

Curriculum Vitae

INFORMAZIONI PERSONALI

Nome LILIANA
Cognome LO PRESTI
Recapiti V.le delle Scienze, Ed. 6, Dipartimento di Ingegneria
Telefono 091-23899526
E-mail liliana.lopresti@unipa.it

FORMAZIONE TITOLI

Education:

- April 2010, **PhD in Computer Engineering** - (XXI ciclo), University of Palermo;
- Sep. 2008 - July 2009, **Visiting scholar** at the Department of Computer Science, Boston University;
- July 2006, **MS in Computer Engineering** - (Laurea V.O.), University of Palermo (national mark: 110/110 cum laude)

Work Experiences and Qualifications:

- March 2024 - **Associate Professor** at the Department of Engineering, University of Palermo.
- 2023, National Scientific Qualification (ASN) to Full Professor in the Computer Engineering field (09/H1)
- March 2021 - Feb. 2024, **Assistant Professor on tenure track (RTD-B)** at the Department of Engineering, University of Palermo.
- 2019, National Scientific Qualification (ASN) to Associate Professor in the Computer Engineering field (09/H1)
- March 2016 - Feb. 2021, **Assistant Professor (RTD-A)** at the Department of Engineering, University of Palermo.
- Sep. 2013 - Sep 2015, **Post-doctoral associate** at the DICGIM, University of Palermo
- Aug. 2011 - July 2013, **Post-doctoral associate** at the Department of Computer Science, Boston University
- 2010 - 2011, **Post-doctoral fellow** at the Consorzio Sirio, within the project FR.A.S.I.

ATTIVITA' DIDATTICA

Teaching:

- 2023/2024 Algorithms and Data Structures (9 CFU) (undergrad level – degree course in Computer Engineering)
- 2023/2024 Data Analytics and Storage (3 CFU) (grad-level - MS Cyber-Physical Systems Engineering for Industry)
- 2023/2024 Computer Vision (6 CFU) (grad level – MS in Computer Engineering)
- 2022/2023 Data Analytics and Storage (3 CFU) (grad-level - MS Cyber-Physical Systems Engineering for Industry)
- 2022/2023 Algorithms and Data Structures (9 CFU) (undergrad level – degree course in Computer Engineering)
- 2022/2023 Computer Vision (6 CFU) (grad level – MS in Computer Engineering)
- 2021/2022 Algorithms and Data Structures (9 CFU) (undergrad level – degree course in Computer Engineering)
- 2021/2022 Eleectronic Calculators (12 CFU) (undergrad level – degree course in Cybernetics Engineering)
- 2020/2021 Algorithms and Data Structures (9 CFU) (undergrad level – degree course in Computer Engineering)
- 2020/2021 Object-Oriented Programming (9 CFU) (undergrad level – degree course in Innovation Engineering for Digital Companies)
- 2019/2020 Algorithms and Data Structures (9 CFU) (undergrad level – degree course in Computer Engineering)
- 2019/2020 Algorithms and Data Structures (6 CFU) (undergrad level – degree course in Computer Engineering)
- 2019/2020 Object-Oriented Programming (9 CFU) (undergrad level – degree course in Computer Engineering)
- 2018/2019 Algorithms and Data Structures (6 CFU) (undergrad level – degree course in Computer Engineering)
- 2018/2019 Object-Oriented Programming (9 CFU) (undergrad level – degree course in Innovation Engineering for Digital Companies)
- 2017/2018 Object-Oriented Programming (9 CFU) (undergrad level – degree course in Management and IT Engineering)
- 2016/2017 Object-Oriented Programming (9 CFU) (undergrad level – degree courses in Computer Engineering and Management and IT Engineering)
- 2016/2017 Operations Research (6 CFU) (undergrad level – degree course in Computer Engineering)
- 2015/2016 Operations Research (6 CFU) (undergrad level – degree course in Computer Engineering)
- 2013/2014 Numerical Methods (9 CFU) (undergrad level – degree course in Computer Engineering)

RICERCHE FINANZIATE

Grants:

- 2019 - 2023: PRIN 2017, I-MALL, improving the customer experience in stores by intelligent computer vision (co-PI)
- 2018 - 2019: FFABR 2017, art. 1, commi 295 e seguenti, legge 11/12/2016 n. 232

INCARICHI / CONSULENZE

2020 – oggi, Delegato all'Internazionalizzazione e Erasmus del Coordinatore del CdL in Ingegneria Informatica;
2022 – 2022, Componente della CPDS per il CDL di Ingegneria Informatica;
2021 – 2022, Componente della Commissione Laboratori del Dipartimento di Ingegneria;
2020 – 2021, Delegato all'Internazionalizzazione e Erasmus del Coordinatore del CdL in Ingegneria dell'Innovazione per le Imprese digitali;
2020 – 2021, Responsabile per i tirocini per il CdL in Ingegneria dell'Innovazione per le Imprese digitali;
2017 – 2018, Componente della commissione di verifica della personale preparazione per l'accesso alla LM in Ingegneria Informatica
2018 – 2018, Componente della commissione passaggi e trasferimenti del CdL in Ing. Informatica e delle Telecomunicazioni
2018 – 2023, Componente del collegio dei docenti del Dottorato di Ricerca in Ingegneria dell'Innovazione Tecnologica, ciclo XXXIV e ciclo XXXV, presso l'Università degli Studi di Palermo
2023 – Componente del collegio dei docenti del Dottorato di Ricerca in ICT, ciclo XXXVIII, presso l'Università degli Studi di Palermo

ASSOCIAZIONI SCIENTIFICHE

Member of:

- AAI (since 2019)
- CVPL (formerly GIRPR, since 2007)
- Lab CINI AIIS (since 2018)

PUBBLICAZIONE

Publications in Peer-reviewed Journals:

- Cruciata, G., Cruciata, L., **Lo Presti, L.**, van Gemert, J., and La Cascia, M. "Learn & drop: fast learning of cnns based on layer dropping". *Neural Computing and Applications*, 1-13, 2024.
- Cruciata, G., **Lo Presti, L.** and La Cascia, M., "Iterative Multiple Bounding-Box Refinements for Visual Tracking". *Journal of Imaging*, 8(3), p.61, 2022
- Cruciata G., **Lo Presti L.**, La Cascia M., "On the Use of Deep Reinforcement Learning for Visual Tracking: A Survey", *IEEE Access* 9 (2021): 120880-120900.
- Mazzola, G., **Lo Presti, L.**, Ardizzone, E. and La Cascia, M., "A dataset of annotated omnidirectional videos for distancing applications." *Journal of Imaging* (2021), 7(8), p.158.
- Monteleone V., **Lo Presti L.**, La Cascia M., Gauthier S., Xavier J., Zaoui M., Berthoz A., Cohen D., Chetouani M., Anzalone S., "Semi-automatic behavioral change-point detection: a case study analyzing children interactions with a social agent", *IEEE Transactions on Cognitive and Developmental Systems*, 2021, DOI 10.1109/TCDS.2020.3023196
- Dindo H., **Lo Presti L.**, La Cascia M., Chella A., Dedic R., "Hankel-based Action Classification for Motor Intention Recognition", *Robotics and Autonomous Systems*, 2017, Vol. 94, pp. 120-133, DOI 10.1016/j.robot.2017.04.003
- **Lo Presti L.**, La Cascia M., "Boosting Hankel Matrices for Face Emotion Recognition and Pain Detection", *Computer Vision and Image Understanding*, 2017, Vol. 156, pp. 19-33, DOI 10.1016/j.cviu.2016.10.007
- **Lo Presti L.**, La Cascia M., "3D Skeleton-based Human Action Classification: a Survey", *Pattern Recognition (PR)*, 2016, Vol. 53, pp. 130-147, DOI 10.1016/j.patcog.2015.11.019
- **Lo Presti L.**, La Cascia M., Sclaroff S., Camps O., "Hankel-based Dynamical Systems Modeling for 3D Action Recognition", *Elsevier Image and Vision Computing (IMAVIS)*, Vol. 44, pp. 29-43, 2015, DOI 10.1016/j.imavis.2015.09.007
- **Lo Presti L.**, La Cascia M., "Concurrent Photo Sequence Organization", *Springer Journal on Multimedia Tools and Applications (MTAP)*, 2014, ISSN 1380-7501, DOI 10.1007/s11042-012-1079-z
- **Lo Presti L.**, La Cascia M., "An On-line Learning Method for Face Association in Personal Photo Collection", *Elsevier Image and Vision Computing (IMAVIS)*, Vol. 30, pp. 306-316, May 2012, ISSN 0262-8856, DOI 10.1016/j.imavis.2012.02.011
- **Lo Presti L.**, Sclaroff S., La Cascia M., "Path Modeling and Retrieval in Distributed Video Surveillance Databases", *IEEE Transactions on Multimedia (TMM)*, Vol. 14, N. 2, April 2012, ISSN 1520-9210, DOI 10.1109/TMM.2011.2173323
- **Lo Presti L.**, Morana M., La Cascia M., "A data association approach to detect and organize people in personal photo collections", *Springer Journal on Multimedia Tools and Applications (MTAP)*, Vol. 1, N. 2, 2012, pp. 321-352, ISSN 1380-7501, DOI 10.1007/s11042-011-0839-5

Publications in Peer-reviewed Conferences/Workshops:

- Gazzeh, S., **Lo Presti, L.**, Douik, A., La Cascia, M. (2023) RLSTM: A Novel Residual and Recurrent Network for Pedestrian Action Classification. *Lecture Notes in Computer Science* 2023, 14185 LNCS.
- Becattini, F., Becchi, G., Ferracani, A., Bimbo, A.D., **Lo Presti, L.**, Mazzola, G., La Cascia, M., Cunico, F., Toaiari, A., Cristani, M. and Greco, A., "I-MALL An Effective Framework for Personalized Visits. Improving the Customer Experience in Stores", *Proceedings of the 1st Workshop on Multimedia Computing towards Fashion Recommendation, ACM MM-Workshop 2022*
- **Lo Presti, L.**; Mazzola, G.; La Cascia M.; "Activity Monitoring Made Easier by Smart 360-Degree Cameras", *Proc. of the 2nd Int. Workshop on Distributed Cameras, ECCV Workshop 2022*
- **Lo Presti, L.**, Mazzola, G., Averna, G., Ardizzone, E. and La Cascia, M., "Depth-Aware Multi-object Tracking in Spherical Videos". In *International Conference on Image Analysis and Processing* (pp. 362-374). 2022. Springer, Cham.

- **Lo Presti L.** and La Cascia M.. "Deep Motion Model for Pedestrian Tracking in 360 Degrees Videos", ICIAP 2019, Trento Italy, DOI 10.1007/978-3-030-30642-74
- Monteleone V., **Lo Presti L.** and La Cascia M.. "Particle filtering for tracking in 360 degrees videos using virtual PTZ cameras", ICIAP, 2019 Trento, Italy, DOI 10.1007/978-3-030-30642-77
- Monteleone V., **Lo Presti L.** and La Cascia M.. "Pedestrian Tracking in 360 Video by Virtual PTZ Cameras", IEEE 4th International Forum on Research and Technology for Society and Industry (RTSI) 2018, Palermo, Italy
- **Lo Presti L.** and La Cascia M. "Multi-modal medical image registration by local affine transformations", International Conference on Pattern Recognition Applications and Methods (ICPRAM) 2018, Portugal
- Monteleone V., **Lo Presti L.** and La Cascia M. "HoP: Histogram of Patterns for Human Action Representation", International Conference on Image Analysis and Processing (ICIAP) 2017, Catania, Italy
- **Lo Presti L.** and La Cascia M. "A Novel Time Series Kernel for Sequences Generated by LTI Systems", Asian Conference on Computer Vision (ACCV) 2016, Taiwan
- **Lo Presti L.**, La Cascia M., "Ensemble of Hankel Matrices for Face Emotion Recognition", Proc. of International Conference on Image Analysis and Processing (ICIAP), September 2015, Genova, Italy (in press), Best paper Candidate
- **Lo Presti L.**, La Cascia M., "Using Hankel Matrices for Dynamics-based Facial Emotion Recognition and Pain Detection", Proc. of IEEE Conference on Computer Vision and Pattern Recognition Workshop (CVPRW), June 2015, Boston, MA, USA ISBN 978-1-4673-6759-2
- **Lo Presti L.**, La Cascia M., "Tracking your Detector Performance: how to grow an effective training set in Tracking-by-Detection methods", Proc. of International Conference on Computer Vision Theory and Applications (VISAPP), March 2015, Berlin, Germany (in press)
- **Lo Presti L.**, La Cascia M., Sclaroff S., Camps O., "Gesture Modeling by Hanklet-based Hidden Markov Model", Proc. of Asian Conference on Computer Vision (ACCV), November 2014, Singapore, Singapore ISBN 978-3-319-16810-4, DOI 10.1007/978-3-319-16811-135
- **Lo Presti L.**, Sclaroff S., Rozga A., "Joint Alignment and Modeling of Correlated Behavior Streams", Proc. of International Conference on Computer Vision Workshop (ICCVW), December 2013, Sidney, Australia ISBN 978-1-4799-3022-7/13 DOI 10.1109/ICCVW.2013.100
- Rehg J., Abowd G., Rozga A., Romero M., Clements M., Sclaroff S., Essa I., Ousley O., Li Y., Kim C., Rao H., Kim J., **Lo Presti L.**, Zhang J., Lantsman D., Bidwell J., Ye Z. "Decoding Children's Social Behavior", IEEE Computer Vision and Pattern Recognition (CVPR), Portland, Oregon USA, June 2013 ISSN 1063-6919, DOI 10.1109/CVPR.2013.438
- Zhang J., **Lo Presti L.**, Sclaroff S., "Online Multi-Person Tracking by Tracker Hierarchy", IEEE Int. Conference on Advanced Video and Signal-based Surveillance (AVSS), Beijing, China, Sep. 2012 ISBN-13: 978-0-7695-4797-8, DOI 10.1109/AVSS.2012.51
- **Lo Presti L.**, La Cascia M. "Entropy-based localization of textured regions", International Conference on Image Analysis and Processing (ICIAP), Ravenna, Italy, Sep. 2011, Springer LNCS ISBN 978-3-642-24084-3, DOI 10.1007/978-3-642-24085-0
- Greco L., **Lo Presti L.**, Augello A., Lo Re G., La Cascia M., Gaglio S. "A Multi-Agent Decision Support System for Dynamic Supply Chain Organization", CEUR Proc. of Workshop on New Challenges in Distributed Information Filtering and Retrieval (DART), Palermo, Italy, Sep. 2011, (jointly with AI*IA 2011)
- **Lo Presti L.**, Morana M., and La Cascia M., "A Data Association Algorithm for People Re-Identification in Photo Sequences", Proc. of IEEE International Symposium on Multimedia (ISM 2010), Taichung, Taiwan, Dec. 2010 ISBN-13: 978-0-7695-4217-1, DOI 10.1109/ISM.2010.55
- **Lo Presti L.**, Sclaroff S. and La Cascia M., "Object matching in distributed video surveillance systems by LDA-based appearance descriptors", Proc. of International Conference on Image Analysis and Processing (ICIAP), Vietri sul Mare, Salerno, Italy, Sept. 2009, Springer LNCS ISBN 978-3-642-04145-7, DOI 10.1007/978-3-642-04146-4
- Gualdi G., Prati A., Cucchiara R., Ardizzone E., La Cascia M., **Lo Presti L.**, Morana M., "Enabling technologies on hybrid camera networks for behavioral analysis of unattended indoor environments and their surroundings", ACM Proc. of Workshop on Vision Networks for Behaviour Analysis, (VNBA), Oct. 2008, Vancouver, Canada (jointly with ACM MM 2008) ISBN 978-1-60558-313-6, DOI 10.1145/1461893.1461911
- **Lo Presti L.** and La Cascia M., "Real-time estimation of geometrical transformation between views in distributed smart-camera systems", Proc. of the second ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC), Sept. 2008, Stanford University, California ISBN 978-1-4244-2665-2, DOI 10.1109/ICDSC.2008.4635688
- **Lo Presti L.** and La Cascia M., "Real-time object detection in embedded video surveillance systems", Proc. of IEEE International Workshop on Image Analysis for Multimedia Interactive Service (WIAMIS), May 2008, Klagenfurt, Austria ISBN 978-0-7695-3130-4, DOI 10.1109/WIAMIS.2008.20
- Magro R., Cascio D., Fauci F., **Lo Presti L.**, Raso G., Ienzi R., Glorioso M., Iacomi M., Vasile M., Sorce S., "A Method to Reduce the FP/imm Number Through CC and MLO View Comparison in Mammographic Images", IEEE Proc. of Nuclear Science Sympos. - Medical Imaging Conf. (NSS-MIC), Oct. 2008, Germania
- Ardizzone E., Gambino O., La Cascia M., **Lo Presti L.** and Pirrone R., "Multi-Modal Non-Rigid Registration of Medical Images Based On Mutual Information Maximization", IEEE Proc. of International Conference on Image Analysis and Processing (ICIAP), Sept. 2007, Modena, Italy ISBN 0-7695-2877-5, DOI 10.1109/ICIAP.2007.4362865

ATTIVITA' SCIENTIFICHE

Chair:

- Local Chair: International Conference in Artificial Intelligence and Statistics (AISTATS), June 2020, Palermo
- Area Chair: IEEE Winter Conference on Applications of Computer Vision, (WACV) in 2016 and 2018
- Invited Session Chair: International Conference on Computer Vision Theory and Applications (VISAPP), March 2015, Berlin, Germany

Member of Program Committee:

- International Workshop on Assistive Computer Vision and Robotics (ACVR), 2013-2018
- International Conference on Network-Based Information Systems (NBIS), 2013

- International Workshop on Activity Monitoring by Multiple Distributed Sensing (AMMDS), 2013 - 2017
- International Workshop on Egocentric Perception, Interaction and Computing (ECCV/EPIC), 2018
- International Conference on Computer Vision Theory and Applications (VISAPP) 2017, 2018, 2019
- International Conference on Pattern Recognition (ICPR) 2020

Reviewer for (journals):

- Synthesis Lectures on Computer Vision - G. Medioni & S. Dickinson, Morgan & Claypool Publishers
- Elsevier International Journal of Computer Vision (IJCV)
- Elsevier Computer Vision and Image Understanding (CVIU)
- Elsevier Image and Vision Computing (IMAVIS);
- IEEE Trans. on Image Processing (TIP)
- IEEE Trans. on Multimedia (TMM)
- IEEE Trans. on Cybernetics;
- International Journal of Pattern Recognition and Artificial Intelligence (IJPRAI)
- Artificial Intelligence in Medicine (AIM);
- IET Computer Vision (IET-CV);
- Machine Vision and Applications (MVA)

Reviewer for (conferences):

AAAI (2020, 2021), ACCV (2012, 2018), AVSS (2009, 2012, 2017, 2023), CVPR (2009, 2012, 2013, 2018, 2019), ECCV (2012, 2018, 2020, 2022, 2024), ICCV (2009, 2011, 2017, 2019, 2023), ICDSC (2009, 2010), ICIAP (2007, 2015, 2017), WACV (2013, 2017, 2019), WCNWASA 2012, WHAU3D 2013, ICIP (2018), RTSI (2018), VISAPP (2018, 2019), ICPR 2018, AI*IA 2017

AMBITI DI RICERCA

Research interests: My main research interests are in the fields of Computer Vision and Machine Learning. Currently, I am working on the development of deep learning approaches for visual tracking and human action recognition. I am especially interested in the modelling of time series to better understand human behaviors.