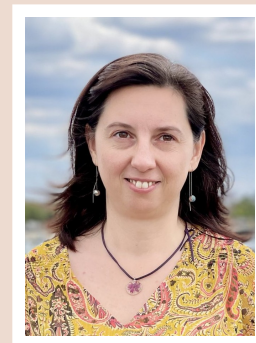


# Iana Atanassova

Assistant Professor | Maître de conférences HDR  
Director of Centre de Recherches Interdisciplinaires et Transculturelles  
Université de Franche-Comté, CRIT, F-25000 Besançon, France  
Institut Universitaire de France (IUF), France

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## CURRENT POSITION

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ASSISTANT PROFESSOR   MAÎTRE DE CONFÉRENCES HDR Université de Franche-Comté, Besançon, France Centre de Recherches Interdisciplinaires et Transculturelles (CRIT)	Since 09/2014
JUNIOR MEMBER Institut Universitaire de France (IUF)	Since 09/2021
DIRECTOR Centre de Recherches Interdisciplinaires et Transculturelles (CRIT)	Since 11/2023

## RESEARCH TOPICS

My research is in the field of **Natural Language Processing (NLP)** and more specifically **full-text processing of scientific papers**. It is part of the research theme "Languages, Knowledge and Discourse" at the CRIT laboratory, with the development of linguistic approaches in NLP for the analysis of scientific discourse. I study the problems of **semantic annotation, ontology population, linguistic modelling and information extraction from scientific texts**. I have used NLP methods to process scientific corpora for building applications in bibliometrics and recommender systems. I have also participated in projects on text mining for competitive intelligence and personal data identification and representation.

My **recent research projects** focus on the study of the rhetorical structure of articles, and in particular the **expression of uncertainty** as part of the process of constructing scientific knowledge (e.g. the ANR InSciM project).

## RESEARCH PROJECTS

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### PRINCIPAL INVESTIGATOR (PI) AND SUPERVISOR

PI, project InSciM - "Modelling Uncertainty in Science" funded by French ANR JCJC grant, ANR-21-CE38-0003-01 (270K euros) <a href="https://project-inscim.github.io/">https://project-inscim.github.io/</a>	2021–2025
SUPERVISOR, project EMONTAL "Extraction and Ontology Modeling of Subjects and Places for the Exploitation of the Documentary Funds of	2020–2024

Bourgogne Franche-Comté" : supervision of a PhD thesis, funded by Région Bourgogne Franche-Comté.  
<http://tesniere.univ-fcomte.fr/projet-emontal/>

SUPERVISOR, project "Researcher-entrepreneur" ICE 2023–2024  
"Applications of NLP for the construction of tools for language teaching" : supervision of a post-doctoral fellow (Dr François-C. Rey), funded by Université de Bourgogne Franche-Comté, France, with the objective of technology transfer to a start-up.

SUPERVISOR, Project "Automatic correction of text responses to exams" 2021–2023  
Collaboration and technology transfer to the start-up e-Cole, funded by Technopole de la Réunion.

PI, project DecRIPT - "Detection of the Representations of Personal Data in Texts" 2019–2022  
funded by Interreg France-Switzerland 2014-2020 (307K euros) and Communauté du Savoir (9K euros).  
- Academic partners : HEG (Switzerland), HEG Arc (Switzerland)  
- Private partners : ERDIL (France), Global Data Excellence (Switzerland)  
- Objectives : Building tools for the robust processing of personal data in texts to facilitate compliance with GDPR.  
<http://tesniere.univ-fcomte.fr/projet-decript/>

SUPERVISOR, project "Researcher-entrepreneur" ICE 2016–2021  
"Linguistic analysis and automatic extraction of semantic relations in Arabic" : supervision of a PhD thesis and a post-doctoral fellow (Dr Youcef Morsi), funded by Université de Bourgogne Franche-Comté, France, with the objective of technology transfer to a start-up.

## **PARTICIPATION IN PROJECTS**

PARTICIPANT, project TheoScit 2020–2023  
funded by French ANR JCJC grant, PI Dr Marc Bertin, ANR-20-CE38-0003

PARTICIPANT, project SEO-ELP "Search Engine Optimization e-Learning Platform" 2018–2025  
funded by Université de Franche-Comté, France  
<https://seo-elp.fr/>

PARTICIPANT, project WebSO+ : Competitive Intelligence Platform 2016–2018  
funded by Interreg France-Switzerland 2014-2020. Development of a platform for strategic technological and competitive intelligence and e-reputation integrating semantic processing, text classification and sentiment analysis.  
<http://tesniere.univ-fcomte.fr/projet-webso/index.html>

PARTICIPANT, project SARS : "System for assisted scientific writing in the biomedical domain" 2015–2017  
funded by Région Franche-Comté, France. Development of tools for scientific writing using lexical databases and Information Retrieval.

## RESEARCH SUPERVISION

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### POST-DOCTORAL SUPERVISION

DR FRANÇOIS-C. REY, PostDoc resercher-entrepreneur	09/2023–08/2024
DR ABDOULAYE GUISSÉ, as part of DecRIPT project	01/2021–05/2021
DR YUCEF MORSI, PostDoc resercher-entrepreneur	09/2020–08/2021
DR FRANÇOIS-C. REY, as part of DecRIPT project	01/2020–12/2020

### PHD THESIS SUPERVISION

PANGGIH KUSUMA NINGRUM "Modelling the expression of uncertainty in scientific articles", Funded by project ANR InSciM	2022–
NICOLAS GUTERHLÉ "Extraction and ontological modelling of actors and places for the exploitation of the documentary funds of the Bourgogne Franche-Comté Region", Project EMONTAL, funded by Bourgogne Franche-Comté Region	2020–
SALAH YAHIAOUI "Information extraction of spatio-temporal data from scientific texts", Funded by French Ministry for Education and Research	2019–2023
YUCEF MORSI "Linguistic Analysis and Automatic Information Extraction of Semantic Relations in Arabic", Funded by project researcher-entrepreneur	2016–2020
FRANÇOIS-C. REY "Ontology of uncertainty and semantic annotation of a corpus dealing with climate change", Co-directed with Dr Marc Bertin, University Lyon-1, France	2016–2022

### MSC THESIS SUPERVISION

Non-exhaustive list. MSc theses prepared during 2 years and defended as part of the Master's degree of Natural Language Processing of Université de Franche-Comté, Besançon, France.

L. RODRIGUES DE ALMEIDA	2024
B. FERNANDES DE BRITO, S. POPOVIC, J. YANG, S. YACOUBI	2023
E. BOFFETTI	2022
J. BACCHIOCCHI, C.-T. KUO, M.A. NGUYEN THI	2021
R. HASNAOUI, J. BERGOEND	2020
S. YAHIAOUI, A. CALATAYUD	2019
N. GUTERHLÉ, C. EL CADI, I. HATIRA, L. ANNEBI	2018
L. LOGRADA, F.-C. REY, M. DELHOTAL, Y. MORSI	2016

## PARTICIPATION IN PhD THESIS JURYS

PAVEL SAVOV, "Measuring the Novelty of Scientific Papers" Polish-Japanese Academy of Information Technology, Poland	2021
MILOUD ROUABHI "Analyse sémantico-cognitive de prépositions en vue d'un traitement automatique", Paris-Sorbonne (Paris 4) University, France	2019
DRAHOMIRA HERRMANNOVA, "Mining Scholarly Publications for Research Evaluation" Knowledge Media institute, The Open University, United Kingdom	2018
DORY SINGH "Extraction des relations de causalité dans les textes économiques par la méthode de l'exploration contextuelle", Paris-Sorbonne (Paris 4) University, France	2017

## SERVICE

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### RESPONSABILITIES

DIRECTOR OF THE CRIT LABORATORY Centre de Recherches Interdisciplinaires et Transculturelles (CRIT), Université de Franche-Comté, France.	11/2023–
CO-DIRECTOR OF THE CRIT LABORATORY CRIT, Université de Franche-Comté, France.	09/2022–10/2023
REFERENT FOR OPEN SCIENCE CRIT, Université de Franche-Comté, France.	09/2021–
MANAGER OF THE DEPARTMENT OF NATURAL LANGUAGE PROCESSING Université de Franche-Comté, France.	09/2020–

### COURSE MANAGEMENT

COURSE MANAGER OF THE SPECIALTY " <i>Natural Language Processing (NLP)</i> " Master of Science "Languages and Foreign Cultures (LLCER)", Université de Franche-Comté, France.	09/2017–
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### ISO/AFNOR COMMISSION

MEMBER OF ISO/TC 37/SC 4 "LANGUAGE RESOURCE MANAGEMENT" WG 2 "Semantic annotation".	06/2022–
MEMBER OF AFNOR COMMISSION, WORK GROUP AFNOR/X03A, ISO/TC 37/SC 4 Terminology and linguistic resource management. National referent for ISO 24617 "Semantic Annotation Framework". <a href="https://norminfo.afnor.org/membre/atanassova-iana797933">https://norminfo.afnor.org/membre/atanassova-iana797933</a>	09/2014–

## ORGANISATION OF WORKSHOPS AND SCIENTIFIC EVENTS

### WORKSHOP CLBIB

China, 2017

"Mining Scientific Papers : Computational Linguistics and Bibliometrics", 16th International Conference on Scientometrics and Informetrics (ISSI), Wuhan, China, 2017.

<https://easychair.org/cfp/CLBib2017>

### WORKSHOP "TRAITEMENT AUTOMATIQUE DES LANGUES SLAVES (TASLA)"

France, 2015

Conference TALN 2015, France.

<http://tesniere.univ-fcomte.fr/tasla/>

### WORKSHOP CLBIB

Turkey, 2015

"Mining Scientific Papers : Computational Linguistics and Bibliometrics", 15th International Society of Scientometrics and Informetrics Conference (ISSI), Istanbul, Turkey, 2015.

### WORKSHOP "ANALYSES LOGOMÉTRIQUES DES REVUES QUÉBÉCOISES"

Canada, 2015

"Analyses logométriques des revues québécoises" : traitements et visualisations". Colloque "Relire les revues québécoises : histoires, formes et pratiques", Montreal, Canada, October 2015.

## ADVISORY BOARDS

### MEMBER OF THE ADVISORY BOARD OF THE ECLATS JOURNAL

2020–

published by doctoral candidates of LECLA Doctoral School, France.

<https://preo.u-bourgogne.fr/eclats/>

### MEMBER OF THE ADVISORY BOARD OF THE SIPS PLATFORM

2019–

"*Information System on Philosophy of Science*", Université de Franche-Comté, France.

<https://sips.univ-fcomte.fr/>

### MEMBER OF THE ADVISORY BOARD OF THE "Natural Language Processing" SERIES

2018–

John Benjamins publishing, <https://benjamins.com/catalog/nlp>.

### ELECTED MEMBER OF THE ADVISORY BOARD OF THE DOCTORAL SCHOOL LECLA

2016–

Université de Bourgogne Franche-Comté (UBFC), France. <https://lecla.ubfc.fr/>

## EVALUATION PANELS

### MEMBER OF THE ANR AAPG EVALUATION PANEL

2023

CE10 – Industry and factory of the future : People, organisations, technologies, France.

### REVIEWER FOR THE NSERC DISCOVERY GRANTS

2023

Natural Sciences and Engineering Research Council of Canada (NSERC), Computer Science (EG 1507) / CRSNG, Canada.

### JOHN R. EVANS LEADERS FUND

2020

Canada Foundation for Innovation, Canada.

## EDITORIAL WORK

### EDITOR OF A RESEARCH TOPIC

2022

*"Mining Scientific Papers, Volume II : Knowledge Discovery and Data Exploitation"* in "Frontiers in Research Metrics and Analytics". Editorial doi : 10.3389/frma.2022.911070.

<https://www.frontiersin.org/research-topics/13388/mining-scientific-papers-volume-ii-knowledge-discovery-and-data-exploitation>

### EDITOR OF A RESEARCH TOPIC

2019

*"Mining Scientific Papers : NLP-enhanced Bibliometrics"* in "Frontiers in Research Metrics and Analytics". Editorial doi : 10.3389/frma.2022.911070.

<https://www.frontiersin.org/research-topics/7043/mining-scientific-papers-nlp-enhanced-bibliometrics>

## REVIEWS AND PROGRAMME COMMITTEES

Non-exhaustive list.

### REVIEWER FOR JOURNALS

- Scientometrics : 2023, 2022, 2019 (3), 2018 (6), 2017 (3)
- International Journal on Digital Libraries (IJDL) : 2023, 2021, 2016
- Quantitative Science Studies (QSS) : 2020
- Journal of Infometrics : 2017 (3), 2016, 2015
- Aslib Journal of Information Management : 2016
- Nature Machine Intelligence : 2020
- Journal of Natural Language Engineering (JNLE) : 2024, 2019
- Revue Ingénierie des Systèmes d'Information, numéro spécial (ISI) : 2017
- Computational Intelligence : 2016

### MEMBER OF THE PROGRAMME COMMITTEES OF INTERNATIONAL WORKSHOPS AND CONFERENCES

- International Symposium Interdisciplinary approaches to phraseological units (PUs) in world languages : Linguistics - NLP & AI - Translation - Literature : 2025 (<https://aiup.sciencesconf.org>)
- Annual International Conference of the Institute for Bulgarian Language (ConfIBL) : 2024, 2023, 2022, 2020
- Extraction and Evaluation of Knowledge Entities from Scientific Documents (EEKE) at JCDL : 2023
- Joint Conference on Digital Libraries (JCDL) : 2023, 2022
- International Conference on Computational Linguistics (COLING) : 2022
- Bibliometrics and Information Retrieval (BIR) : 2023, 2021, 2020, 2019, 2018, 2017, 2016, 2014
- Bibliometric-enhanced Information Retrieval and NLP for Digital Libraries (BIRNDL) : 2019, 2018, 2017, 2016
- Workshop On Mining Scientific Publications (WOSP) at LREC : 2020, 2018, 2017
- Workshop on Natural Language Processing for Digital Humanities (NLP4DH) : 2022, 2021
- Recent Advances in Natural Language Processing (RANLP) : 2021, 2017
- The International Florida Artificial Intelligence Research Society Conference (FLAIRS) : 2023, 2022, 2021, 2020, 2019, 2015–2017
- The American Association for the Advancement of Science (AAAS) 2015 Annual Meeting
- The International ACM Conference on Management of computational and collective intelligence in Digital EcoSystems (MEDES) : 2016, 2015, 2014

- International Conference on Computational Collective Intelligence (ICCCI) : 2022, 2021, 2020
- Conférence sur le Traitement Automatique des Langues Naturelles (JEP-TALN-RECITAL) : 2020
- Workshop on Scholarly Web Mining (SWM) : 2017
- Workshop on Scholarly Document Processing (SDP) : 2021, 2020
- Electronic lexicography in the 21st century (eLex) : 2017
- Computational Linguistics in Bulgaria (CLIB) : 2024, 2022, 2020, 2018
- Workshop on AI + Informetrics (AII) : 2021
- 4th International Workshop on Detection, Representation, and Exploitation of Events in the Semantic Web (DeRiVE) : 2015

## ASSOCIATIONS AND SOCIETIES

ISSI (INTERNATIONAL SOCIETY OF SCIENTOMETRICS AND INFOMETRICS)	Member since 2023
ATALA (ASSOCIATION POUR LE TRAITEMENT AUTOMATIQUE DES LANGUES)	Member since 2014

## GRANTS AND PRIZES

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IUF (INSTITUT UNIVERSITAIRE DE FRANCE) RESEARCH GRANT	2021–2026
GRANT FOR DOCTORAL SUPERVISION AND RESEARCH (PEDR), France	2019–2021
FIRST PRIZE OF THE INOVHACKTION HACKATHON Organised by the Air Force France on the Intelligent analysis of documents. <a href="http://actu.univ-fcomte.fr/article/le-traitement-automatique-des-langues-seduit-larmee-005704">http://actu.univ-fcomte.fr/article/le-traitement-automatique-des-langues-seduit-larmee-005704</a>	2017
NOMINATION Annual International Society for Scientometrics and Infometrics (ISSI) Paper of the year award : Marc Bertin, Iana Atanassova, Vincent Larivière, and Yves Gingras. The Invariant Distribution of References in Scientific Papers. JASIST, 2016.	2016

## SCIENCE DISSEMINATION

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ORGANISER OF THE TEDONNÉES WORKSHOP SERIES Series of workshops for the general public "Emerging Data Processing Tools", Besançon, France. These workshops aim to inform the general public and to promote the interactions between students in NLP, researchers and firms that work in this domain. Several editions were organised on the following topics : - 2017, Data mining and e-reputation : <a href="http://tesniere.univ-fcomte.fr/tedonnees/tedonnees2017">tesniere.univ-fcomte.fr/tedonnees/tedonnees2017</a> - 2018, Smart cities and language technologies : <a href="http://tesniere.univ-fcomte.fr/tedonnees/tedonnees2018/">http://tesniere.univ-fcomte.fr/tedonnees/tedonnees2018/</a> - 2022, Fake News and credibility of the public information : <a href="http://tesniere.univ-fcomte.fr/tedonnees/tedonnees2022/">http://tesniere.univ-fcomte.fr/tedonnees/tedonnees2022/</a> - 2024, Échanger et innover : les SHS à l'horizon du numérique : <a href="http://tesniere.univ-fcomte.fr/tedonnees/tedonnees2024/">http://tesniere.univ-fcomte.fr/tedonnees/tedonnees2024/</a>	2017–2022
TDM STORIES “THE STRUCTURE OF PAPERS“, OpenMinTeD Interview <a href="http://openminded.eu/tdm-stories-structure-papers/">http://openminded.eu/tdm-stories-structure-papers/</a>	2017
SCIENCE MAP "THE COGNITIVE CONTEXT OF CITATIONS"	2014

In the *Places & Spaces 10th iteration : The Future of Science Mapping* exhibit.  
<https://scimaps.org/map/10/6>

## TEACHING ACTIVITY

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Non-exhaustive list.

IN MSC SPECIALTY NLP IN “LANGUAGES AND FOREIGN CULTURES” (LLCER) 2014–  
Université de Franche-Comté (UFC), Beaçon, France

Courses (lectures & tutorial classes) : Methodology in NLP, Computer Programming for NLP, Information extraction and IR, Etymology, Cognitive Methods and ML, Software engineering for NLP.

IN MSC “LANGUAGES AND FOREIGN CULTURES” (LLCER), ALL SPECIALTIES 2014–  
Université de Franche-Comté (UFC), Beaçon, France

Courses (lectures & tutorial classes) : Collaborative work and project management, Information Retrieval

IN BSC “LANGUAGES AND FOREIGN CULTURES”, SPECIALTY NLP 2014–2019  
Université de Franche-Comté (UFC), Beaçon, France

Courses (lectures & tutorial classes) : Computational Linguistics, Formal linguistics and informatics, Introduction to computer programming for NLP.

IN URFIST DE LYON, France 2019 & 2020  
Courses : "Introduction to scientific writing with L<sup>A</sup>T<sub>E</sub>X"

IN MSC "*French Language and Applications*" 2011–2012  
Paris-Sorbonne University, Paris, France.

Courses : "Introduction to Informatics and Natural Language Processing" (lectures & tutorial classes).

IN BSC "*French Language and Informatics*" 2009–2011  
Paris-Sorbonne University, Paris, France.

Courses : "Logics and Introduction to Informatics" (tutorial classes); "General Mathematics and Analysis - 1" (lectures & tutorial classes); "Preparation for the Certificate of Informatics and Internet (C2i) - level 1" (lectures & tutorial classes).

IN MSC "*Informatics and Language Engineering for Information Management*" 2009–2011  
Paris-Sorbonne University, Paris, France.

Courses : "Methodology and scientific reasoning" (tutorial classes).

IN MSC "*Philosophy and Sociology*" 2006–2009  
Paris-Sorbonne University, Paris, France.

Courses : "Informatic tools" (tutorial classes).

## WORK EXPERIENCE

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INTERNATIONAL MOBILITY ERASMUS+ STA, University of Wolverhampton, UK 02/2017  
Research and teaching stay at the Research Institute in Information and Language Processing (RIILP), Research Group in Computational Linguistics



POST-DOCTORAL FELLOW, Concordia University, Montreal, Canada 01/2014–08/2014  
Semantic processing of corpora in humanities and social sciences, under the direction of Pr. Jean-Philippe Warren.

Objectives : Linguistic analyses for the exploitation of the documentary collections of the Bibliothèque et Archives nationales du Québec (BAnQ); Identification of new concepts, semantic relations and definitions in journal articles; Diachronic analysis of corpora to produce data for the sociological study of ideas and the evolution of concepts.

RESEARCH AND DEVELOPMENT MANAGER, MyScienceWork, France/Luxembourg. 03/2012–06/2013  
Implementation of a search engine for scientific papers for the MyScienceWork social network.

TEACHING AND RESEARCH ASSISTANT (ATER) 09/2009–08/2011  
Paris-Sorbonne University, Institute of Applied Human Sciences, Paris, France.

## EDUCATION

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HABILITATION TO DIRECT RESEARCH (HDR), Specialty “Natural Language Processing” December 2015  
University of Franche-Comté, Centre Tesnière, Besançon, France.

Title : *"Qualitative and quantitative analysis of scientific discourse. Applications to Information Extraction, Information Retrieval and the Semantic Web"*

Supervisor : Pr. Sylviane Cardey (University of Franche-Comté, France)

Jury : Pr. R. Mitkov (University of Wolverhampton, UK); Pr. Ch. Roche (Université de Savoie, France); Pr. B. K. Bogacki (Université de Varsovie, Poland); Pr. L. Da Sylva (Université de Montréal, Canada); Pr. J.-P. Desclés (Paris-Sorbonne University, Paris); Pr. P. Pognan (INALCO, Paris).

PHD IN "MATHEMACS, INFORMATICS AND APPLICATIONS TO HUMAN SCIENCES" January 2012  
Paris-Sorbonne University, Faculty of Letters, LaLIC-STIH laboratory, Paris, France.

Title : *"Exploiting semantic annotations for information retrieval and text navigation"*

Supervisor : Pr. J.-P. Desclés (Paris-Sorbonne University, Paris)

Jury : Pr. Th. Poibeau (CNRS, LaTTiCe); Pr. M. Hassoun (ENSSIB); Dr. Ch. Harbulot (EGE); Dr. B. Djoua (STIH, Paris-Sorbonne).

MSc "INFORMATION AND COMMUNICATION" 2005–2006  
Paris-Sorbonne University, Faculty of Letters, Paris, France.

MSc thesis title : *"Semantic annotations of texts in French and in Bulgarian with the Excom engine. Automatic syntheses"*, supervised by Pr. J.-P. Desclés

MSc "COMPUTATIONAL LINGUISTICS", Sofia University, Sofia, Bulgaria 2004–2005  
Faculty of Classical and Modern Philology

BSc IN ENGLISH PHILOLOGY, Sofia University, Faculty of Classical and Modern Philologies 2002–2005  
Sofia, Bulgaria

BSc IN MATHEMATICS, Sofia University, Sofia, Bulgaria 2000–2004  
Faculty of Mathematics and Informatics