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RESEARCH INTERESTS Software maintenance, Empirical software engineering, Refactoring recommendation systems, Software quality assurance, Design pattern detection

WORK EXPERIENCE **Associate Professor** June 2017 – present  
Department of Computer Science and Software Engineering,  
Concordia University, Montreal, Canada

**Assistant Professor** July 2012 – May 2017  
Department of Computer Science and Software Engineering,  
Concordia University, Montreal, Canada

**Postdoctoral Fellow** Jan 2011 – May 2012  
Department of Computing Science,  
University of Alberta, Edmonton, Canada

EDUCATION **University of Macedonia**, Thessaloniki, Greece

Ph.D. in Applied Informatics (Software Engineering) Dec 2006 – Sep 2010  

- Thesis: “Evaluation and Improvement of Software Architecture: Identification of Design Problems in Object-Oriented Systems and Resolution through Refactorings”

M.Sc. in Applied Informatics (Computer Systems) Oct 2004 – Aug 2006  

- Thesis: “Design Pattern Detection Using Graph Matching Algorithms”

B.Sc. in Applied Informatics Oct 2000 – Sep 2004  

- Thesis: “Predicting the Probability of Change in Object-Oriented Systems”

LICENSING Professional Engineers of Ontario - Limited License in the category of Software  
License number: 100221052  
Date of issue: November 3rd, 2015

RESEARCH FUNDING	Project	Funding Source	Duration
	Refactoring Recommendation 2.0 (PI)	NSERC Discovery	Apr'18 – Mar'23
	Pattern Extraction (PI)	Huawei Technologies	Jan'16 – Jan'17
	Concordia University Research Chair in Web Software Technologies (PI)	Vice-President, Research and Graduate Studies	Jun'15 – May'20
	Improving the Maintainability and Efficiency of Cascading Style Sheets (PI)	FRQNT New University Researchers Start-up	May'14 – May'16
	A Framework for the Management of Preventive Maintenance (PI)	NSERC Discovery	Apr'13 – Mar'18
	Supporting Preventive Maintenance through the Detection of Refactoring Opportunities (PI)	ENCS Start-up	Jul'12 – Apr'14

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- JOURNAL PAPERS
1. E. da S. Maldonado, E. Shihab, and **N. Tsantalis**, “Using Natural Language Processing to Automatically Detect Self-Admitted Technical Debt,” *IEEE Transactions on Software Engineering*, vol. 43, no. 11, pp. 1044-1062, November 2017. ([top-6 cited papers published at TSE in 2017](#))
  2. **N. Tsantalis**, D. Mazinianian, and G. P. Krishnan, “Assessing the Refactorability of Software Clones,” *IEEE Transactions on Software Engineering*, vol. 41, no. 11, pp. 1055-1090, November 2015.
  3. **N. Tsantalis**, and A. Chatzigeorgiou, “Identification of Extract Method Refactoring Opportunities for the Decomposition of Methods,” *Journal of Systems and Software*, vol. 84, no. 10, pp. 1757-1782, October 2011. ([top-9 cited papers published at JSS in 2011](#))
  4. **N. Tsantalis**, and A. Chatzigeorgiou, “Identification of Move Method Refactoring Opportunities,” *IEEE Transactions on Software Engineering*, vol. 35, no. 3, pp. 347-367, May/June 2009. ([top-7 cited papers published at TSE in 2009](#))
  5. **N. Tsantalis**, A. Chatzigeorgiou, G. Stephanides, and S. T. Halkidis, “Design Pattern Detection Using Similarity Scoring,” *IEEE Transactions on Software Engineering*, vol. 32, no. 11, pp. 896-909, November 2006. ([top-6 cited papers published at TSE in 2006](#))
- CONFERENCE PAPERS
1. **N. Tsantalis**, M. Mansouri, L. Eshkevari, D. Mazinianian, and D. Dig, “Accurate and Efficient Refactoring Detection in Commit History,” pp. 483-494, *40th International Conference on Software Engineering (ICSE)*, Gothenburg, Sweden, May 27 - June 3, 2018. ([top-5 cited papers published at ICSE 2018](#))
  2. **N. Tsantalis**, D. Mazinianian, and S. Rostami, “Clone Refactoring with Lambda Expressions,” *39th International Conference on Software Engineering (ICSE)*, Buenos Aires, Argentina, May 20-28, 2017. ([ACM SIGSOFT Distinguished Paper Award](#))
  3. D. Silva, **N. Tsantalis**, and M. T. Valente, “Why We Refactor? Confessions of GitHub Contributors,” pp. 858-870, *24th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE)*, Seattle, WA, USA, November 13-18, 2016. ([ACM SIGSOFT Distinguished Paper Award, top-3 cited papers published at FSE 2016](#))
  4. M. Fokaefs, R. Mikhael, **N. Tsantalis**, E. Stroulia, and A. Lau, “An Empirical Study on Web Service Evolution,” pp. 49-56, *9th IEEE International Conference on Web Services (ICWS)*, Washington DC, USA, July 4-9, 2011. ([top-3 cited papers published at ICWS 2011](#))

## Awards/Distinctions

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**IEEE Computer Society TCSE Most Influential Paper Award** at SANER 2019

**Most Influential Paper Award** at SANER 2018

**ACM SIGSOFT Distinguished Paper Award** at ICSE 2017

**ACM SIGPLAN Distinguished Artifact Award** at OOPSLA 2017

**ACM SIGSOFT Distinguished Paper Award** at FSE 2016

**ACM SIGSOFT Distinguished Artifact Award** at FSE 2016

**Best Paper Candidate Award** at SANER 2016

**Featured article** of the IEEE TSE November 2017 issue

**Featured article** of the IEEE TSE November 2015 issue

**Outstanding Reviewer Status** *Information & Software Technology* 2014-2015

## Teaching & Supervision

TEACHING EXPERIENCE	Course title	Course number	Reg. Students	Offered
	Software Architecture II	SOEN 344/4 S	131	Winter 2020
	SE Team Design Project	SOEN 390/4 S	168	Winter 2020
	Software Refactoring	SOEN 6491/2 DD	41	Fall 2019
	Software Architecture II	SOEN 344/4 S	163	Winter 2018
	Software Refactoring	SOEN 6491/2 DD	50	Fall 2017
	SE Team Design Project	SOEN 390/4 S	93	Winter 2017
	Software Refactoring	SOEN 6491/2 DD	31	Fall 2016
	SE Team Design Project	SOEN 390/4 S	62	Winter 2016
	Software Refactoring	SOEN 691/2 DD	27	Fall 2015
	Software Measurement	SOEN 6611/1 AA	93	Summer 2015
	SE Team Design Project	SOEN 390/4 S	55	Winter 2015
	Software Refactoring	SOEN 691C/2 DD	47	Fall 2014
	Object-Oriented Programming II	COMP 249/1 CC	67	Summer 2014
	Software Measurement	SOEN 6611/4 DD	32	Winter 2014
	Software Refactoring	SOEN 691C/2 DD	27	Fall 2013
	Object-Oriented Programming II	COMP 249/2 D	60	Fall 2013
	Software Measurement	SOEN 6611/4 DD	22	Winter 2013
	Object-Oriented Programming II	COMP 249/2 D	46	Fall 2012

  

SUPERVISED STUDENTS	Name	Role	Level	Start	End
	1 Mehran Jodavi	Supervisor	Master's	Sep'19	-
	2 Mosabbir Khan Shiblu	Supervisor	Master's	Sep'19	-
	3 Sadegh Aalizadeh	Supervisor	Master's	May'19	-
	4 Tahmid Ahmad	Supervisor	Master's	Sep'16	Nov'19
	5 Matin Mansouri	Supervisor	Master's	Jan'16	Jan'18
	6 Mehran Hassani	Co-supervisor	Master's	Jan'16	Mar'18
	7 Laleh M. Eshkevari	Supervisor	Postdoc	Feb'16	Aug'17
	8 Davood Mazinianian	Supervisor	Ph.D.	May'13	Aug'17
	9 Asif Al-Waqfi	Supervisor	Master's	Sep'15	Mar'17
	10 Shahriar Rostami	Supervisor	Master's	Sep'14	Aug'16
	11 Guo Qiao	Supervisor	Master's	Sep'13	Apr'15
	12 Giri Panamoottil Krishnan	Supervisor	Master's	Jan'13	Apr'14
	1 Hassan Mansour	Supervisor	NSERC USRA	May'19	Aug'19
	2 Zackary Valenta	Supervisor	NSERC USRA	May'14	Aug'14
	3 Kimberly Dextras-Romagnino	Supervisor	NSERC USRA	May'13	Aug'13
	4 Raphael Stein	Supervisor	NSERC USRA	May'13	Aug'13

## Service

JOURNAL BOARD MEMBER	- IEEE Transactions on Software Engineering Review Board
GENERAL CHAIR	- 3 <sup>rd</sup> International Workshop on Refactoring (IWoR'2019), co-located with ICSE'2019
PROGRAM CHAIR	- 37 <sup>th</sup> IEEE International Conference on Software Maintenance and Evolution (ICSME'2021) [Research track]

- 20<sup>th</sup> IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM'2020) [Research track]
- 28<sup>th</sup> IEEE/ACM International Conference on Program Comprehension (ICPC'2020) [Tool Demonstration track]
- 19<sup>th</sup> IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM'2019) [Engineering track]
- 26<sup>th</sup> IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER'2019) [ERA track]
- 24<sup>th</sup> IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER'2017) [Tool Demonstration track]
- 22<sup>nd</sup> IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER'2015) [ERA track]

PROGRAM  
COMMITTEE  
MEMBER

**2020** [Track]

- IEEE International Conference on Software Maintenance and Evolution (ICSME) [Research]
- International Conference on Mining Software Repositories (MSR) [Research]

**2019** [Track]

- IEEE/ACM International Conference on Program Comprehension (ICPC) [Research]

**2018** [Track]

- IEEE International Conference on Software Maintenance and Evolution (ICSME) [Research]
- ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE) [ACM Student Research Competition]
- International Workshop on Refactoring (IWor)

**2017** [Track]

- IEEE/ACM International Conference on Automated Software Engineering (ASE) [Research]
- IEEE International Conference on Software Maintenance and Evolution (ICSME) [Research]
- IEEE International Conference on Program Comprehension (ICPC) [Research]
- International Workshop on API Usage and Evolution (WAPI)

**2016** [Track]

- IEEE International Conference on Software Maintenance and Evolution (ICSME) [Research]
- IEEE International Conference on Program Comprehension (ICPC) [Research]
- IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER) [ERA]
- International Workshop on Refactoring (IWor)

**2015** [Track]

- International Conference on Web Engineering (ICWE) [Web user interfaces]
- IEEE International Conference on Program Comprehension (ICPC) [Research]
- IEEE International Conference on Program Comprehension (ICPC) [ERA]

**2014** [Track]

- Asia-Pacific Software Engineering Conference (APSEC) [Research]
- IEEE International Conference on Software Maintenance and Evolution (ICSME) [ERA]
- IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM) [Research]
- IEEE Conference on Software Maintenance, Reengineering and Reverse Engineering (CSMR-WCRE) [Research]

**2013** [Track]

- International Conference on Software Engineering (ICSE) [Formal Research Demonstrations]
- IEEE International Conference on Program Comprehension (ICPC) [ERA]
- European Conference on Software Maintenance and Reengineering (CSMR) [Research]
- IEEE International Conference on Software Maintenance (ICSM) [ERA]

**2012** [Track]

- European Conference on Software Maintenance and Reengineering (CSMR) [Research]
- IEEE International Conference on Software Maintenance (ICSM) [ERA]