

Antonis Anastasopoulos

CONTACT INFORMATION	355 Fitzpatrick Hall Notre Dame, IN 46556	574-993-1434 aanastas@nd.edu
RESEARCH INTERESTS	Natural Language Processing, Machine Translation, Speech Recognition, Low-Resource NLP applications, Neural Networks	
EDUCATION	University of Notre Dame , South Bend, IN Ph.D., Computer Science, <i>Expected</i> : Summer 2019 <ul style="list-style-type: none">• Advisor: David Chiang, Ph.D, Associate Professor National Technical University of Athens , Athens, Greece B.Sc - M.Sc., Electrical and Computer Engineering, May 2014 <ul style="list-style-type: none">• Diploma Thesis: <i>Online learning for adaptive quality estimation of machine translation output</i>• Advisors: Marco Turchi, Ph.D, Matteo Negri, Ph.D and Yanis Maistros, Asst. Professor• Diploma Grade: 8.6/10	
RESEARCH EXPERIENCE	Software Engineering Intern Google, Inc Hosts: Chris Alberti, Manaal Faruqui (SAFT team, NYC) Collaborated with a team of engineers to investigate the use of neural sequence-to-sequence models on a developing project on Grammar Error Correction: <ul style="list-style-type: none">– Used python, tensorflow (seq2seq, tensor2tensor).– Integrated models developed by other teams for the GEC task.– Achieved neural state-of-the-art results.– Output will be included in two products.	May 2017 - August 2017
	Research Assistant Natural Language Processing Group Department of Computer Science and Engineering University of Notre Dame Supervisor: David Chiang, Ph.D	August 2014 - now
	Visiting Researcher Institute of Language, Cognition, and Computation School of Informatics University of Edinburgh Supervisors: Sharon Goldwater, Ph.D and Adam Lopez, Ph.D	January 2017 - March 2017
	Research Internship Human Language Technologies - Machine Translation Group Fondazione Bruno Kessler, Trento Supervisors: Matteo Negri, Ph.D and Marco Turchi, Ph.D	June 2013 - August 2013
	Research Assistant Natural Language Processing Group National Technical University of Athens Supervisors: Yanis Maistros, Ph.D and Stella Markantonatou, Ph.D	June 2012 - June 2014

TEACHING
EXPERIENCE

Teaching Assistant

Spring 2015-16

CSE 30151 - Theory of Computing
Instructor: Dr. David Chiang
Department of Computer Science and Engineering
University of Notre Dame

PUBLICATIONS

1. **Antonios Anastasopoulos**, Sameer Bansal, Sharon Goldwater, Adam Lopez, and David Chiang. “Spoken Term Discovery for Language Documentation using Translations” In *SCNLP, the 1st Workshop on Speech-Centric Natural Language Processing*, Copenhagen, Denmark, Sep, 2017.
2. Graham Neubig, Chris Dyer, Yoan Goldberg, Steve Matthews, Waleed Ammar, **Antonios Anastasopoulos**, Miguel Ballesteros, David Chiang, Daniel Clothiaux, Trevor Cohn, Kevin Duh, Manaal Faruqui, Cynthia Gan, Dan Garrette, Yangfeng Ji, Lingpeng Kong, Adhiguna Kuncoro, Gaurav Kumar, Chaitanya Malaviya, Paul Michel, Yusuke Oda, Matthew Richardson, Naomi Saphra, Swabha Swayamdipta, Pengcheng Yin. “DyNet: The Dynamic Neural Network Toolkit”, Jan, 2017.
3. **Antonios Anastasopoulos**. “A case study on using speech-to-translation alignments for language documentation” In *ComputEL-2, the 2nd Workshop on Computational Methods for Endangered Languages*, Honolulu, Hawaii, March 6-7, 2017.
4. **Antonios Anastasopoulos**, David Chiang, and Long Duong. “An Unsupervised Probability Model for Speech-to-Translation Alignment of Low-Resource Languages” In *Proceedings of the 2016 Conference on Empirical Methods in Natural Language Processing* (pp. 1255-1263), Austin, Texas, November 2016.
5. Long Duong, **Antonios Anastasopoulos**, Trevor Cohn, Steven Bird, and David Chiang. “An Attentional Model for Speech Translation Without Transcription” In *Proceedings of the 2016 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies* (pp. 949-959), San Diego, California, June 2016.
6. M. Turchi, **A. Anastasopoulos**, J.G.C. de Souza, and M. Negri. “Adaptive Quality Estimation for Machine Translation” In *Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics* (Vol. 1, pp. 710-720), 2014.
7. J.G. Camargo de Souza, M. Turchi, **A. Anastasopoulos**, and M. Negri. “Online and Multitask learning for Machine Translation Quality Estimation in Real-world scenarios” In *1st Italian Conference on Computational Linguistics*, Pisa, Italy, 2014.
8. S. Markantonatou, **A. Anastasopoulos**, and Y. Maistros. “Explicit Objects and Polysemy”. In *11th International Conference on Greek Linguistics*, Rhodes, Greece 2013.
9. **A. Anastasopoulos**, S. Markantonatou, Y. Maistros. “Using noun and clitic frequencies to study verb transitivity in Modern Greek” In *International Workshop on “The relative frequencies of nouns, pronouns, and verbs in discourse” adjacent to ALT10*, Leipzig, Germany, 2013.

AWARDS

Teaching Awards

- Outstanding Graduate Student Teacher Award,
Notre Dame Graduate School
Notre Dame Kaneb Center for Teaching and Learning

April 2017

Travel Awards

- Don and Betty Walker Travel Fund for ACL 2014, Baltimore, MD August 2014

Scholarships

- Undergraduate Studies Scholarship by the John S. Latsis Public Benefit Foundation 2008 - 2013

INVITED TALKS

- *Low-resource neural triangulation for language documentation* post-JSALT meetup, Grenoble, France [upcoming] Jan 2018
- *Speech translation for documentation of endangered languages* Georgetown NLP, DC Oct 2017
- *A Neural Network Pipeline for State-of-the-art Grammar Error Correction* CSE Graduate Student Seminar, Notre Dame, IN Sep 2017
- *Speech translation for documentation of endangered languages* SAFT Team Research Meeting, Google, NYC, NY Jul 2017
- *Speech translation for documentation of endangered languages* Babelfish Research Meeting, Google, MTV, CA Jul 2017
- *Speech to translation alignment for documentation of endangered languages* Probabilistic Models for Language Seminar, Edinburgh, UK Feb 2017
- *Recurrent Neural Networks for Language* Math Graduate Student Association's (MGSA) Graduate Student Seminar (GSS), Notre Dame, IN March 2017

SOFTWARE

SPEECH2TRANSLATION

- **SPEECH2TRANSLATION** is a tool for directly aligning speech to its translation text without access to transcriptions. It extends the IBM model 2 (with the fast_align parameterization) combining it with a clustering model based on Dynamic Time Warping as a distance measure.

AQET

- **AQET** is an open-source package for performing Quality Estimation for Machine Translation, in an online fashion, using Online Support Vector Regression and Online Gaussian Processes. It was developed by **Antonis Anastasopoulos**, José C.G. de Souza, Marco Turchi, Matteo Negri and Nicola Bertoldi at Fondazione Bruno Kessler. The current release was made possible through the [MateCat project](#).

GRIKO DATABASE

- An **online corpus** of Griko, a greek dialect spoken in southern Italy. The corpus contains transcriptions of sentences, along with the corresponding sound files, recorded during oral interviews made by our team in four villages in Grecia Salentina, in May 2013 and in August 2013. The project was financially supported by the John S. Latsis Public Benefit Foundation.

CONTRIBUTIONS TO OPEN-SOURCE SOFTWARE

- **CNN** (now **DYNET**) : a **C++ neural networks library**. Worked on using grammar-like statements for more user-friendly development at the early stage of the library's development (Spring 2015).
- **PENNE** : a **python neural networks library**. Created by the NLP group at Notre Dame, it tries to make creating neural networks as easy as possible.
- **PIALIGN** : a **C++ library** for unsupervised learning to jointly align and extracting phrase table using bayesian inference. Expanded the model to include new tuning parameters, improving performance by up to 5%.

- SERVICE
- ACL Student Research Workshop pre-submission Mentor March 2017
- Quality of Life co-chair, Graduate Student Union August 2016 – Present
- Organise events that promote graduate student welfare.
 - Focus on international and LGBTQ students' integration.
- International and Graduate Orientation Ambassador August 2015, August 2016
- Participated in the orientation programme for incoming international and graduate students
 - Participated in a Graduate Student Q&A panel organised by the GSU.
- MISCELLANEOUS
- Languages:
- Greek, English, Italian, Swedish, German, Spanish
- Computer Programming:
- Python, C, C++, Lua, PHP, UNIX shell scripting, SQL, MySQL, MATLAB, and others
- Music:
- Study of Piano: Degree with “Excellent” grade 1994 - June 2012
 - Study of Counterpoint: Degree with “Very Good” grade June 2009
 - Study of Harmony: Degree with “Excellent” grade June 2006
 - Study of History of Music: Degree with “Excellent” grade June 2006