

PhD student position at the Institute of Argumentation, Linguistics and Semiotics, Faculty of Communication, Culture and Society, USI Università della Svizzera italiana

Università della Svizzera italiana (USI) is a young and lively university, a hub of opportunity open to the world where students are offered a quality interdisciplinary education in which they can be fully engaged and take center stage, and where our researchers can count on having the space to freely pursue their initiative.

Established in 1996, USI is in constant evolution, always taking on new challenges while remaining true to its three guiding principles: quality, openness and responsibility.

The Institute of Argumentation, Linguistics and Semiotics (IALS) represents a lively research environment for a PhD student who specializes in the study of argumentation. Interaction with several researchers specializing on argumentation in different contexts, as well as interdisciplinary interactions with colleagues inside and outside the Faculty is an asset for a PhD candidate who wants to work on empirical argumentation.

The Institute invites applications for a PhD position in **Argumentation, Corpus Linguistics and Computational Linguistics** within the FNS project "***Mining argumentative patterns in context. A large-scale corpus study of Earnings Conference Calls of listed companies***" (100%, 4 years).

The PhD candidate will develop their dissertation within the project *Mining argumentative patterns in context. A large-scale corpus study of Earnings Conference Calls of listed companies*, with an interdisciplinary focus combining Argumentation Theory, Computational and Corpus Linguistics and the quantitative analysis of the discourse of corporate financial communications. The dissertation will be supervised by Prof. Andrea Rocci. Depending on the thesis topic, a co-supervision involving one of the international project partners could be activated. Moreover, the PhD candidate will participate in the PhD Program in Applied Linguistics *Managing languages, arguments and narratives in the datafied society*.

The project

The project is a large-scale study of *argumentative patterns* in a corpus of quarterly Earnings Conference Calls (ECCs), a key dialogical genre in the financial communication of listed companies. In order to grasp the argumentative dynamics of this dialogical genre on a large scale, the project seeks to develop computational Argumentation Mining techniques, which allow to automatically extract the structure of the reasoning expressed by the participants in the discussion.

Traditionally, studies on argumentation in different communication contexts have adopted a qualitative approach. Only a large-scale study, however, allows us to understand how argumentation shapes debates in society and what its effects are on decisions.

During earnings conference calls, managers discuss the financial results of the company and present their future outlook, facing questions from financial analysts, aimed at examining both

the valuation of the company and the credibility of the managers. It is widely recognized that what happens at earnings conference calls can have a significant impact on financial markets. The research examines the hypothesis is that the effects of these events depend, in large part, on the interactive arguments exchanged between managers and analysts.

The project examines a large corpus of earnings conference call transcripts, manually annotating it at different levels of semantic, discursive and argumentative structure in order to single out significant recurring *argumentative patterns*, recognizable from genre-specific discourse moves, predictable dialogue structure and semantic indicators. Machine learning techniques will be progressively applied to the manually annotated corpus to develop fully automated pipeline for the recognition of patterns in earnings conference calls. Argumentation Analytics will be then used to examine pattern distribution in relation to financial market and corporate accounting data.

The main scientific partners of the project are the Institute of Argumentation, Linguistics and Semiotics at USI, CH (Prof. Andrea Rocci, Dr. Carlo Raimondo) and the ARG-Tech Centre for Argument Technology at the University of Dundee, UK (Prof. Chris Reed). Other partners providing their scientific expertise to the project include Prof. Emanuele Bajo (Department of Economics, University of Bologna), Prof. Katarzyna Budzynska (Laboratory of The New Ethos, Warsaw University of Technology), Dr. Rudi Palmieri (Department of Communication and Media, University of Liverpool), Dr. Daniele Puccinelli (Institute of Information Systems and Networking, SUPSI).

The Ph.D. Position

Coursework. The doctoral student will be enrolled as PhD student in the Faculty of Communication, Culture and Society, in the Ph.D. school in Communication Sciences, with a specialization in "Discourse and Argumentation". Furthermore, the doctoral student will participate in the PhD Program in Applied Linguistics *Managing languages, arguments and narratives in the datafied society*, through which they will be able to attend doctoral courses in the areas of Argumentation Theory, Discourse Analysis, Corpus Linguistics and Computational Linguistics.

Given the domain of application of the project "Mining argumentative patterns in context" the PhD candidate will be also asked to take one or more master courses on Financial Communication in the Master program of European Studies in Investor Relations and Financial Communication (ESIR) to acquire the required domain knowledge.

Research and Thesis. The PhD candidate will collaborate to the development of the institute research agenda, with a primary focus on the project "Mining argumentative patterns in context". He or she will have a significant role in the manual annotation of the corpus of the project and in other key research tasks connected to it. Their dissertation will be empirical and based on the project's corpus data.

The PhD candidate is also asked to present papers at scientific conferences, and produce publications for scientific journals, in co-authorship with other project members of the project and as a single author.

Teaching. On the teaching side, the PhD candidate will work as teaching assistant in the Argumentation and Discourse Analysis courses taught by Prof. Andrea Rocci at the master and bachelor levels, helping in the preparation of teaching materials and tutoring students.

Candidates' profile

Ideal candidates should satisfy the following requirements:

- A Master (or equivalent title) in linguistics, computational linguistics, argumentation, rhetoric, discourse analysis, applied linguistics, communication sciences, or related disciplines.

- High personal interest in the analysis of discourse, dialogue and argumentation. Proven attitude for a fine-grained analysis of discourse and language. An interest for exploring the discourse of business, corporate and financial communication.
- Passion for interdisciplinary work and an open-minded willingness to learn about a wide range of topics and subject areas (including Linguistics, Argumentation, Finance and Artificial Intelligence), to work with both qualitative and quantitative methods and to acquire some computer programming skills.
- A strong work ethic and the willingness to carry out painstaking manual linguistic annotation of corpus data maintaining the highest standards of quality. Willingness to learn annotation software (e.g. INCEPTION, OVA+).
- A strong motivation to develop and complete a PhD thesis and the ability to work in a team as well to collaborate more broadly with colleagues at IALS (engage in scientific dialogue, listen and think critically).
- Excellent fluency in English is necessary. Knowledge of Italian, German or French will be considered an added value. Working knowledge of a programming language (e.g. Python) will be also considered a plus.
- Interest for teaching and tutoring students is also required.

Contract terms

The position is funded by the Swiss National Science Foundation (SNF) and the salary levels correspond to those set by the SNF for PhD researchers. Please, consult the SNF salary ranges guidelines (in English):

http://www.snf.ch/SiteCollectionDocuments/Annex_XII_Ausfuehrungsreglement_Beitragseglement_E.pdf

Workplace is USI Università della Svizzera italiana, located in Lugano, Switzerland. Availability to travel to other parts of Switzerland and abroad (for purposes of collaboration and research) is required.

Starting date is October 1st, 2021 (at the earliest). However, the position will be kept open until a suitable candidate has been found.

The Application

Applications should contain: (1) a letter in which the applicants describe their research interests and the motivation to apply to this specific position, (2) a complete CV, (3) copies of relevant diplomas, certificates as well as the full transcript of records that prove the candidates' eligibility for doctoral studies in Communication Sciences, (4) an electronic version of a research work (Master thesis or other scientific publication). The latter must be accompanied by a short summary in English (1 page maximum). A support letter written by the Master thesis supervisor (or another Professor who knows the candidate well) is equally welcome.

Please send your application in electronic form or requests for further information to Prof. Andrea Rocci (andrea.rocci@usi.ch). **Applications received before August 15, 2021, will be given priority.** However, applications will be received until the position is filled.

As an institution that values diversity, USI particularly encourages applications from women and from all individuals from underrepresented groups.

Lugano, June 15, 2021