied his third semester at NTNU being enrolled at the Franco-Norwegian Master Program 3DMT. His advance project work was in the area of melanoma detection using machine learning. This work is published in ([46]).

Cristian Rocha's advanced project course work in Fall 2018. He is a MSc student whom studied his third semester at NTNU being enrolled at the Franco-Norwegian Master Program 3DMT. His advance project work was in the area of melanoma detection using machine learning. He submitted a course report with the title "Deep learning for skin lesion classification: a comparison between the performance of segmented and non-segmented images".

Sabri Bolkar's advanced project course work in Fall 2018 together with Prof. Faouzi A. Cheikh. He is a MSc student whom studied his third semester at NTNU being enrolled at the Franco-Norwegian Master Program 3DMT. His advance project work resulted in a journal article ([47]).

Anahita Mohammadi Golrang's research planing course work in Spring 2019 and the work resulted in a report titled "The application of multi-objective feature selection in Android malware detection systems".

18.4 Supervised BSc theses

I have supervised 8 BSc theses. At GUC and HIHM, bachelor thesis is most often conducted in groups, so this totals to a number of 10 students. Most of these theses were written for the degree of Computer Science and Game Programming. Currently I supervise and co-supervise two more BSc thesis, namely "Foreldrekontroll av barn på nett" and "How safe are children in Online Social Networks?" respectively.

The thesis [48] resulted in a book chapter ([49]). The other BSc theses supervised are [50], [51], [52] and [53]. The last thesis is co-supervised with Prof. Pavel Skrabanek from University of Pardubice and it resulted in a journal paper ([54]). Two more [55] and [56] are being supervised in cooperation with UP.

Besides, Alexandre Cros from ENISCAEN ²³ has completed his BSc work ([57]) during period 15.05.13 – 15.08.13 under my supervision while he had been an exchange student at GUC.

 $^{^{20} \}rm https://www.ntnu.edu/studies/courses/IMT4894\#tab=omEmnet$

²¹https://www.ntnu.edu/studies/courses/IMT4205#tab=omEmnet

 $^{^{22}} https://www.ntnu.edu/studies/courses/TTM4502tab=omEmnet$

 $^{^{23}}$ https://www.ensicaen.fr/

18.5 Internships

Spring 2021: Anass El Quahabi, 15/04/2021- 26.08.2021, ESIREM 4th year BSc student completed his internship under my supervision.

Summer 2020 (Postponed due to Covid-19): Buse Demirci, Beril Erzurum, Cankaya University, Istanbul, in cooperation with Assistant Prof. Gul Tokdemir, Computer Engineering Department

Spring 2019: Gunes Cepic: Middle East Technical University BSc student [58]

Semesters between 2011-2018: Coordination of internships of approx. 30 BSc and MSc exchange students in cooperation with IT companies in Oppland Region (with Jan Erik Østvang, CEO of SecCon AS) within AEP and Erasmus+ projects (Appendix ??).

19 Bibliography

Journal Publications

- Zenun Kastrati et al. "Analysis of Online Social Networks Posts to Investigate Suspects Using SEMCON". In: Lecture Notes in Computer Science 9182 (2015). Ed. by Gabriele Meiselwitz, pp. 148–157. DOI: 10.1007/978-3-319-20367-6_16. URL: https://doi.org/10.1007/978-3-319-20367-6_16.
- [47] Sabri Bolkar et al. "Deep Smoke Removal from Minimally Invasive Surgery Videos". In: 2018
 25th IEEE International Conference on Image Processing (ICIP) (Oct. 2018), pp. 3403–3407.
 ISSN: 2381-8549. DOI: 10.1109/ICIP.2018.8451815.
- [54] Pavel Škrabánek, Pavel Vodička, and Sule Yildirim-Yayilgan. "Control System of a Semi-Autonomous Mobile Robot**The work has been supported by the Funds of University of Pardubice, Czech Republic, grant No. SGS-2016-017." In: *IFAC-PapersOnLine* 49.25 (2016). 14th IFAC Conference on Programmable Devices and Embedded Systems PDES 2016, pp. 460–469. ISSN: 2405-8963. DOI: https://doi.org/10.1016/j.ifacol.2016.12.065. URL: http://www.sciencedirect.com/ science/article/pii/S2405896316327021.
- [59] Mohamed Abomhara et al. "A Comparison of primary stakeholders views on the deployment of biometrics technology in border management Case study of smart mobility at the European land borders". In: *Technology in society* (2020).
- [60] Nita Muliqi et al. "The Importance of Skip Connections in Encoder-Decoder Architectures for Colorectal Polyp Detection". In: Proceedings of IEEE international conference on image processing (2020). ISSN: 2381-8549. DOI: 10.1109/ICIP40778.2020.9191310.
- [62] Athar Khodabakhsh and Sule Yildirim Yayilgan. "Data Privacy in IoT Equipped Future Smart Homes". In: *LNCS* 5805 (2020 In print).
- [63] Ogerta Elezaj and Sule Yildirim Yayilgan. "Criminal Network Community Detection in Social Media Forensics". In: LNCS 5805 (2020 - In print).
- [64] Mohamed Abomhara and Sule Yildirim Yayilgan. "A Privacy and Data Protection Best Practices for Biometrics Data Processing in Border Control: Lesson Learned from SMILE". In: LNCS 5805 (2020 - In print).
- [65] Yen-Ting Lee et al. "Data-Driven Machine Learning Approach for Human Action Recognition Using Skeleton and Optical Flow". In: *LNCS* 5805 (2020 In print).
- [66] Anahita Golrang, Sule Yildirim Yayilgan, and Ogerta Elezaj. "The multi-objective feature selection in Android malware detection system". In: *LNCS* 5805 (2020 In print).
- [67] Ferhat Ozgur Catak and Sule Yildirim Yayilgan. "Deep Neural Network based Malicious Network Activity Detection Under Adversarial Machine Learning Attacks". In: LNCS 5805 (2020 - In print).
- [68] Ahmed Mohammed et al. "PS-DeVCEM: Pathology-sensitive deep learning model for video capsule endoscopy based on weakly labeled data". In: Computer Vision and Image Understanding (2020). DOI: 10.1016/j.cviu.2020.103062.
- [69] Sule Yildirim Yayilgan et al. "Pre-trained CNN based deep features with hand-crafted features and patient data for skin lesion classification". In: *LNCS* 5805 (2020 In print).
- [70] Mohamed Abomhara et al. "How to Do It Right: A Framework for Biometrics Supported Border Control". In: Part of the Communications in Computer and Information Science (2020). Ed. by Sokratis Katsikas and Vasilios Zorkadis, pp. 94–109. DOI: https://doi.org/10.1007/978-3-030-37545-4_7.
- [72] Mohamed Abomhara et al. "Border Control and Use of Biometrics: Reasons Why the Right to Privacy Can Not Be Absolute". In: *IFIP Advances in Information and Communication Technology* (2020). Ed. by Michael Friedewald et al., pp. 259–271. DOI: 10.1007/978-3-030-42504-3_17. URL: https://doi.org/10.1007/978-3-030-42504-3_17.
- [73] Javed Ahmed et al. "Towards Blockchain-Based GDPR-Compliant Online Social Networks: Challenges, Opportunities and Way Forward". In: Advances in Intelligent Systems and Computing (2020). Ed. by Kohei Arai, Supriya Kapoor, and Rahul Bhatia, pp. 113–129.

- [75] Ogerta Elezaj et al. "Crime Intelligence from Social Media Using CISMO". In: Advances in Intelligent Systems and Computing. 1183 (2020). DOI: https://doi.org/10.1007/978-981-15-5856-6_44.
- [76] Ogerta Elezaj et al. "Towards Designing a Knowledge Graph-Based Framework for Investigating and Preventing Crime on Online Social Networks". In: Part of the Communications in Computer and Information Science (2020). Ed. by Sokratis Katsikas and Vasilios Zorkadis, pp. 181–195. DOI: https://doi.org/10.1007/978-3-030-37545-4_12.
- [77] Ferhat Ozgur Catak et al. "Practical Implementation of Privacy Preserving Clustering Methods Using a Partially Homomorphic Encryption Algorithm". In: *Electronics* 9.2 (Jan. 2020), p. 229. ISSN: 2079-9292. DOI: 10.3390/electronics9020229. URL: http://dx.doi.org/10.3390/ electronics9020229.
- [79] Anahita Golrang et al. "A Novel Hybrid IDS Based on Modified NSGAII-ANN and Random Forest". In: *Electronics* 9.4 (Mar. 2020), p. 577. ISSN: 2079-9292. DOI: 10.3390/electronics9040577. URL: http://dx.doi.org/10.3390/electronics9040577.
- [81] Ahmed Mohammed et al. "Deep-STRESS Capsule Video Endoscopy Image Enhancement". In: Color and Imaging Conference 2018.1 (2018), pp. 247-252. ISSN: 2166-9635. DOI: doi:10.2352/ ISSN.2169-2629.2018.26.247. URL: https://www.ingentaconnect.com/content/ist/cic/ 2018/00002018/00000001/art00040.
- [82] Tomás Majtner, Sule Yildirim-Yayilgan, and Jon Y. Hardeberg. "Optimised deep learning features for improved melanoma detection". In: *Multimedia Tools and Applications* 78 (2018), pp. 11883– 11903. DOI: https://doi.org/10.1007/s11042-018-6734-6.
- [83] Zenun Kastrati, Ali Shariq Imran, and Sule Yildirim Yayilgan. "The impact of deep learning on document classification using semantically rich representations". In: Inf. Process. Manag. 56.5 (2019), pp. 1618–1632. DOI: 10.1016/j.ipm.2019.05.003. URL: https://doi.org/10.1016/j. ipm.2019.05.003.
- [85] Sule Yildirim and Turhan Tunali. "The Implementation of a Robotic Replanning Framework". In: Advances in Information Systems (2002). Ed. by Tatyana Yakhno, pp. 195–204. DOI: https: //doi.org/10.1007/3-540-36077-8_19.
- [98] Sule Yildirim, Ronald L. Beachell, and Henning Veflingstad. "Novel Rock Detection Intelligence for Space Exploration Based on Non-Symbolic Algorithms and Concepts". In: AIP Conference Proceedings 880.1 (2007), pp. 760–768. DOI: 10.1063/1.2437515. eprint: https://aip.scitation. org/doi/pdf/10.1063/1.2437515. URL: https://aip.scitation.org/doi/abs/10.1063/1. 2437515.
- [100] Henning Veflingstad and Sule Yildirim. "Novelty Detection in and Between Different Modalities". In: AIP Conference Proceedings 969.1 (2008), pp. 818-826. DOI: 10.1063/1.2845047. eprint: https://aip.scitation.org/doi/pdf/10.1063/1.2845047. URL: https://aip.scitation.org/doi/abs/10.1063/1.2845047.
- Jun Wang et al. "Reciprocity between the cerebellum and the cerebral cortex: Nonlinear dynamics in microscopic modules for generating voluntary motor commands". In: *Complexity* 14.2 (2008), pp. 29-45. DOI: 10.1002/cplx.20241. URL: https://doi.org/10.1002/cplx.20241.
- [105] Sule Yildirim Yayilgan et al. "An Architectural Approach to Building Ambient Intelligent Travel Companions". In: International Journal of E-Health and Medical Communications IJEHMC 3.3 (2012), pp. 86–95. DOI: 10.4018/jehmc.2012070107.
- [107] Sule Yildirim Yayilgan et al. "A New Ski Injury Registration System Architecture Using Mobile Applications to Enhance Skiing Safety". In: International Journal of Interactive Mobile Technologies (iJIM) 10.4 (2016), pp. 4–10. DOI: http://dx.doi.org/10.3991/ijim.v10i4.5540. URL: http://www.online-journals.org/index.php/i-jim/article/view/5540.
- [118] Aud Tone Vold, Sule Yildirim, and Jan Oddvar Sørnes. "New Takes on Learning in Organizations When Using Role Play Simulation". In: The Proceedings of the 15th European Conference on Knowledge Management 1-3 (2014). ISSN: 2048-8963.
- [127] Edlira Kalemi and Sule Yildirim-Yayilgan. "Ontologies for Social Media Digital Evidence". In: World Academy of Science, Engineering and Technology, International Journal of Computer, Electrical, Automation, Control and Information Engineering 10.2 (2016).

- [128] Edlira Kalemi et al. "SMONT: an ontology for crime solving through social media". In: International Journal of Metadata, Semantics and Ontologies 12.2/3 (2017), pp. 71-81. DOI: 10.1504/IJMS0.2017.10011827. URL: https://doi.org/10.1504/IJMS0.2017.10011827.
- [132] Ogerta Elezaj, Sule Yildirim, and Edlira Kalemi. "Data-Driven Machine Learning Approach for Predicting Missing Values in Large Data Sets: A Comparison Study". In: LNCS. Lecture Notes in Computer Science 10710 (2017). Ed. by Giuseppe Nicosia et al., pp. 268–285. DOI: 10.1007/978-3-319-72926-8_23. URL: https://doi.org/10.1007/978-3-319-72926-8_23.
- [134] Kadri Sylejmani et al. "Distribution of fiscal coupons via Genetic Algorithms and Greedy Randomized Adaptive Search Procedure". In: International Journal of Computer Information Systems and Industrial Management Applications 10 (2018), pp. 143–153. ISSN: 2150-7988.
- [135] Qëndresë Hyseni et al. "Solving the Problem of Distribution of Fiscal Coupons by Using a Steady State Genetic Algorithm". In: Innovations in Bio-Inspired Computing and Applications (2018). Ed. by Ajith Abraham et al., pp. 49–59. DOI: https://doi.org/10.1007/978-3-319-76354-5_5.
- [136] Marika Apostolova Trpkovska, Sule Yildirim Yayilgan, and Adrian Besimi. "An Integrated Children Disease Prediction Tool within a Special Social Network." In: *Studies in health technology* and informatics 221 (2016), pp. 69–73. DOI: 10.3233/978-1-61499-633-0-69.
- [137] Pavel Škrabánek and Sule Yildirim-Yayilgan. "WECIA Graph: Visualization of classification performance dependency on grayscale conversion setting". In: MENDEL journal series (SJR 0.2, Scopus) (2018). DOI: 10.13164/mendel.2018.2.041.
- [143] Vivek Sharma, Sule Yildirim Yayilgan, and Luc Van Gool. "Low-cost scene modeling using a density function improves segmentation performance". In: 25th IEEE International Symposium on Robot and Human Interactive Communication, RO-MAN 2016, New York, NY, USA, August 26-31, 2016 (2016), pp. 77–84. DOI: 10.1109/ROMAN.2016.7745113. URL: https://doi.org/10. 1109/ROMAN.2016.7745113.
- [147] Adnan Abdalla and Sule Yildirim Yayilgan. "A Review of Using Online Social Networks for Investigative Activities". In: LNCS (2014). Ed. by Gabriele Meiselwitz, pp. 3–12.
- [155] Claudia Companioni-Brito et al. "Editorial Image Retrieval Using Handcrafted and CNN Features". In: (2018), pp. 284–291. DOI: 10.1007/978-3-319-94211-7_31. URL: https://doi.org/ 10.1007/978-3-319-94211-7_31.
- [157] Yat Hong Jacky Lam and Sule Yildirim Yayilgan. "Saliency-Based Image Object Indexing and Retrieval". In: (2018), pp. 269-277. DOI: 10.1007/978-3-319-93000-8_31. URL: https: //doi.org/10.1007/978-3-319-93000-8_31.
- [159] Evelyn Paiz-Reyes, Nadile Nunes-de-Lima, and Sule Yildirim Yayilgan. "GIF Image Retrieval in Cloud Computing Environment". In: Lecture Notes in Computer Science (2018), pp. 261–268. DOI: 10.1007/978-3-319-93000-8_30. URL: https://doi.org/10.1007/978-3-319-93000-8_30.
- [160] Claudia Companioni-Brito et al. "Mobile-Based Painting Photo Retrieval Using Combined Features". In: (2018), pp. 278–284. DOI: 10.1007/978-3-319-93000-8_32. URL: https://doi.org/ 10.1007/978-3-319-93000-8_32.
- [167] Zenun Kastrati, Ali Shariq Imran, and Sule Yildirim Yayilgan. "A General Framework for Text Document Classification Using SEMCON and ACVSR". In: Lecture Notes in Computer Science 9172 (2015). Ed. by Sakae Yamamoto, pp. 310–319. DOI: 10.1007/978-3-319-20612-7_30. URL: https://doi.org/10.1007/978-3-319-20612-7_30.
- [170] Zenun Kastrati, Ali Shariq Imran, and Sule Yildirim Yayilgan. "SEMCON: A Semantic and Contextual Objective Metric for Enriching Domain Ontology Concepts". In: Int. J. Semantic Web Inf. Syst. 12.2 (2016), pp. 1–24. DOI: 10.4018/IJSWIS.2016040101. URL: https://doi. org/10.4018/IJSWIS.2016040101.
- Zenun Kastrati and Sule Yildirim Yayilgan. "Improving Document Classification Effectiveness Using Knowledge Exploited by Ontologies". In: Lecture Notes in Computer Science 10260 (2017). Ed. by Flavius Frasincar et al., pp. 435–438. DOI: 10.1007/978-3-319-59569-6_52. URL: https://doi.org/10.1007/978-3-319-59569-6_52.
- [178] Ahmed Mohammed et al. "Stochastic Capsule Endoscopy Image Enhancement". In: Journal of Imaging 4.6 (2018). ISSN: 2313-433X. DOI: 10.3390/jimaging4060075. URL: http://dx.doi. org/10.3390/jimaging4060075.

- [179] Ahmed Mohammed et al. "Sparse Coded Handcrafted and Deep Features for Colon Capsule Video Summarization". In: Computer-Based Medical Systems (June 2017), pp. 728–733. ISSN: 2372-9198. DOI: 10.1109/CBMS.2017.13.
- [180] Ahmed Mohammed et al. "Variational approach for capsule video frame interpolation". In: EURASIP Journal on Image and Video Processing 2018.1 (May 2018), p. 30. ISSN: 1687-5281. DOI: 10.1186/ s13640-018-0267-9. URL: https://doi.org/10.1186/s13640-018-0267-9.
- [182] Wendelberg Linda, Volden Frode, and Yildirim-Yayilgan Sule. "Death anxiety and visual oculomotor processing of arousing stimuli in a free view setting". In: Scand J Psychol. 58.2 (2017), pp. 131–141. DOI: doi:10.1111/sjop.12354.
- [183] Fisnik Dalipi, Sule Yildirim Yayilgan, and Zenun Kastrati. "Enhancing the Learner's Performance Analysis Using SMEUS Semantic E-learning System and Business Intelligence Technologies". In: Lecture Notes in Computer Science 9192 (2015). Ed. by Panayiotis Zaphiris and Andri Ioannou, pp. 208–217. DOI: 10.1007/978-3-319-20609-7_20. URL: https://doi.org/10.1007/978-3-319-20609-7_20.
- [185] Fisnik Dalipi, Sule Yildirim Yayilgan, and Alemayehu Gebremedhin. "Data-Driven Machine-Learning Model in District Heating System for Heat Load Prediction: A Comparison Study". In: Applied Comp. Int. Soft Computing 2016 (2016), 3403150:1-3403150:11. DOI: 10.1155/2016/3403150. URL: https://doi.org/10.1155/2016/3403150.
- [190] Fisnik Dalipi et al. "Towards Understanding the MOOC Trend: Pedagogical Challenges and Business Opportunities". In: Lecture Notes in Computer Science 9753 (2016). Ed. by Panayiotis Zaphiris and Andri Ioannou, pp. 281–291. DOI: 10.1007/978-3-319-39483-1_26. URL: https://doi.org/10.1007/978-3-319-39483-1_26.
- [192] Fisnik Dalipi, Mexhid Ferati, and Sule Yildirim Yayilgan. "User Interface Evaluation of a Ski Injuries Management System". In: Advances in Human Factors in Sports and Outdoor Recreation. Advances in Intelligent Systems and Computing 496 (2017). DOI: 10.1007/978-3-319-41953-4_19.
- [193] Tomás Majtner, Sule Yildirim Yayilgan, and Jon Yngve Hardeberg. "Efficient Melanoma Detection Using Texture-Based RSurf Features". In: Lecture Notes in Computer Science 9730 (2016). Ed. by Aurélio Campilho and Fakhri Karray, pp. 30–37. DOI: 10.1007/978-3-319-41501-7_4. URL: https://doi.org/10.1007/978-3-319-41501-7%5C_4.
- [197] Tomás Majtner et al. "Improving skin lesion segmentation in dermoscopic images by thin artefacts removal methods". In: 6th European Workshop on Visual Information Processing, EUVIP 2016, Marseille, France, October 25-27, 2016 (2016), pp. 1–6. DOI: 10.1109/EUVIP.2016.7764580. URL: https://doi.org/10.1109/EUVIP.2016.7764580.

Book chapters

- [46] Binu Melit Devassy, Sule Yildirim-Yayilgan, and Jon Yngve Hardeberg. "The Impact of Replacing Complex Hand-Crafted Features with Standard Features for Melanoma Classification Using Both Hand-Crafted and Deep Features". In: *Intelligent Systems and Applications*. Ed. by Kohei Arai, Supriya Kapoor, and Rahul Bhatia. Cham: Springer International Publishing, 2019, pp. 150–159. ISBN: 978-3-030-01054-6. DOI: https://doi.org/10.1007/978-3-030-01054-6_10.
- [49] Fisnik Dalipi et al. "An intelligent model for predicting the occurrence of skiing injuries". In: 2015 5th National Symposium on Information Technology: Towards New Smart World (NSITNSW). Feb. 2015, pp. 1–7. DOI: 10.1109/NSITNSW.2015.7176420.
- [61] Athar Khodabakhsh et al. "Cyber-Risk Identification for a Digital Substation". In: Proc. First International Workshop on Electrical Power and Energy Systems Safety, Security and Resilience (EPESec 2020). ACM, 2020. ISBN: 978-1-4503-8833-7. DOI: https://doi.org/10.1145/3407023. 3409227.
- [71] Athar Khodabakhsh et al. "Cyber-Security Gaps in a Digital Substation: From Sensors to SCADA". In: Embedded Computing (MECO), Mediterranean Conference on (MECO2020 and CPSIoT2020). 2020. ISBN: 978-1-7281-1740-9. DOI: 10.1109/MEC049872.2020.9134350.

- [74] Javed Ahmed et al. "GDPR Compliant Consent Driven Data Protection in Online Social Networks: A Blockchain-Based Approach". In: 2020 3rd International Conference on Information and Computer Technologies (ICICT). 2020, pp. 307–312. ISBN: 978-1-7281-7284-2. DOI: 10.1109/ ICICT50521.2020.00054.
- [78] Ogerta Elezaj et al. "Data-Driven Intrusion Detection System for Small and Medium Enterprises". In: 2019 IEEE 24th International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD). 2019, pp. 1–7. ISBN: 978-1-7281-1016-5. DOI: 10.1109/CAMAD.2019.8858166.
- [88] Sule Yildirim. "A Learning Based Vision Guided Robotic Agent Replanning Framework and a Case Study". In: Proceedings of the International Conference on Artificial Intelligence, IC-AI '04, Volume 2, Proceedings of the International Conference on Machine Learning; Models, Technologies and Applications, MLMTA '04, June 21-24, 2004, Las Vegas, Nevada, USA. Ed. by Hamid R. Arabnia and Youngsong Mun. CSREA Press, 2004, pp. 770–776. ISBN: 1-932415-32-7.
- [91] Sule Yildirim. "Innate Planning Mechanism". In: Proceedings of the Worskshop on Modeling Natural Action Selection. Ed. by Bryson J. et al. AISB Press, 2005, pp. 221-224. URL: https: //www.academia.edu/24903782/Innate_Planning_Mechanisms.
- [96] Sule Yildirim and Ronald L. Beachell. "Does the Human Brain Have Algorithms?" In: Proceedings of the 2006 International Conference on Artificial Intelligence, ICAI 2006, Las Vegas, Nevada, USA, June 26-29, 2006, Volume 2. Ed. by Hamid R. Arabnia. CSREA Press, 2006, pp. 486–492. ISBN: 1-932415-97-1.
- [99] Sule Yildirim, Gregory L. Dam, and James C. Houk. "The Mind Agents in Netlogo 3.1". In: Proceedings of the 2007 Spring Simulation Multiconference - Volume 2. SpringSim '07. Norfolk, Virginia: Society for Computer Simulation International, 2007, pp. 137–143. ISBN: 978-1-56555-313-2.
- [101] Sule Yildirim and Sindre Berg Stene. "A survey on the need and use of AI in game agents". In: Proceedings of the 2008 Spring Simulation Multiconference, SpringSim 2008, Ottawa, Canada, April 14-17, 2008. 2008, pp. 124-131. URL: http://dl.acm.org/citation.cfm?id=1400549. 1400565.
- [106] Sule Yildirim Yayilgan et al. "A novel system architecture for efficient management of skiing injuries". In: 2015 International Conference on Interactive Mobile Communication Technologies and Learning (IMCL). Nov. 2015, pp. 73–77. DOI: 10.1109/IMCTL.2015.7359558.
- [110] Sule Yildirim Yayilgan et al. "Group Identification at Border Crossing Points". In: BIOSIG 2011 -Proceedings of the Special Interest Group on Biometrics and Electronic Signatures, 08.-09. September 2011 in Darmstadt, Germany. Ed. by Arslan Brömme and Christoph Busch. Vol. 191. LNI. GI, 2011, pp. 291-296. ISBN: 978-3-88579-285-7. URL: http://subs.emis.de/LNI/Proceedings/ Proceedings191/article6473.html.
- [114] Ali Shariq Imran et al. "Semantic Tags for Lecture Videos". In: 2012 IEEE Sixth International Conference on Semantic Computing. Sept. 2012, pp. 117–120. DOI: 10.1109/ICSC.2012.36.
- [115] Ali Shariq Imran et al. "Semantic Keyword Selection for Automatic Video Annotation". In: 2013 International Conference on Signal-Image Technology Internet-Based Systems. Dec. 2013, pp. 241– 246. DOI: 10.1109/SITIS.2013.49.
- [116] Tone Vold et al. "Enhanced learning outcome using participative role play simulation". In: 2010 9th International Conference on Information Technology Based Higher Education and Training (ITHET). Apr. 2010, pp. 75–78. DOI: 10.1109/ITHET.2010.5480061.
- [117] Tone Vold and Sule Yildirim Yayilgan. "Playful participation for learning in higher education The introduction of participatory role play simulation in a course at Hedmark University College". In: 2013 12th International Conference on Information Technology Based Higher Education and Training (ITHET). Oct. 2013, pp. 1–4. DOI: 10.1109/ITHET.2013.6671063.
- [119] Ali Shariq Imran et al. "Objective keyword selection for lecture video annotation". In: 2014 5th European Workshop on Visual Information Processing (EUVIP). Dec. 2014, pp. 1–6. DOI: 10.1109/EUVIP.2014.7018378.

- [120] Sule Yildirim Yayilgan et al. "Knowledge, Technology and Innovation (KTI): Opportunities, issues and challenges of KTI transfer between Norway and the Balkans countries". In: 2015 International Conference on Information Technology Based Higher Education and Training, ITHET 2015, Lisbon, Portugal, June 11-13, 2015. 2015, pp. 1–7. DOI: 10.1109/ITHET.2015.7218022. URL: https://doi.org/10.1109/ITHET.2015.7218022.
- [125] Arild Jacobsen, Sindre Berg Stene, and Sule Yildirim. "Possibilities for Learning in Game Artificial Intelligence". In: Proceedings of the First Norwegian Artificial Intelligence Symposium. Tapir Akademisk Forlag, 2009, pp. 169–179. ISBN: 978-82-519-2519-8.
- [126] Sule Yildirim and Sindre Berg Stene. "A survey on the need and use of AI in game agensts". In: Modeling, simulation, and optimization: focus on applications. IntechOpen, 2010. ISBN: 978-953-307-055-1. DOI: 10.5772/8968.
- [129] Edlira Kalemi et al. "An EHR system architecture for Albania for improving health care services and its implementation". In: Proceedings of the 7th International Conference "Information Systems and Technology Innovations". 2016. ISBN: 978-9928-148-56-8.
- [130] Romina Muka, Sule Yildirim, and Kozeta Sevrani. "Legal and ethical considerations for transmission and storage of shared e-health data: A review". In: Proceedings of the 7th International Conference on Information Systems and Technology Innovations: the New Paradigm for a Smarter Economy. 2016. ISBN: 978-9928-148-56-8.
- [138] Frank Dittrich et al. "Pixelwise Object Class Segmentation based on Synthetic Data using an Optimized Training Strategy". In: First International Conference on Networks and Soft Computing (ICNSC2014). 2014. DOI: 10.1109/CNSC.2014.6906671.
- [148] Kamer Vishi and Sule Yildirim Yayilgan. "Multimodal Biometric Authentication Using Fingerprint and Iris Recognition in Identity Management". In: 2013 Ninth International Conference on Intelligent Information Hiding and Multimedia Signal Processing. Oct. 2013, pp. 334–341. DOI: 10.1109/IIH-MSP.2013.91.
- [151] Victor M. T. Ochoa, Sule Yildirim Yayilgan, and Faouzi Alaya Cheikh. "Adult Video Content Detection Using Machine Learning Techniques". In: 2012 Eighth International Conference on Signal Image Technology and Internet Based Systems. Nov. 2012, pp. 967–974. DOI: 10.1109/ SITIS.2012.143.
- [152] Limamou Gueye et al. "Automatic detection of colonoscopic anomalies using capsule endoscopy". In: 2015 IEEE International Conference on Image Processing, ICIP 2015, Quebec City, QC, Canada, September 27-30, 2015. IEEE, 2015, pp. 1061–1064. ISBN: 978-1-4799-8339-1. DOI: 10. 1109/ICIP.2015.7350962. URL: https://doi.org/10.1109/ICIP.2015.7350962.
- [154] Carlos A. Duque, Ani Khachatryan, and Sule Yildirim-Yayilgan. "A relevance feedback based image retrieval approach for improved performance". In: 2015 Colour and Visual Computing Symposium (CVCS). Aug. 2015, pp. 1–6. DOI: 10.1109/CVCS.2015.7274883.
- Zenun Kastrati, Ali Shariq Imran, and Sule Yildirim Yayilgan. "SEMCON: Semantic and contextual objective metric". In: Proceedings of the 9th IEEE International Conference on Semantic Computing, ICSC 2015, Anaheim, CA, USA, February 7-9, 2015. Ed. by Mohan S. Kankanhalli, Tao Li, and Wei Wang. IEEE Computer Society, 2015, pp. 65–68. ISBN: 978-1-4799-7935-6. DOI: 10.1109/ICOSC.2015.7050779. URL: https://doi.org/10.1109/ICOSC.2015.7050779.
- [165] Zenun Kastrati, Ali Shariq Imran, and Sule Yildirim Yayilgan. "An Improved Concept Vector Space Model for Ontology Based Classification". In: 11th International Conference on Signal-Image Technology & Internet-Based Systems, SITIS 2015, Bangkok, Thailand, November 23-27, 2015. Ed. by Kokou Yétongnon and Albert Dipanda. IEEE Computer Society, 2015, pp. 240-245. ISBN: 978-1-4673-9721-6. DOI: 10.1109/SITIS.2015.102. URL: https://doi.org/10.1109/ SITIS.2015.102.
- Zenun Kastrati, Sule Yildirim Yayilgan, and Rune Hjelsvold. "Automatically Enriching Domain Ontologies for Document Classification". In: Proceedings of the 6th International Conference on Web Intelligence, Mining and Semantics, WIMS 2016, Nimes, France, June 13-15, 2016. Ed. by Rajendra Akerkar et al. ACM, 2016, 29:1–29:4. ISBN: 978-1-4503-4056-4. DOI: 10.1145/2912845.
 2912875. URL: http://doi.acm.org/10.1145/2912845.2912875.

- [175] Zenun Kastrati and Sule Yildirim Yayilgan. "Supervised Ontology-Based Document Classification Model". In: Proceedings of the International Conference on Compute and Data Analysis, ICCDA 2017, Lakeland, FL, USA, May 19-23, 2017. ACM, 2017, pp. 245-251. ISBN: 978-1-4503-5241-3. DOI: 10.1145/3093241.3107883. URL: http://doi.acm.org/10.1145/3093241.3107883.
- [177] Zenun Kastrati, Ali Shariq Imran, and Sule Yildirim Yayilgan. "A Hybrid Concept Learning Approach to Ontology Enrichment". In: Innovations, Developments, and Applications of Semantic Web and Information Systems. 2018, pp. 85–119. DOI: 10.4018/978-1-5225-5042-6.ch004.
- [181] Ahmed Mohammed et al. "StreoScenNet: surgical stereo robotic scene segmentation". In: Medical Imaging 2019: Image-Guided Procedures, Robotic Interventions, and Modeling. Ed. by Baowei Fei and Cristian A. Linte. Vol. 10951. SPIE, 2019, pp. 174–182. DOI: 10.1117/12.2512518. URL: https://doi.org/10.1117/12.2512518.
- [186] Fisnik Dalipi, Sule Yildirim Yayilgan, and Alemayehu Gebremedhin. "A Cloud Computing Framework for Smarter District Heating Systems". In: 2015 IEEE 12th Intl Conf on Ubiquitous Intelligence and Computing and 2015 IEEE 12th Intl Conf on Autonomic and Trusted Computing and 2015 IEEE 15th Intl Conf on Scalable Computing and Communications and Its Associated Workshops (UIC-ATC-ScalCom), Beijing, China, August 10-14, 2015. IEEE Computer Society, 2015, pp. 1413-1416. ISBN: 978-1-4673-7211-4. DOI: 10.1109/UIC-ATC-ScalCom-CBDCom-IoP. 2015.255. URL: https://doi.org/10.1109/UIC-ATC-ScalCom-CBDCom-IoP.2015.255.
- [188] Fisnik Dalipi, Sule Yildirim Yayilgan, and Alemayehu Gebremedhin. "A machine learning approach to increase energy efficiency in district heating systems". In: Environmental Engineering and Computer Application : Proceedings of the International Conference on Environmental Engineering and Computer Application, ICEECA 2014. 2015, pp. 223–226. ISBN: 978-1-138-02807-4. DOI: 10.13140/RG.2.1.2213.1369.
- [189] Fisnik Dalipi and Sule Yildirim Yayilgan. "The impact of environmental factors to skiing injuries: Bayesian regularization neural network model for predicting skiing injuries". In: 2015 6th International Conference on Computing, Communication and Networking Technologies (ICCCNT). July 2015, pp. 1–6. DOI: 10.1109/ICCCNT.2015.7395218.
- [195] Tomás Majtner, Sule Yildirim Yayilgan, and Jon Yngve Hardeberg. "Combining deep learning and hand-crafted features for skin lesion classification". In: Sixth International Conference on Image Processing Theory, Tools and Applications, IPTA 2016, Oulu, Finland, December 12-15, 2016. IEEE, 2016, pp. 1–6. ISBN: 978-1-4673-8910-5. DOI: 10.1109/IPTA.2016.7821017. URL: https://doi.org/10.1109/IPTA.2016.7821017.
- [200] Fisnik Dalipi and Sule Yildirim Yayilgan. "Security and Privacy Considerations for IoT Application on Smart Grids: Survey and Research Challenges". In: 4th IEEE International Conference on Future Internet of Things and Cloud Workshops, FiCloud Workshops 2016, Vienna, Austria, August 22-24, 2016. Ed. by Muhammad Younas, Irfan Awan, and Joyce El Haddad. IEEE Computer Society, 2016, pp. 63–68. ISBN: 978-1-5090-3946-3. DOI: 10.1109/W-FiCloud.2016.28. URL: https://doi.org/10.1109/W-FiCloud.2016.28.

Conference and Workshop Papers

- [80] Ahmed Kedir Mohammed et al. "Y-Net: A deep Convolutional Neural Network for Polyp Detection". In: British Machine Vision Conference 2018, BMVC 2018, Northumbria University, Newcastle, UK, September 3-6, 2018. 2018, p. 308. URL: http://bmvc2018.org/contents/ papers/0487.pdf.
- [84] Sule Yildirim and Turhan Tunali. "A New Methodology For Dealing With Uncertainty In Robotic Tasks". In: Proceedings of the Fourteenth International Symposium on Computer and Information Sciences (ISCIS'99). IEEE. 1999.
- [86] Sule Yildirim and Turhan Tunali. "A Proposal For A Robotic Planning/Replanning Framework". In: Proceedings of the Eleventh Turkish Symposium on Artificial Intelligence and Neural Networks. 2002.
- [87] Sule Yildirim and Turhan Tunali. "A Learning Based and Vision Guided Robotic Agent Replanning Framework". In: Proceedings of the Twelfth Turkish Symposium on Artificial Intelligence and Neural Networks At: Canakkale, Turkey. 2003.

- [90] Sule Yildirim. "From Low level to High level Reasoning". In: Proceedings of the Thirteenth Turkish Symposium on Artificial Intelligence and Neural Networks. Dokuz Eylul University and Bogazici University, 2004.
- [95] Sule Yildirim, Gregory Dam, and Jim Houk. "Agents of the Mind to Emerge in Netlogo". In: Tenth Annual Swarm Agent-Based Simulation Meeting (SwarmFest 2006). University of Notre Dame, Indiana, USA, 2006.
- [103] Turhan Tunali, Sule Yildirim, and Tayfun Dalbasti. "The Use of Smart Cards in Health Care". In: Proceedings of the IST-2000-26429 Hermes Project Workshop, Co-sponsored by TUBITAK and METU, Ankara, Turkey. 2002. URL: https://www.ansatt.hig.no/suley/public_html/ Publications/COMBINE/SmartCrd.pdf.
- [108] Demissie B. Aredo and Sule Yildirim. "Security issues in adaptive distributed systems". In: Proceedings of the Fourteenth European Conference on Information Systems, ECIS 2006, Göteborg, Sweden, 2006. Ed. by Jan Ljungberg and Magnus Andersson. 2006, pp. 2206-2215. URL: http://aisel.aisnet.org/ecis2006/63.
- [112] Peter de Souza and Sule Yildirim. "Artificial Intelligence and "learning regions" an outline to research adventure". In: RSA Conference. May 2007, pp. 75–78.
- [113] Sule Yildirim. "Serious Game Design for Military Training". In: Games: Design and Research Conference, Volda University College. June 2010.
- [139] Poster & Extended Abstract Vivek Sharma et al. "Improving Human Pose Recognition Accuracy using CRF modeling". In: 8th IEEE Conference on Computer Vision and Pattern Recognition (CVPR). 2015.
- [145] Vivek Sharma et al. "Efficient Real-Time Pixelwise Object Class Labeling for Safe Human-Robot Collaboration in Industrial Domain". In: Proceedings of the 4th Workshop on Machine Learning for Interactive Systems, MLIS 2015, co-located with the 32nd International Conference on Machine Learning (ICML 2015), Lille, France, July 11th, 2015. Vol. 43. JMLR Workshop and Conference Proceedings. JMLR.org, 2015, pp. 6-14. URL: http://jmlr.org/proceedings/ papers/v43/sharma15.html.

Reports

- [2] Sule Yildirim. Kan du klare å spare mer strøm enn naboen? 2016.
- [121] Sule Yildirim et al. Energizing: A simplification of 3D modeling (BIM) at gaming digital energy efficient operation, maintenance and rehabilitation of water-based heating. 2017.
- [122] Sule Yildirim. Deliverables of the Horizon2020 SMILE Project. 2017-2020.
- [123] Sule Yildirim. Progres Reports of the AEP Project. 2011-2016.
- [124] Sule Yildirim-Yayilgan et al. SPEED: Sport Event Identity Management. 2012.

Written and Reviewed PhD Theses

- [3] Ismail Bezzine. "Multichannel Processing and Analysis for QoS and Quality driven video surveillance over wireless sensors". PhD thesis. 2020 - **Reviewed**.
- [4] Pawel Drozdowski. "Efficient privacy-preserving biometric identification in large-scale multibiometric systems". PhD thesis. 2020 - **Reviewed**.
- [5] Ambika Shrestha. "Constrained Approximate Search and Data Reduction Techniques in Cybersecurity and Digital Forensics". PhD thesis. 2020 - **Reviewed**.
- [6] Pankaj Wasnik. "Robust Biometrics on Smartphones Using Quality Assessment, Presentation Attack Detection, and Biometric Fusion". PhD thesis. 2019 - Reviewed.
- [7] Guoqiang Li. "Innovative methods for large-scale fingerprint identification systems Facilitating searching in a large-scale database". PhD thesis. 2016 **Reviewed**.
- [8] Soumik Mondal. "Continuous User Authentication and Identification Combination of Security Forensics". PhD thesis. 2016 **Reviewed**.
- [104] Sule Yildirim. "A Vision Guided Intelligent Task Planner for a Robot Arm". PhD thesis. International Computer Institute, Ege University (EGE), Turkey, 2002.