

Agnese Chiatti



agnese.chiatti@open.ac.uk
<https://achiatti.github.io>



+44 07394 321316
Knowledge Media Institute,
Milton Keynes MK7 6AA



I am a **PhD Student** at the Knowledge Media Institute (the Open University, UK), working under the supervision of [Prof. Enrico Motta](#) and [Dr. Enrico Daga](#). I hold a M.S. in Information Sciences and Technology (IST) from the Pennsylvania State University, where I have worked with Profs. [Lee Giles](#), [Nilam Ram](#) and [Prasenjit Mitra](#).

My research is currently focused on developing **hybrid solutions**, combining **Knowledge-driven technologies** with **Machine Learning**, to enhance the **Visual Intelligence** of **service robots**. You can find out more about this project [here](#).

EDUCATION

2019 – Present

PhD Student at KMi (the Open University, UK)

Advisors: Prof. Enrico Motta, Dr. Enrico Daga

2016 – 2019

MS in Information Sciences and Technology at PSU

Advisor: Prof. Prasenjit Mitra

2012 – 2014

MS in Industrial Engineering and Management (IT minor) at Politecnico di Torino – Italy

Advisor: Prof. Tania Cerquitelli

2009 – 2012

BS in Industrial Engineering and Management (IT minor) at University of Bologna – Italy

EMPLOYMENT

June '18 – Sep '19	Research Assistant at KMI, the Open University, UK
Aug '16 – May '18	Research and Teaching Assistant at Penn State University
Jan '16 – Jun '16	Employee at Hera Group - R&D – Innovation - Italy
Jun '15 – Dec '15	Intern at Hera Group - R&D – Innovation - Italy
Feb '15 – Jun '15	Intern at CRIF - Business Analyst, UK Market - Italy
May '13 – Sep '13	Scholarship holder at Politecnico di Torino - Open Access Office – Italy

RESEARCH PROJECTS

- **(June- Sept 2019)** I was part of the organising team for the 1st International Robotic Competition to be held in a shopping mall, to test Human-Robot Interaction in a Smart City scenario ([the 2019 SciRoc Challenge](#)).
- **(June 2018 – Sept 2019)** My research at the Knowledge Media Institute (KMi - the Open University, UK), has been initially focused on object detection and recognition from Robot-collected RGB-Depth data, with [Prof. Enrico Motta](#), [Dr. Ilaria Tiddi](#) and [Dr. Emanuele Bastianelli](#) as line managers.
- **(Oct- Nov 2018)** At KMi, I have also collaborated with [Dr. Pinelopi Troullinou](#) to the final evaluation phase of the [Analytics for Everyday Learning \(AFEL\)](#) EU project, aimed at investigating how users reach informal and collective learning through online platforms.
- **(2016- 2018)** During my first two years at Penn State, I have worked with [Profs. Lee Giles](#) (IST) and [Nilam Ram](#) (Human Development and Family Studies) at the [Screenomics](#) project, a collaboration with Stanford University. My work has been focused on implementing a Cloud-based infrastructure for text extraction and retrieval from digital screenshots (collected from individuals' laptops and smartphones).
- **(2016 - 2017)** I have collaborated with [Drs. Jian Wu](#) and [Sagnik Ray Chodhoury](#) in the development of a scientific domain knowledge entity extractor, implementing a hybrid approach (supervised + unsupervised).
- **(2015 – 2016)** While working for an energy multi-utility, I have been part of a pilot project on energy consumption mappings, in a Smart City scenario.

- **(Aug-Sept 2014)** Visiting Master student at Linköping University (Sweden) in the Division for Database and Information Techniques. This visiting experience was part of my Master Thesis development, advised by [Prof. Tania Cerquitelli](#) (Politecnico di Torino) and [Prof. Patrick Lambrix](#) (Linköping University).

● PUBLICATIONS

● Journal ● Conference ● Workshop

2020

- **Chiatti, A.**, Motta, E., and Daga, E. (2020) [Towards a Framework for Visual Intelligence in Service Robotics: Epistemic Requirements and Gap Analysis](#). To appear in *Proceedings of the 17th International Conference on Principles of Knowledge Representation and Reasoning (KR 2020)*.
- **Chiatti, A.**, Bardaro, G., Bastianelli, E., Tiddi, I., Mitra, P. and Motta, E. [Task-agnostic Object Recognition for Mobile Robots through Few-shot Image Matching](#). 2020. *Electronics. Special Issue on Big Data Analytics for Smart Cities* .9(3), 380. MDPI.

2019


- Reeves, B., Ram, N., Robinson, T.N., Cummings, J. J., Giles, L., Pan, J., **Chiatti, A.**, Cho, M.J. et al. [Screenomics: A Framework to Capture and Analyze Personal Life Experiences and the Ways that Technology Shapes Them](#). *Human Computer Interaction*.
- **Chiatti, A.**, Bardaro, G., Bastianelli, E., Tiddi, I., Mitra, P. and Motta, E. [Exploring Task-agnostic, ShapeNet-based Object Recognition for Mobile Robots](#). In *Proceedings of the 3rd International workshop on Data Analytics solutions for Real-Life Applications (DARLI-AP 2019)*. CEUR.
- Bardaro, G., Semprebon, A., **Chiatti, A.**, and Matteucci, M. [From Models to Software Through Automatic Transformations: An AADL To ROS End-to-End Toolchain](#). In *Proceedings of the Third International Workshop on New Frontiers in Computational Robotics (NFCR '19)*. IEEE.
- Hoque, MRU, Bradley, D., Kwan, C., **Chiatti, A.**, Li, J., and Wu, J. [Searching for Evidence of Scientific News in Scholarly Big Data](#). In *Proceedings of the 10th International Conference on Knowledge Capture (K-CAP 2019)*. ACM.

2018


- **Chiatti, A.**, Cho, M. J., Gagneja, A., Yang, X., Brinberg, M., Roehrick, K., Choudhury, S. R., Ram, N., Reeves, B. and Giles, C. L. [Text Extraction and Retrieval from Smartphone Screenshots: Building a Repository for Life in Media](#). In *Proceedings of*

the 33rd ACM/SIGAPP Symposium on Applied Computing (SAC 2018). Pau, France. April 9-13, 2018.

2017

-  **Chiatti, A.**, Yang, X., Brinberg, M., Cho, M.J., Gagneja, A., Ram, N., Reeves, B., and Giles, C. L. [Text Extraction from Smartphone Screenshots to Archive in situ Media Behavior](#). In *Proceedings of the 9th International Conference on Knowledge Capture (K-CAP 2017)*. Austin, TX, USA. December 4-6, 2017.
-  Wu, J., Choudhury, S.R., **Chiatti, A.**, Liang, C. and Giles, C. L. [HESDK: A Hybrid Approach to Extracting Scientific Domain Knowledge Entities](#). In *Proceedings of the ACM/IEEE Joint Conference on Digital Libraries (JCDL 2017)*. 241-244. Toronto, ON, Canada, June 19-23, 2017.

2015

-  **Chiatti, A.**, Dragisic, Z., Cerquitelli, T. and Lambrix, P. [Reducing the search space in ontology alignment using clustering techniques and topic identification](#). In *Proceedings of the 8th International Conference on Knowledge Capture (K-CAP 2015)*. Palisades, NY, USA, October 7-10, 2015.





PRE-PRINTS

Chiatti, A., Bardaro, G., Daga, E. and Motta, E. (2019) [Improving Object Recognition for Mobile Robots by Leveraging Common-sense Knowledge Bases](#).

Chiatti, A., Davaasuren, D., Ram, N., Mitra, P., Reeves B., and Robinson, T. (2019) [Guess What's on my Screen? Clustering Smartphone Screenshots with Active Learning](#). ArXiv preprint 1901.02701.



TEACHING ASSISTANSHIPS

-  (Spring 2018) **IST 441** specialty class on **Information Retrieval and Search Engines** offered to senior undergraduate and graduate students.
-  (Fall 2016) **IST 210** sophomore-level required class on **Organization of Data**.



AWARDS AND SCHOLARSHIPS

Received the Christine Collet EDBT/ICDT Student Participation Award to attend [the 22nd International joint EDBT/ICTD conference](#), to be hold on March 25-29, 2019, in Lisbon, Portugal.

Selected to participate in the [2018 CRA-W Grad Cohort workshop](#) on April 12-14, 2018 in San Francisco, CA.



TECHNICAL SKILLS

Object-oriented programming: Python (advanced level), Java + {Java in Android SDK}, R, Matlab, C++ (very basic level).

Image Processing: OpenCV (2D), Open3D (3D).

Machine Learning: Scikit-learn, Pytorch and Keras for Deep Learning.

Robotics: Robot Operating System (ROS), rosbag data/logs manipulation in Python.

Data Analysis: SQL (SQLServer), MongoDB, Excel VBA, MS Access, RapidMiner.

Information Retrieval: Apache Solr + ElasticSearch Lucene, Heritrix (Web crawling).

Ontologies: RDF, OWL format, JSON for Linked data (JSON-LD).

GIS: Esri ArcGIS, QGIS.

Web Design: HTML, CSS, Django, SQL+PHP, Javascript

Cloud Systems: Google Cloud (storage, UNIX-based Virtual Machine setup and package installations), building Docker images for remote servers (CPU and GPU environments).

Functional testing: Selenium (Web) and SoapUI (A2A).



PC MEMBERSHIPS/ REVIEWING

- Reviewed for the Journal of [Information Systems Frontiers](#) (Springer).
- [CIKM 2020](#): 29th ACM International Conference on Information and Knowledge Management – Poster & Demo track.
- [DARLI-AP 2018-2020](#) : International workshop on Data Analytics solutions for Real-Life Applications.

- [TheWebConf 2019](#) (sub-reviewer): Web and Society Track at the 28th edition of the Web Conference series (formerly WWW).
- [DaS 2017](#): 1st International workshop on Data Science: Methodologies and Use-Cases.
- [ICDAR 2017](#): The 14th IAPR International Conference on Document Analysis and Recognition (sub-reviewer)



REFERENCES

Prof. Enrico Motta, Professor of Knowledge Technologies, Knowledge Media Institute, the Open University, Milton Keynes, UK. Email: enrico.motta@open.ac.uk, Phone: +44 (0)1908 653506

Prof. Prasenjit Mitra, Associate Dean for Research and Professor, The Pennsylvania State University, University Park, PA. Email: pmitra@ist.psu.edu, Phone: +1 (814) 865 2379

Prof. Nilam Ram, Professor, Human Development and Family Studies, and Psychology, The Pennsylvania State University, University Park, PA. Email: nur5@psu.edu, Phone: +1 (814) 865 7038

Prof. C. Lee Giles, David Reese Professor, The Pennsylvania State University, University Park, PA. Email: giles@ist.psu.edu, Phone: +1 (814) 865-7884

Prof. Tania Cerquitelli, Assistant Professor, Politecnico di Torino, Torino, Italy. Email: tania.cerquitelli@polito.it, Phone: (+39) 011 090 7178