Tommaso Caselli

CURRENT POSITION

<u>**Senior Assistant Professor**</u>   Faculty of Arts - Rijksuniversiteit Groningen

September 2017   Groningen - NL

Research Interests: timeline and storyline extraction; perspectives identification (including fake news detection) and narrative understanding; content types detection; abusive language.

Coordination: <u>Scientific coordination</u>: Social Media Sensing Group (RUG-SMS - in collaboration with prof. Malvina Nissim); <u>Shared task participation</u>: NLP4IF 2021 Shared Task on Fighting the COVID-19 Infodemic; SemEval 2020 Task 12: Multilingual OffensEval; SemEval 2019 Task 6: OffensEval; CLEF 2019 Lab ProtestNews; EVALITA 2018 HaSpeeDe: Hate Speech Detection in Twitter and Facebook; GermEval 2018: Offensive Language Detection in Social Media.

Managing: <u>Programme coordinator</u> for the Erasmus Mundus Language and Communication Technologies Master (Groningen); <u>Shared task organization</u>: EVALITA 2023 HODI (hate speech); EVALITA 2023 PoliticIT task; EVALITA 2020 HaSpeeDe 2 (hate speech); EVALITA 2020 DIACR-Ita (diachronic lexical semantic change); 2023 *CheckThat!* Lab at CLEF 2023 (misinformation/subjectivity); *CheckThat!* Lab at CLEF (misinformation); <u>Volume/journal editor</u> Computational Analysis of Storylines (edited volume; CUP); Research Topic on Frontiers in Artificial Intelligence on "Bias, Subjectivity and Perspectives in Natural Language Processing" (2022); Computational Linguistics in the Netherlands (2019 - volume 9); <u>Conference editor</u>: Area Chair for the Language Resources track at EMNLP 2022; Senior Area Chair of the Sentiment Analysis and Opinion Mining track at COLING 2022; Area Chair of the Language Resource track at ACL 2021; area chair of the Semantics and Knowledge Representation track at CLIC-it 2020; <u>Workshop organization</u>: 1st Joint Workshop on Narrative Understanding, Storylines, and Events (2020); Contextual Representation of Objects and Events in Language Workshop (2018; 2019); Events and Stories in the News Workshop series (2015 – 2018). <u>Conference chair</u>: DH Benelux 2021; Computational Linguistics in the Netherlands - CLIN 29; EVALITA Workshop 2018;

Ph.D. supervision: <u>Iris Baas</u> (2022 - ongoing; RUG; promoter: prof. Marcel Broesma); <u>Gosse Minnema</u> (2019 - ongoing; RUG; promoter: prof. Malvina Nissim, prof. Johan Bos); <u>Davide Colla</u> (January-July 2020, visiting PhD, Student University of Turin; promoter: prof. Daniele P. Radicioni); <u>Rachele Sprugnoli</u> (October-December 2016, visiting PhD, Student University of Trento; promoter: dr. Sara Tonelli).

Ph.D. defence committee: <u>Rohan Kumar Yada</u> - University of Agder (November 2022); <u>Davide Colla</u> - University of Turin (July 2022); <u>Hessel Haagsma</u> - University of Groningen (September 2020); <u>Hector Llorens</u> - University of Alicante (June 2011).

Achievements: first position at the NLP4IF 2021 Shared Task; "Best of Labs" paper at CLEF 2020; release of the Event StoryLine Corpus v1.5; development and release of systems for offensive and abusive language detection in multiple languages (Italian, English, German, Turkish, Danish, and Dutch); release of the first corpus for generic abusive and offensive language in Dutch (DALC); release of a Twitter corpus in Dutch to fight misinformation against COVID-19; release of a neural network network architecture for event detection for Italian.

Invited speaker/lecture: <u>2022</u>: Perspectivist Approach in NLP (panel; LREC 2022);

You Need Facts to Tell a Story (invited speaker; TAGFACT Workshop); <u>2021</u>: Cosa significa? (seminar/lecture; Dept. of Linguistics, University of Bologna - IT).

Grants <u>RUG Interfaculty Incentive Funds (2021)</u> - *Misinformation, opinions and social cohesion: a computational social science perspective*; RUG CIT/RIS - Centre for Digital Humanities Data Science (2018) - *Are They Telling the Same Story? Trying to Break Filter Bubbles.*

Awards <u>2022</u>: AACL 2022 Best Paper Award; COLING 2022 Outstanding paper; <u>2021</u>: Best student paper award CLIC-it 2021.

PREVIOUS AFFILIATIONS AND ROLES	**Senior Researcher**	Computational Lexicology and Terminology Lab, Faculty of Humanities - Vrije Universiteit Amsterdam
	September 2014 - August 2017	Amsterdam - NL
	Lecturer (Cultore della materia) *November 2012 - December 2017*	Department of Humanities - Università degli Studi di Pavia Pavia - IT
	Post-doctoral Fellow *October 2012 - September 2014*	TrentoRISE & IBM Language and Knowledge Center for Advanced Studies of Trento Sommarive di Povo (TN) - IT
	Lecturer *October 2013 - October 2014*	Faculty of Computer Science - Free University of Bozen/Bolzano Bolzano/Bozen - IT
	Post-doctoral Fellow *October 2011 - July 2012*	Dept. of Chinese and Bilingual Studies, Faculty of Humanities - Hong Kong Polytechnic University Hong Kong, SAR
	Post-doctoral Fellow *April 2009 - September 2011*	Institute of Computational Linguistics - National Research Council Pisa - IT

EDUCATION

Università degli Studi di Pisa, Pisa, IT.
Ph.D., Computational Linguistics "Time, Events and Temporal Relations: an Empirical Model for Temporal Processing of Italian Texts" (June, 23 2009).

Università degli Studi di Pavia, Pavia, IT.
M.A., Theoretical and Applied Linguistics (Computational Linguistics), (April, 18 2005).

Università degli Studi di Pisa, Pisa, IT.
B.A., Modern English Linguistics, (December, 22 2002).

VISITING PERIOD

Departmanet de Lenguaje y Sistemas informaticos (DLSI) - Universidad de Alicante, Alicante, ES.
Period: November 2010.
Achievements: development of an event detection and classification system for Italian. Paper presented at RANLP 2011.

COMPUTER SKILLS

Languages: Python (scripts for feature extraction, data enrichment, format manipulation and conversion, machine learning experiments, neural networks), XML (annotation schemes).

Applications: MySQL (data storing and querying), Protegé (ontology development), CRF++ (used to develop classifiers for event detection and temporal relations extraction), Weka (used to develop classifiers for event nominals and testing different machine leaning algorithms), NLTK (data manipulation and classifiers), Mallet (used for Topic Modeling for event salience), LibSVM.

Operating Systems: Unix/Linux, Mac OSX, Windows.

LANGUAGES

Italian: mother tongue.
English/French: fluent (C2).
Dutch: intermediate (passive B2/active B1).
M.S. Arabic/Chinese/Spanish/: beginner (A1).

PROJECTS

Framing situations in the Dutch Language - NWO Vrije Competitie Geesteswetenschappen (2019-2023) collaborator.

NewsReader - *Building structured event indexes of large volumes of financial and economic data for decision making* (FP7 Programme, Grant Agreement 316404): collaborator in WP5 (Event Detection); responsible for improving the event detection system and developing a framework for StoryLine extraction and evaluation.

PANACEA - *Platform for Automatic, Normalized Annotation and Cost-Effective Acquisition of Language Resources for Human Language Technologies* (FP7 Programme, Grant Agreement 248064): collaborator in WP6 (Lexical Acquisition) and WP7 (Integration & resource evaluation).

FlaReNet - *Fostering Language Resources Network* (eContent Plus Programme, Grant Agreement ECP-2007-LANG-617001): Member of the coordination group and collaborator WG5 (Evaluation Protocols and Procedures).

OTHER ACADEMIC ACTIVITIES

Member of ACL; AILC (Italian Association for Computational Linguistics).
Member of the scientific board of the AILC "Lectures on Computational Linguistics".
Member of the editorial board of the Journal of Language Resources and Evaluation, Springer (ISSN: 1574-020X (print version); ISSN: 1574-0218 (electronic version))
Conference reviewer: NAACL; ACL; COLING; EMNLP; LREC; IJCAI; AAAI; DH; ARR
Journal reviewer: Journal of Language Resources and Evaluation; Journal Information Processing & Management ; ACM Transactions on Asian Language Information Processing, Intelligenza Artificiale, Journal of Semantic Web, Applied Ontology Journal, Transaction on Internet Technology, Italian Journal of Computational Linguistics - IJCOL; Computational Linguistics in the Netherlands - CLIN.

SELECTED PUBLICATIONS

Articles in journals

- Gosse M., Ruggiero, G., Bartl, M., Gemelli, S., Caselli, T., Zanchi, C., Patti, V., te Brömmelstroet, M., and Nissim, M. (accepted) Responsibility Framing under the Magnifying Lens of NLP: The Case of Gender-based Violence and Traffic Danger. *CLIN*, 12.

- Theodoridis, D., and Caselli, T. (accepted) All that Glitters Is Not Gold: Transfer-Learning for Offensive Language Detection in Dutch. *CLIN*, 12.

- Bolognesi, M., and Caselli, T. (2022) Specificity ratings for Italian data. *Behavior Research Methods*.

- Calvo Figueras, B., Caselli, T., and Broersma, M. (2021) Finding Narratives in News Flows: The Temporal Dimension of News Stories. Digital Humanities Quarterly (DHQ), 15:4 `http://www.digitalhumanities.org/dhq/vol/15/4/000582/000582.html`

- Caselli, T., Sprugnoli, R. and Moretti, G. (2021) Identifying communicative functions in discourse with content types. *Lang Resources & Evaluation* `https://doi.org/10.1007/s10579-021-09554-4`

- Bolognesi, M., Burgers, C. and Caselli, T. (2020) On abstraction: decoupling conceptual concreteness and categorical specificity. *Cognitive Processing*. `https://doi.org/10.1007/s10339-020-00965-9`

- Basile, A., Caselli, T., Merenda, F., and Nissim, M. (2018). Facebook Reactions as Controversy Proxies: Predictive Models over Italian News. *Italian Journal of Computational Linguistics*, 4(2), 73-90.

- Vossen, P., Caselli, T., and Cybulska, A. (2018). How Concrete Do We Get Telling Stories? *Topics in Cognitive Science*, 10(3), 621-640. https://doi.org/10.1111/tops.12366

Book chapters & Books

- Caselli, T. and Nissim, M. 2022 Harvesting Perspectives in Social Media. In P. Vossen and A. Fokkens (Eds.), *Creating a more transparent Internet: the Perspective Web*, Cambridge University Press.

- Caselli, T., Palmer, M., Hovy, E. and Vossen, P. (Eds.). (2021). *Computational Analysis of Storylines: Making Sense of Events*, Cambridge University Press.

- Vossen, P., Caselli, T., and Segers, R. (2021) A Narratology-based Framework for Storyline Extraction. In T. Caselli, M. Palmer, E. Hovy and P, Vossen (Eds.), *Computational Analysis of Storylines: Making Sense of Events*, Cambridge University Press.

- Caselli, T., Nissim, M. (to appear) Harvesting Perspectives in Social Media. In P. Vossen and A. Fokkens (Eds.) *The Perspective Web: Creating a More Transparent Internet*, Cambridge University Press.

- Caselli, T., and Sprugnoli, R. (2017). It-TimeML and the Ita-TimeBank: Language Specific Adaptations for Temporal Annotation. In N. Ide, and J. Pustejovsky (Eds.), *Handbook of Linguistic Annotation* (pp. 969-988). Springer Netherlands.

Conference proceedings (full paper peer review)

- Minnema, G., Gemelli, S., Zanchi, C., Caselli, T., and Nissim, M. (2022) Dead or Murdered? Predicting Responsibility Perception in Femicide News Reports. In *Proceedings of the 2nd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and the 10th International Joint Conference on Natural Language Processing*, Association for Computational Linguistics (ACL). ***Best Paper Award***

- Caselli, T., Dini, I., and Dell'Orletta, F. (2022) How About Time? Probing a Multilingual Language Model for Temporal Relations. In *Proceedings of the 29th International Conference on Computational Linguistics (COLING)*. International Committee on Computational Linguistics (ICCL). *Outstanding Paper*

- Basile, V., Caselli, T., Koufakou, A., and Patti, V. (2022) Automatically Computing Connotative Shifts of Lexical Items. In P. Rosso, V. Basile, R. Martínez, E. Métais, F. Meziane (Eds.) *Natural Language Processing and Information Systems: 27th International Conference on Applications of Natural Language to Information Systems, NLDB 2022*, LNCS, volume 13286, Spinger.

- Minnema, G., Gemelli, S., Zanchi, C., Caselli, T., and Nissim, M. (2022). SocioFillmore: A Tool for Discovering Perspectives. In *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics: System Demonstrations*, Association for Computational Linguistics.

- Anting Tan, F., Hürriyetoğlu, A., Caselli, T., Oostdijk, N., Nomoto, T., Hettiarachchi, H., Ameer, I., Uca, O., Ferdousi Liza, F. and H. Tiancheng (2022). The Causal News Corpus: Annotating Causal Relations in Event Sentences from News. In *Proceedings of the Thirteenth International Conference on Language Resources and Evaluation (LREC 2022)*, European Language Resources Association (ELRA).

- Nakov, P., Barrón-Cedeño, A., Da San Martino, G., Alam, F., Struß, J., Mandl, T., Míguez, R., Caselli, T., Kutlu, M., Zaghouani, W., Li, C., Shaar, S., Kishore Shahi, G., Mubarak, H., Nikolov, A., Babulkov, N., Selim Kartal, Y., and Beltrán, J. (2022) The CLEF-2022 CheckThat! Lab on Fighting the COVID-19 Infodemic and Fake News Detection, In M. Hagen et al. (Eds.) *Advances in Information Retrieval. ECIR 2022*, LNCS, volume 13186, Springer.

- Minnema, G., Gemelli, S., Zanchi, C., Patti, V., Caselli, T., and Nissim, M. (2021). Frame Semantics for Social NLP in Italian: Analyzing Responsibility Framing in Femicide News Reports. In *Proceedings of the Eighth Italian Conference on Computational Linguistics* (Vol. 3303). CEUR Workshop Proceedings (CEUR-WS.org).

- Ògúnremí, T., Sabri, N., Basile, V., and Caselli, T. (2021). Leveraging Bias in Pre-Trained Word Embeddings for Unsupervised Microaggression Detection. In *Proceedings of the Eighth Italian Conference on Computational Linguistics* (Vol. 3303). CEUR Workshop Proceedings (CEUR-WS.org).

- Minnema, G., Remijnse, L., Bos, J., Caselli, T., Fokkens, A., Nissim, M., Postma, M. and Vossen, P., (2020). Towards reference-aware FrameNet representations: Bridging generic and specific event knowledge. In *GeCKo Symposium: Integrating Generic and Contextual Knowledge*.

- Alam, F., Shaar, S., Dalvi, F., Sajjad, H., Nikolov, A., Mubarak, H., Da San Martino, G., Abdelali, A., Durrani, N., Darwish, K. Al-Homaid, A., Zaghouani, W., Caselli, T., Danoe, G., Stolk, F., Brutnik, B., and Nakov, P. (2021). Fighting the COVID-19 Infodemic: Modeling the Perspective of Journalists, Fact-checkers, Social Media Platforms, Policy Makers, and the Society. In *Findings of the Association for Computational Linguistics: EMNLP 2021*, Association for Computational Linguistics.

- Caselli, T, Basile, V, Mitrović, J., Kartoziya, I, and Granitzer, M. (2020). I Feel Offended, Don't Be Abusive! Implicit/Explicit Messages in Offensive and Abusive Language. In *Proceedings of the Twelfth International Conference on Language Resources and Evaluation (LREC 2020)*, European Language Resources Association (ELRA).

- Caselli, T., and Üstun, A. (2019). There and Back Again: Cross-Lingual Transfer Learning for Event Detection. In *Proceedings of the Sixth Italian Conference on Computational Linguistics* (Vol. 2481). CEUR Workshop Proceedings (CEUR-WS.org).

- Caselli, T., and Inel, O. (2018). Crowdsourcing StoryLines: Harnessing the Crowd for Causal Relation Annotation. In T. Caselli, B. Miller, M. van Erp, P. Vossen, M. Palmer, E. Hovy, T. Mitamura, D. Caswell, S. W. Brown, and C. Bonial (Eds.), *Events and Stories in the News: Proceedings of the Workshop*, Association for Computational Linguistics (ACL).

- Caselli, T. (2018). Italian Event Detection Goes Deep Learning. In *Proceedings of the Fifth Italian Conference on Computational Linguistics (CLiC-it 2018) (Vol. 2253)*. CEUR Workshop Proceedings (CEUR-WS.org).

- Bai, X., Merenda, F., Zaghi, C., Caselli, T., and Nissim, M. (2018). RuG @ EVALITA 2018: Hate Speech Detection In Italian Social Media. In T. Caselli, N. Novielli, V. Patti, and P. Rosso (Eds.), *Sixth Evaluation Campaign of Natural Language Processing and Speech Tools for Italian: Final Workshop (EVALITA 2018)* CEUR Workshop Proceedings (CEUR-WS.org).

- Caselli, T., and Morante, R. (2018). Systems' Agreements and Disagreements in Temporal Processing: An Extensive Error Analysis of the TempEval-3 Task. In *Proceedings of the Eleventh International Conference on Language Resources and Evaluation (LREC 2018)* European Language Resources Association (ELRA).

- Segers, R., Caselli, T., and Vossen, P. (2018). The Circumstantial Event Ontology (CEO) and ECB+/CEO: an Ontology and Corpus for Implicit Causal Relations between Events. In *Proceedings of the Eleventh International Conference on Language Resources and Evaluation (LREC 2018)* Paris: European Language Resources Association (ELRA).

Workshop proceedings (full paper peer review)

- Ruitenbeek, W., Zwart, V., van der Noord, R., Gnezdilov, Z., and Caselli, T. "*Zo Grof!*": A Comprehensive Corpus for Offensive and Abusive Language in Dutch. In *Proceedings of the 6th Workshop on Online Abuse and Harms (WOAH 2022)*, Association for Computational Linguistics.

- Caselli, T., Cibin, R., Conforti, C., Ecinas, E. and Teli, M. (2021). Guiding principles for participatory design-inspired natural language processing. In *Proceedings of the 1st Workshop on NLP for Positive Impact* , Association for Computational Linguistics.

- Caselli, T., Mutlu, O., Basile, A. and Hürriyetoğlu, A., 2021, August. Protest-er: Retraining BERT for Protest Event Extraction. In *Proceedings of the 4th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text (CASE 2021)*, Association for Computational Linguistics.

- Caselli, T., Schelhaas, A., Weultjes, M., Leistra, F., van der Veen, H., Timmerman, G. and Nissim, M., 2021, August. DALC: the Dutch Abusive Language Corpus. In *Proceedings of the 5th Workshop on Online Abuse and Harms (WOAH 2021)* , Association for Computational Linguistics.

- Caselli, T., Basile, V., Mitrović, J. and Granitzer, M., (2021). Hatebert: Retraining BERT for Abusive Language Detection in English. *Proceedings of the 5th Workshop on Online Abuse and Harms (WOAH 2021)*, Association for Computational Linguistics.

- van Rosendaal, J., Caselli, T., Nissim, M. (2020). Lower Bias, Higher Density Abusive Language Datasets: A Recipe. In *Proceedings of the 1st Workshop on Resources and Techniques for User and Author Profiling in Abusive Language (ResT-UP)*. European Language Resources Association (ELRA).

- Graumans, L., David, R., and Caselli, T. (2019). Twitter-based Polarised Embeddings for Abusive Language Detection. In *2019 8th International Conference on Affective Computing and Intelligent Interaction Workshops and Demos (ACIIW)* , IEEE.

- Basile, A., and Caselli, T. (2019). ProTestA: Identifying and Extracting Protest Events in News Notebook for ProtestNews Lab at CLEF 2019. In *Working Notes of CLEF 2019 : Conference and Labs of the Evaluation Forum* (Vol. 2380, pp. 1-13). CEUR Workshop Proceedings (CEUR-WS.org).

- Caselli, T. and P. Vossen. 2017. The Event StoryLine Corpus: A New Benchmark for Causal and Temporal Relation Extraction. In *Proceedings of the Workshop on Events and Stories in the News (EventStory 2017)*, Association for Computational Linguistics.