Simone Conia

PhD Student in Computer Science

RESEARCH EXPERIENCE

Semantic Role Labelling

Sapienza, University of Rome   📅 06/2019 - Ongoing

Exploiting **Multilinguality and Cross-linguality** for neural Semantic Role Labelling in Natural Language Processing.
- Grant ID: Sapienza I.C.E. (Incarico di Collaborazione Esterna) 09/2019
- Supervisor: **Roberto Navigli**

Word Sense Disambiguation

Sapienza, University of Rome   📅 05/2020 - Ongoing

Improving Multilingual Word Sense Disambiguation with state-of-the-art deep learning architectures.

Concept Representation Learning

Sapienza, University of Rome   📅 11/2018 - 04/2019

Learning **language-independent Concept Representations** in Natural Language Processing.
- Grant ID: Sapienza B.S. (Borsa di Studio) 10/2018
- Supervisor: **Roberto Navigli**

EDUCATION

PhD in Computer Science

Sapienza, University of Rome   📅 2019 - Ongoing   📍 Rome, Italy
- **Best admitted student** in 2019
- Research Area: Semantic Role Labeling, Concept Representations, Natural Language Processing, Deep Learning
- Advisor: Prof. Roberto Navigli

M.S. Engineering in Computer Science

Sapienza, University of Rome   📅 10/2016 - 2019   📍 Rome, Italy
- Final grade: **110 with honors / 110**
- Grade Point Average: **30 / 30**
- Thesis: Multilingually-enhanced Concept Vector Representations for Natural Language Processing
- Advisor: Prof. Roberto Navigli

Honors Programme (Percorso di Eccellenza) in Natural Language Processing

Sapienza, University of Rome   📅 05/2018 - 2019   📍 Rome, Italy
- Topic: Semantic Role Labelling
- Advisor: Prof. Roberto Navigli

B.S. Engineering in Computer Science

Sapienza, University of Rome   📅 09/2013 - 10/2016   📍 Rome, Italy
- Final grade: **110 with honors / 110**

AWARDS

🏆 Outstanding Paper Award @ NAACL 2021

Awarded as **one of the best papers at NAACL 2021**, a top-tier conference for NLP.

🎖 3rd Place @ CyberChallenge.IT

A national training programme **sponsored by Microsoft, IBM and Cisco**, for 25 students cherry-picked among more than 700 candidates.

🎖 1st Place @ Google Workshop

An inter-university build-your-startup traineeship and competition directly **sponsored by Google**.
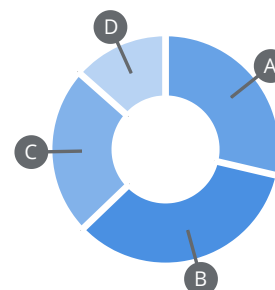
🎓 Honors Student Award

Honors Student (Laureato Eccellente) among the students graduated in the academic year 2017/2018.

https://uniroma1.it/it/notizia/la-giornata-del-laureato-2019

LANGUAGES

Italian	Native	●●●●●
English	Proficient	●●●●○
Japanese	Intermediate	●●●○○

MY CURRENT RESEARCH INTERESTS

- Ⓐ Concept Representation Learning
- Ⓑ Multilingual Semantic Role Labelling
- Ⓒ Word Sense Disambiguation
- Ⓓ Semantic Parsing

PUBLICATIONS

VerbAtlas: a Novel Large-Scale Verbal Semantic Resource and Its Application to Semantic Role Labeling

with Andrea di Fabio, Roberto Navigli; presented @ **EMNLP-IJCNLP 2019 (conference rating: A+).**

Conception: Multilingually-Enhanced, Human-Readable Concept Vector Representations

with Roberto Navigli; presented @ **COLING 2020 (conference rating: A).**

Bridging the Gap in Multilingual Semantic Role Labeling: A Language-Agnostic Approach

with Roberto Navigli; presented @ **COLING 2020 (conference rating: A).**

InVeRo: Making Semantic Role Labeling Accessible with Intelligible Verbs and Roles

with Davide Zanfardino, Fabrizio Brignone, Roberto Navigli; presented @ **EMNLP 2021 (conference rating: A+).**

Framing Word Sense Disambiguation as a Multi-Label Problem for Model-Agnostic Knowledge Integration

with Roberto Navigli; presented @ **EACL 2021 (conference rating: A).**

Unifying Cross-Lingual Semantic Role Labeling with Heterogenous Linguistic Resources

Outstanding Paper Award with Andrea Bacciu, Roberto Navigli; presented @ **NAACL 2021 (conference rating: A+).**

Ten Years of BabelNet: A Survey

with Roberto Navigli, Michele Bevilacqua, Dario Montagnini, Francesco Cecconi; presented @ **IJCAI 2021 (conference rating: A++)**.

Generating Senses and RoLes: An End-to-End Model for Dependency-and Span-based Semantic Role Labeling

with Rexhina Blloshmi, Rocco Tripodi, Roberto Navigli; presented @ **IJCAI 2021 (conference rating: A++)**

Named Entity Recognition for Entity Linking: What Works and What's Next

with Simone Tedeschi, Francesco Cecconi, Roberto Navigli; presented @ **EMNLP 2021 (conference rating: A+)**

UniteD-SRL: A Unified Dataset for Span- and Dependency-based Multilingual and Cross-Lingual Semantic Role Labeling

with Rocco Tripodi, Roberto Navigli; presented @ **EMNLP 2021 (conference rating: A+)**

AMuSE-WSD: An All-in-One Multilingual System for Easy Word Sense Disambiguation

with Riccardo Orlando, Fabrizio Brignone, Francesco Cecconi, Roberto Navigli; presented @ **EMNLP 2021 (conference rating: A+)**

InVeRo-XL: Making Cross-Lingual Semantic Role Labeling Accessible with Intelligible Verbs and Roles

with Riccardo Orlando, Fabrizio Brignone, Francesco Cecconi, Roberto Navigli; presented @ **EMNLP 2021 (conference rating: A+)**

SKILLS

Natural Language Processing

Artificial Intelligence

Machine Learning

Deep Learning

Semantic Role Labelling

Concept Representation Learning

RELATED TO NATURAL LANGUAGE PROCESSING

Japanese Language Proficiency Test / N3

The JLPT is a worldwide proficiency certification for the Japanese language.

Japanese Course at Nihon Bunka Kaikan (Japanese Institute of Culture) in Rome

The most ancient Japanese Institute of Culture in the world.

EXTRA-CURRICULAR ACTIVITIES

Invited @ RAI Petrolio

📅 05/2017   📍 Rome, Italy

An Italian **investigate programme** aired the national TV channel RAI.

· Episode: **"Attacco alla Rete"**
· Watch on: raiplay.it/video/2017/05/I-ragazzi-della-cyberchallengeit-a3f26c12-5663-4f33-a882-8fa7569d8397
· As seen on **Wired:** wired.it/attualita/tech/2017/06/08/cyberchallenge-sicurezza-informatica

Guest Speaker @ Google Tel Aviv

📅 06/2016   📍 Tel Aviv, Israel

Invited to give a talk for the winning project for the Google Workshop 2015/2016 on how to build a startup, teamwork and success.

Guest Speaker @ Codemotion 2016

📅 03/2016   📍 Rome, Italy

Presentation for the Google Workshop 2015/2016 on bringing a startup to success, from technical and economical points of view.

PUBLICATIONS

Nibbling at the Hard Core of Word Sense Disambiguation

with Marco Maru, Michele Bevilacqua, Roberto Navigli; to be presented @ **ACL 2022 (conference rating: A++)**

SRL4E - Semantic Role Labeling for Emotions: A Unified Evaluation Benchmark

with Cesare Campagnano, Roberto Navigli; to be presented @ **ACL 2022 (conference rating: A++)**

Probing Pretrained Language Models for Predicate Argument Structures

with Roberto Navigli; to be presented @ **ACL 2022 (conference rating: A++)**

RESEARCH GRANTS

Research Grant (I.C.E. 09/2019) @ La Sapienza

I.C.E. (Incarico di Collaborazione Esterna) for the development of innovative neural architectures for **Semantic Role Labelling** with Prof. **Roberto Navigli** (7 months, 12'500 €).

Research Grant (B.S. 10/2018) @ La Sapienza

B.S. (Borsa di Studio) for Research Activity in the development of innovative neural architectures for **word sense representation and disambiguation** with Prof. **Roberto Navigli** (6 months, 3'000€).

Research Grant (B.S. 09/2018) @ La Sapienza

B.S. (Borsa di Studio) for Research Activity in innovative neural techniques for the **Knowledge Acquisition Bottleneck** with Prof. **Roberto Navigli** (6 months, 3'000€).

RESEARCH ACTIVITY

Multilingual Semantic Role Labelling

with Roberto Navigli   📅 03/2019 - Ongoing

Development of **multilingually-enhanced neural model for Semantic Role Labelling**.

VerbAtlas: a Novel Lexical Semantics Resource

with Roberto Navigli, Andrea Di Fabio   📅 2019 - Ongoing

Creation and validation of a new Lexical Semantics resource for Natural Language Processing. Presented @ **EMNLP-IJCNLP 2019 (A+ class conference)**.

English Semantic Role Labeling

with Roberto Navigli   📅 09/2018 - 03/2019

Development of a Semantic Role Labelling neural architecture that **outperforms the previous State of the Art** in CoNLL-2009 (English) and is used in "VerbAtlas and its application to Semantic Role Labelling".

Word Sense Disambiguation

with Roberto Navigli, Federico Scozzafava   📅 05/2018 - 06/2018

Development of an attention-based recurrent neural architecture for Word Sense Disambiguation.

Google Workshop 2015/2016

Google Tel Aviv + La Sapienza + Roma Tre + Roma Tor Vergata

📅 12/2015 - 06/2016

A training programme and competition on how to raise a startup. A collaboration **Google Research Center in Tel Aviv** (Israel), La Sapienza, Roma Tre and Roma Tor Vergata.

https://sites.google.com/a/dis.uniroma1.it/google-technologies-for-cloud-and-web-development-2015

CyberChallenge.IT - 1st Edition

Microsoft + IBM + Cisco + Italian Secret Services + CINI + La Sapienza

📅 03/2017 - 06/2017

One of the most important training programs in cybersecurity in Italy, focused on malware analysis and penetration testing. In collaboration with **IBM, Cisco, Microsoft, the Italian Secret Services, CINI** (Consorzio Interuniversitario Nazionale per l'Informatica), and La Sapienza.

https://cyberchallenge.it