

Angelo Susi

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Researcher in the Software Engineering (SE) Research Unit at Fondazione Bruno Kessler, Trento, Italy. He received his Laurea degree in Computer Science Engineering from the University of Rome "Sapienza" with a thesis in the field of activity scheduling and planning.

His main research interests are in the following fields.

- *Requirements Engineering* where he is active in the area of requirements elicitation and analysis through informal and formal methods techniques.
- *Search-Based Software Engineering* in particular in the study of meta-heuristics to be applied to the problems of requirements and test cases prioritization and management. *Machine Learning* with the development of algorithms to be applied to decision-making problems in requirements management.
- *Goal-Oriented Software Engineering*, where the focus is that of developing and refining several aspects of Tropos methodology, a goal-oriented framework that supports the whole software development process from domain early analysis to the system implementation.
- *Risk Analysis*, where the study concerns the application of software engineering techniques to the identification and management of risks.

He wrote over 90 peer reviewed conference/workshop papers and 19 journal papers. His H-index (according to Google scholar) is 27. He obtained the national scientific qualification to function as full professor in Italian Universities (*Abilitazione Scientifica Nazionale, prima fascia*) for the scientific area: 01/B1 – Computing (7/08/2018), and as associate professor in Italian Universities (*Abilitazione Scientifica Nazionale, seconda fascia*) for the scientific area: 01/B1 – Computing (1/08/2017).

He participated in several research projects on requirements engineering and risk analysis among which SUPERSEDE, an H2020 project for software system evolution and adaptation (2015-2018), RISCOSS, a European FP7 project for risk analysis in Open Source Software adoption (2012-2015), and *EuRailCheck*, (2008) a project for the validation of the signaling specification of the European high-speed trains.

He served as General Chair for SSBSE 2012, as Financial Chair for RE 2011, and Organisation Chair for ISSTA 2009, and ICSM 2012. Among the others, he served in the program committees of ICSE, CAiSE, SSBSE, RE, REFSQ, AAMAS. He has been reviewer, among the others, for TSE, IST, JSS and REJ.

Professional Career

- *From December 2000 to date.* Angelo Susi joined the former Istituto Trentino di Cultura, now Fondazione Bruno Kessler in 2000 as a Researcher in the Software Engineering Unit.
- *From October 1998 to December 2000.* Research assistant at the National Research Council of Italy (CNR), Institute of Cognitive Sciences. The research work mainly concerned the field of Temporal reasoning applied to the planning and scheduling problems. He participated at the design and development of an automated scheduling system for satellite activities, named O-OSCAR in a project financed by the Italian Space Agency (ASI) and by the European Space Agency (ESA).

Research Projects

Here a list of the main research projects:

- **SUPERSEDE** (2015-2018). European Union H2020 project (n.644018). SUPERSEDE will provide a new solution framework for software evolution and adaptation for feedback driven and data-intensive applications. Role in the project: Workpackage Leader.
- **RISCOSS** (2012-2015). European Union FP7 project (n.318249). RISCOSS offers novel risk identification, management and mitigation in Open Source Software (OSS). Role in the project: Scientific Manager and Workpackage Leader.
- **ACube** (2008-2011). Founded by the Autonomous Province of Trento under the grant "Grandi Progetti 2006". The project concerned the application of Ambient Assisted Living methodologies and techniques in the healthcare institutions. Role in the project: Task Leader.
- **EuRailCheck** (2008). Founded by the European Railway Agency under the service contract ERA/2007/ERTMS/02. The project concerned the formal analysis and validation of the European Railway Signaling System Specifications. Role in the project: Workpackage Leader.

International cooperation partners

Several contacts have been established with members of international academic institutions thanks to common research interests and participation to research projects. Here a list of the major contacts in the last five years: Xavier Franch, UPC, Universitat Politècnica de Catalunya, Spain, Oscar Pastor, University of Valencia, Spain, Mark Harman, Emmanuel Letier University College London, UK, Neil Maiden, City University, London, UK, Irit Hadar, Iris Reinhartz-Berger, Tsvi Kuflik, University of Haifa, Israel, Daniel Amyot, University of Ottawa, Canada, John Mylopoulos, University of Toronto, Canada, Eric Yu, University of Toronto, Canada, Ivan Jureta, University of Namur, Belgium.

Selection of committees and reviewing

TSE: IEEE Transactions on Software Engineering. IEEE Computer Society. Reviewer. **IST**: Information Systems & Software. Elsevier. Reviewer. **JSS**: Journal of Systems and Software, Elsevier. Reviewer. **ICSE**: International Conference on Software Engineering. Program committee. **RE**: IEEE Requirements Engineering Conference. Reviewing Committee. **REFSQ**: Requirements Engineering and Software Quality Conference. Program

committee. **SSBSE**: Symposium on Search Based Software Engineering. Program committee. General chair (2012). **CAiSE**: Int. Conference on Advanced information System Engineering. Program committee.

Selected publications

1. Antônio Mauricio Pitangueira, Paolo Tonella, Angelo Susi, Rita Suzana Pitangueira Maciel, Márcio de Oliveira Barros: Minimizing the stakeholder dissatisfaction risk in requirement selection for next release planning. *Information & Software Technology* 87: 104-118 (2017)
2. Alessandro Marchetto, Md. Mahfuzul Islam, M. Waseem Asghar, Angelo Susi, Giuseppe Scanniello: A Multi-Objective Technique to Prioritize Test Cases. *IEEE Trans. Software Eng.* 42(10): 918-940 (2016)
3. Anna Perini, Angelo Susi, Paolo Avesani: *A Machine Learning Approach to Software Requirements Prioritization*. *IEEE Trans. Software Eng.* 39(4): 445-461 (2013). <http://doi.ieeecomputersociety.org/10.1109/TSE.2012.52>
4. Alessandro Cimatti, Marco Roveri, Angelo Susi, Stefano Tonetta: *Validation of requirements for hybrid systems: A formal approach*. *ACM Trans. Softw. Eng. Methodol.* 21(4): 22 (2012). <http://doi.acm.org/10.1145/2377656.2377659>
5. Paolo Tonella, Angelo Susi, Francis Palma: *Interactive requirements prioritization using a genetic algorithm*. *Information & Software Technology* 55(1): 173-187 (2013). <http://dx.doi.org/10.1016/j.infsof.2012.07.003>
6. Luca Sabatucci, Mariano Ceccato, Alessandro Marchetto, Angelo Susi: Ahab's legs in scenario-based requirements validation: An experiment to study communication mistakes. *Journal of Systems and Software* 109: 124-136 (2015)
7. Irit Hadar, Iris Reinhartz-Berger, Tsvi Kuflik, Anna Perini, Filippo Ricca, Angelo Susi: *Comparing the comprehensibility of requirements models expressed in Use Case and Tropos: Results from a family of experiments*. *Information & Software Technology* 55(10): 1823-1843 (2013). <http://dx.doi.org/10.1016/j.infsof.2013.05.003>
8. Alessandro Cimatti, Marco Roveri, Angelo Susi, Stefano Tonetta: *Formalizing requirements with object models and temporal constraints*. *Software and System Modeling* 10(2): 147-160 (2011). <http://dx.doi.org/10.1007/s10270-009-0130-7>
9. Anna Perini, Filippo Ricca, Angelo Susi: *Tool-supported requirements prioritization: Comparing the AHP and CBRank methods*. *Information & Software Technology* 51(6): 1021-1032 (2009). <http://dx.doi.org/10.1016/j.infsof.2008.12.001>
10. Loris Penserini, Anna Perini, Angelo Susi, John Mylopoulos: *High variability design for software agents: Extending Tropos*. *TAAS* 2(4) (2007). <http://doi.acm.org/10.1145/1293731.1293736>

Recent publications (2013-2018)

Year 2018

1. Xavier Franch, Jolita Ralyté, Anna Perini, Alberto Abelló, David Ameller, Jesús Gorroñoigoitia, Sergi Nadal, Marc Oriol, Norbert Seyff, Alberto Siena, Angelo Susi: A Situational Approach for the Definition and Tailoring of a Data-Driven Software Evolution Method. *CAiSE 2018*: 603-618
2. Renata S. S. Guizzardi, Anna Perini, Angelo Susi: Aligning Goal and Decision Modeling. *CAiSE Forum 2018*: 124-132
3. Fitsum Meshesha Kifetew, Anna Perini, Angelo Susi: Managing Multi-Lingual User Feedback: The SUPERSEDE Project Experience. *REFSQ Workshops 2018*
4. Miguel Goulão, Marcela Ruiz, Angelo Susi: Proceedings of the 11th International i* Workshop co-located with the 30th International Conference on Advanced Information Systems Engineering (CAiSE 2018), Tallinn, Estonia, June 12, 2018. *CEUR Workshop Proceedings 2118*, CEUR-WS.org 2018

Year 2017

1. Antônio Mauricio Pitangueira, Paolo Tonella, Angelo Susi, Rita Suzana Pitangueira Maciel, Márcio de Oliveira Barros: Minimizing the stakeholder dissatisfaction risk in requirement selection for next release planning. *Information & Software Technology* 87: 104-118 (2017)
2. Fitsum Meshesha Kifetew, Angelo Susi, Denisse Muñante, Anna Perini, Alberto Siena, Paolo Busetta: Towards Multi-decision-maker Requirements Prioritisation via Multi-Objective Optimisation. *CAiSE-Forum-DC 2017*: 137-144

3. Paolo Busetta, Fitsum Meshesha Kifetew, Denisse Muñante, Anna Perini, Alberto Siena, Angelo Susi: Tool-Supported Collaborative Requirements Prioritisation. *COMPSAC (1) 2017*: 180-189
4. Fitsum Meshesha Kifetew, Mirko Morandini, Denisse Muñante, Anna Perini, Alberto Siena, Angelo Susi: Goal-aware Analysis of Software License Risks. *iStar 2017*: 1-6
5. Denisse Muñante, Alberto Siena, Fitsum Meshesha Kifetew, Angelo Susi, Melanie J. C. Stade, Norbert Seyff: Gathering Requirements for Software Configuration from the Crowd. *RE Workshops 2017*: 176-181
6. Jacek Dabrowski, Fitsum Meshesha Kifetew, Denisse Muñante, Emmanuel Letier, Alberto Siena, Angelo Susi: Discovering Requirements through Goal-Driven Process Mining. *RE Workshops 2017*: 199-203
7. Fitsum Meshesha Kifetew, Denisse Muñante, Anna Perini, Angelo Susi, Alberto Siena, Paolo Busetta, Danilo Valerio: Gamifying Collaborative Prioritization: Does Pointsification Work? *RE 2017*: 322-331
8. Itzel Morales-Ramirez, Denisse Muñante, Fitsum Meshesha Kifetew, Anna Perini, Angelo Susi, Alberto Siena: Exploiting User Feedback in Tool-Supported Multi-criteria Requirements Prioritization. *RE 2017*: 424-429
9. Fitsum Meshesha Kifetew, Denisse Muñante, Anna Perini, Angelo Susi, Alberto Siena, Paolo Busetta: DMGame: A Gamified Collaborative Requirements Prioritisation Tool. *RE 2017*: 468-469
10. Fitsum Meshesha Kifetew, Denisse Muñante, Jesús Gorroñoigoitia, Alberto Siena, Angelo Susi, Anna Perini: Grammar Based Genetic Programming for Software Configuration Problem. *SSBSE 2017*: 130-136

Year 2016

1. Alessandro Marchetto, Md. Mahfuzul Islam, M. Waseem Asghar, Angelo Susi, Giuseppe Scanniello: A Multi-Objective Technique to Prioritize Test Cases. *IEEE Trans. Software Eng.* 42(10): 918-940 (2016)
2. Xavier Franch, Angelo Susi: Risk assessment in open source systems. *ICSE (Companion Volume) 2016*: 896-897
3. Antônio Mauricio Pitangueira, Paolo Tonella, Angelo Susi, Rita Suzana Pitangueira Maciel, Márcio de Oliveira Barros: Risk-Aware Multi-stakeholder Next Release Planning Using Multi-objective Optimization. *REFSQ 2016*: 3-18

Year 2015

4. Luca Sabatucci, Mariano Ceccato, Alessandro Marchetto, Angelo Susi: Ahab's legs in scenario-based requirements validation: An experiment to study communication mistakes. *Journal of Systems and Software* 109: 124-136 (2015)
5. Luca Sabatucci, Massimo Cossentino, Angelo Susi: A goal-oriented approach for representing and using design patterns. *Journal of Systems and Software* 110: 136-154 (2015)
6. Dolors Costal, Lidia López, Mirko Morandini, Alberto Siena, Maria Carmela Annsi, Daniel Gross, Lucía Méndez, Xavier Franch, Angelo Susi: Aligning Business Goals and Risks in OSS Adoption. *ER 2015*: 35-49
7. Matthieu Vergne, Angelo Susi: Breaking the Recursivity: Towards a Model to Analyse Expert Finders. *ER 2015*: 539-547
8. Itzel Morales-Ramirez, Matthieu Vergne, Mirko Morandini, Anna Perini, Angelo Susi: Exploiting Online Discussions in Collaborative Distributed Requirements Engineering. *iStar 2015*: 7-12
9. Xavier Franch, Ron S. Kenett, Fabio Mancinelli, Angelo Susi, David Ameller, Maria Carmela Annsi, Ron Ben-Jacob, Yehuda Blumenfeld, O. H. Franco, Daniel Gross, L. Lopez, Mirko Morandini, Marc Oriol, Alberto Siena: The RISCOSS Platform for Risk Management in Open Source Software Adoption. *OSS 2015*: 124-133
10. Paolo Avesani, Anna Perini, Alberto Siena, Angelo Susi: Goals at risk? Machine learning at support of early assessment. *RE 2015*: 252-255

Year 2014

1. Mirko Morandini, Alberto Siena, Angelo Susi: *Risk Awareness in Open Source Component Selection*. In Proc. of BIS 2014: 241-252. http://dx.doi.org/10.1007/978-3-319-06695-0_21
2. Matthieu Vergne, Angelo Susi: *Expert Finding Using Markov Networks in Open Source Communities*. In Proc. of CAISE 2014: 196-210. http://dx.doi.org/10.1007/978-3-319-07881-6_14
3. Ron S. Kenett, Xavier Franch, Angelo Susi, Nikolas Galanis: *Adoption of Free Libre Open Source Software (FLOSS): A Risk Management Perspective*. In Proc. of COMPSAC 2014: 171-180. <http://dx.doi.org/10.1109/COMPSAC.2014.25>

4. Silvia Ingolfo, Ivan Jureta, Alberto Siena, Anna Perini, Angelo Susi: *Nòmos 3: Legal Compliance of Roles and Requirements*. In Proc. of ER 2014: 275-288. http://dx.doi.org/10.1007/978-3-319-12206-9_22
5. Alberto Siena, Mirko Morandini, Angelo Susi: *Modelling Risks in Open Source Software Component Selection*. In Proc. of ER 2014: 335-348. http://dx.doi.org/10.1007/978-3-319-12206-9_28
6. Itzel Morales-Ramirez, Matthieu Vergne, Mirko Morandini, Alberto Siena, Anna Perini, Angelo Susi: *Who is the expert? combining intention and knowledge of online discussants in collaborative RE tasks*. ICSE Companion 2014: 452-455. <http://doi.acm.org/10.1145/2591062.2591103>
7. Dolors Costal, Daniel Gross, Lidia López, Mirko Morandini, Alberto Siena, Angelo Susi: *Quantifying the Impact of OSS Adoption Risks with the help of i* Models*. In Proc. of iStar 2014. <http://doi.acm.org/10.1145/2591062.2591103>
8. Xavier Franch, Ron S. Kenett, Fabio Mancinelli, Angelo Susi, David Ameller, Ron Ben-Jacob, Alberto Siena: *A Layered Approach to Managing Risks in OSS Projects*. In Proc. of OSS 2014: 168-171. http://dx.doi.org/10.1007/978-3-642-55128-4_23
9. Mariano Ceccato, Alessandro Marchetto, Anna Perini, Angelo Susi: *How smartphone users assess the value/risk trade-off of apps: An observational study*. In Proc. of EmpiRE 2014: 17-24. <http://dx.doi.org/10.1109/EmpiRE.2014.6890111>

Year 2013

1. Silvia Ingolfo, Alberto Siena, John Mylopoulos, Angelo Susi, Anna Perini: *Arguing regulatory compliance of software requirements*. Data Knowl. Eng. 87: 279-296 (2013). <http://dx.doi.org/10.1016/j.datak.2012.12.004>
2. Paolo Tonella, Angelo Susi, Francis Palma: *Interactive requirements prioritization using a genetic algorithm*. Information & Software Technology 55(1): 173-187 (2013). <http://dx.doi.org/10.1016/j.infsof.2012.07.003>
3. Irit Hadar, Iris Reinhartz-Berger, Tsvi Kuflik, Anna Perini, Filippo Ricca, Angelo Susi: *Comparing the comprehensibility of requirements models expressed in Use Case and Tropos: Results from a family of experiments*. Information & Software Technology 55(10): 1823-1843 (2013). <http://dx.doi.org/10.1016/j.infsof.2013.05.003>
4. Anna Perini, Angelo Susi, Paolo Avesani: *A Machine Learning Approach to Software Requirements Prioritization*. IEEE Trans. Software Eng. 39(4): 445-461 (2013). <http://doi.ieeecomputersociety.org/10.1109/TSE.2012.52>
5. M. Waseem Asghar, Alessandro Marchetto, Angelo Susi, Giuseppe Scanniello: *Maintainability-Based Requirements Prioritization by Using Artifacts Traceability and Code Metrics*. In Proc. of CSMR 2013: 417-420. <http://dx.doi.org/10.1109/CSMR.2013.62>
6. Alberto Siena, Silvia Ingolfo, Anna Perini, Angelo Susi, John Mylopoulos: *Automated Reasoning for Regulatory Compliance*. In Proc. of ER 2013: 47-60. http://dx.doi.org/10.1007/978-3-642-41924-9_5
7. Xavier Franch, Angelo Susi, Maria Carmela Annosi, Claudia P. Ayala, Ruediger Glott, Daniel Gross, Ron S. Kenett, Fabio Mancinelli, Pop Ramsamy, Cedric Thomas, David Ameller, Stijn Bannier, Nili Bergida, Yehuda Blumenfeld, Olivier Bouzereau, Dolors Costal, Manuel Dominguez, Kirsten Haaland, Lidia López, Mirko Morandini, Alberto Siena: *Managing Risk in Open Source Software Adoption*. In Proc. of ICISOFT 2013: 258-264. <http://dx.doi.org/10.5220/0004592802580264>
8. Matthieu Vergne, Itzel Morales-Ramirez, Mirko Morandini, Angelo Susi, Anna Perini: *Analysing User Feedback and Finding Experts: Can Goal-Oriented Help?* In Proc. of iStar 2013: 49-54. http://ceur-ws.org/Vol-978/paper_9.pdf
9. Claudia P. Ayala, Xavier Franch, Lidia López, Mirko Morandini, Angelo Susi: *Using i* to Represent OSS Ecosystems for Risk Assessment*. In Proc. of iStar 2013: 73-78. http://ceur-ws.org/Vol-978/paper_13.pdf
10. Zohreh Sharafi, Alessandro Marchetto, Angelo Susi, Giuliano Antoniol, Yann-Gaël Guéhéneuc: *An empirical study on the efficiency of graphical vs. textual representations in requirements comprehension*. In Proc. of ICPC 2013: 33-42. <http://dx.doi.org/10.1109/ICPC.2013.6613831>
11. Silvia Ingolfo, Alberto Siena, Angelo Susi, Anna Perini, John Mylopoulos: *Modeling laws with nomos 2*. In Proc. of RELAW 2013: 69-71. <http://dx.doi.org/10.1109/RELAW.2013.6671350>
12. Silvia Ingolfo, Alberto Siena, Ivan Jureta, Angelo Susi, Anna Perini, John Mylopoulos: *Choosing Compliance Solutions through Stakeholder Preferences*. In Proc. of REFSQ 2013: 206-220. http://dx.doi.org/10.1007/978-3-642-37422-7_15