

# Nikolaos (Nikos) Flemotomos

Ming Hsieh Department of Electrical Engineering  
University of Southern California  
3710 McClintock Ave., Room RTH 317  
Los Angeles, CA 90089

✉ flemotom@usc.edu  
☎ +1 213 421 7498  
🌐 nikosfl.github.io

---

RESEARCH INTERESTS	Speech Recognition, Speaker Diarization and Role Recognition, Machine Learning	
EDUCATION	<b>Ph.D., Electrical Engineering</b> University of Southern California, Los Angeles, CA, U.S.A. Current GPA: 3.95/4.00	started Aug 2016
	<b>M.Sc., Electrical Engineering</b> University of Southern California, Los Angeles, CA, U.S.A. Current GPA: 4.00/4.00	expected Dec 2018
	<b>Diploma (5-years degree), Electrical and Computer Engineering</b> National Technical University of Athens, Athens, Greece Thesis: <i>Robust Acoustic Features for Distant Speech Recognition</i> GPA: 9.34/10.00	Apr 2016
WORKING EXPERIENCE	<b>University of Southern California</b> , Los Angeles, CA, U.S.A Signal Processing and Interpretation Laboratory (SAIL) <i>Graduate Research Assistant</i> <i>Supervisor</i> : Prof. Shrikanth Narayanan	May 2017 to present
	<ul style="list-style-type: none"><li>Combining Speaker Role Recognition (SRR) with other speech processing modules (e.g. diarization, speech recognition) in order both to improve the performance of SRR itself and to provide useful information to the module it is combined with.</li><li>Leading the team that develops a real-world system which, given recordings of psychotherapy sessions, gives feedback to the therapist. This is used in practice for computer-aided therapist training.</li></ul>	
	<b>National Technical University of Athens</b> , Athens, Greece Computer Vision, Speech Communication and Signal Processing Group (CVSP) <i>Undergraduate Research Assistant</i> <i>Supervisor</i> : Prof. Petros Maragos	Feb 2015 to Mar 2016
	<ul style="list-style-type: none"><li>Explored the Teager-Kaiser Energy Operator for energy estimation in speech signals.</li><li>Did a comparative study of acoustic feature sets for distant speech recognition, with an emphasis to those based on the AM-FM speech model.</li></ul>	
	<b>Czech Technical University in Prague</b> , Prague, Czech Republic Biomedical Data and Signal Processing Group (BioDat) <i>Research Intern</i> <i>Supervisor</i> : Assoc. Prof. Lenka Lhotska	Mar 2016 to Jun 2016
	<ul style="list-style-type: none"><li>Developed a novel algorithm for automatic sleep staging from polysomnographic signals, motivated by ideas used in speech recognition.</li></ul>	
TEACHING EXPERIENCE	<b>Society of Astronomy and Space</b> , Volos, Greece <i>Teaching Assistant</i> Preparation for the International Olympiad on Astronomy and Astrophysics	Summer 2011 & 2012
SOFTWARE SKILLS	<b>Programming Languages:</b> Python, UNIX shell scripting, MATLAB, C C++, Java, ML, R, Prolog, SQL	<i>extensive experience</i> <i>familiarity</i>

	<b>Tools:</b> Kaldi Speech Recognition Toolkit, OpenFST library, Tensorflow, Keras Deep Learning library, $\text{\LaTeX}$	
GRADUATE COURSEWORK	Random Processes, Probability, Statistics, Pattern Recognition, Deep Learning, Machine Learning from Signals, Machine Learning Theory, Mathematics of High-Dimensional Data	
AWARDS AND DISTINCTIONS	<b>Annenberg Ph.D Fellowship</b> University of Southern California	Aug 2016 to present
	<b>Travel Grant</b> International Speech Communication Association (ISCA)	Sep 2018
	<b>Honorable Mention</b> 4th International Olympiad on Astronomy and Astrophysics, Beijing, China	Sep 2010
	<b>3rd Award of Success</b> 15th Pan-Hellenic Student Competition on Astronomy and Space Engineering	Mar 2010
CONFERENCE PUBLICATIONS	1. <b>N. Flemotomos</b> , Z. Chen, D.C. Atkins, and S. Narayanan, "Role Annotated Speech Recognition for Conversational Interactions", <i>2018 IEEE SLT Workshop</i> . (accepted) 2. <b>N. Flemotomos</b> , P. Papadopoulos, J. Gibson, and S. Narayanan, "Combined Speaker Clustering and Role Recognition in Conversational Speech", <i>Proc. Interspeech 2018</i> . 3. <b>N. Flemotomos</b> , V.R. Martinez, J. Gibson, D.C. Atkins, T.A. Creed, and S. Narayanan, "Language Features for Automated Evaluation of Cognitive Behavior Psychotherapy Sessions", <i>Proc. Interspeech 2018</i> . 4. K. Singla, Z. Chen, <b>N. Flemotomos</b> , J. Gibson, D. Can, D.C. Atkins, and S. Narayanan, "Using Prosodic and Lexical Information for Learning Utterance-level Behaviors in Psychotherapy", <i>Proc. Interspeech 2018</i> .	
SERVICE AND VOLUNTARY WORK	<b>Hellenic Student Association of USC</b> Student volunteer and board member	Jan 2018 to present
	<b>IEEE Engineering in Medicine &amp; Biology Society NTUA Student Chapter</b> President	Sep 2014 to Jun 2015
	<ul style="list-style-type: none"> <li>Inaugurated partnership with the Scientific Society of Medical Students in Greece.</li> <li>Co-organized and supervised events aiming at the dissemination of the scientific knowledge of Bioengineering and the cooperation between students, professors, and researchers, such as Apps4Med, a 2-week-long event focused on mobile health app development, with workshops, presentations, and a hackathon on mHealth apps.</li> </ul>	
	Student volunteer	Sep 2013 to Jun 2014
	<b>7th International Olympiad on Astronomy and Astrophysics</b> Student volunteer	Aug 2014
	<b>Greek Astronomy magazine "Ouranos"</b> Member of the writing team	Sep 2012 to Mar 2015
	<b>AEGEE-Athina</b> Volunteer (organisation aiming at a democratic, diverse Europe)	Sep 2012 to Sep 2013
LANGUAGES	<b>Greek</b> , Native Speaker <b>English</b> , Proficient Level <b>French</b> , Proficient Level <b>Japanese</b> , Beginner Level	
	<i>Certificate of Proficiency in English</i> <i>Diplôme Approfondi de Langue Française (DALF C1-C2)</i> <i>Level N5 of the Japanese-Language Proficiency Test</i>	