

Fifth International Workshop on Variability and Evolution of Software-Intensive Systems (VariVolution 2022)

Sandra Greiner
University of Bayreuth, Germany
Sandra1.Greiner@uni-bayreuth.de

Gabriela Karoline Michelon
JKU Linz, Austria
gabriela.michelon@jku.at

Kristof Meixner
TU Wien, Austria
kristof.meixner@tuwien.ac.at

Philippe Collet
Université Côte d'Azur, CNRS, I3S
philippe.collet@univ-cotedazur.fr

ABSTRACT

Software versions resulting from evolution in time (revisions) and space (variants) are still separately managed instead of being treated uniformly. Recently, several research activities have focused on the integrated management of evolution and variability. Existing approaches stem from multiple origins, most notably from the fields of software configuration management and software product line engineering. For instance, variation control systems adopt a holistic view on software evolution in time and space with the ultimate goal of systematically managing software revisions and variants. *VariVolution* (the 5th International Workshop on Variability and Evolution of Software-Intensive Systems) aims at bringing together active researchers studying software evolution and variability from different angles as well as practitioners who encounter these phenomena in real-world applications and systems. The workshop offers a platform for exchanging new ideas and fostering future research collaborations and synergies.

CCS CONCEPTS

• **Software and its engineering** → *Software product lines; Software configuration management and version control systems.*

KEYWORDS

Evolution, variability, version control, configuration management

ACM Reference Format:

Sandra Greiner, Kristof Meixner, Gabriela Karoline Michelon, and Philippe Collet. 2022. Fifth International Workshop on Variability and Evolution of Software-Intensive Systems (VariVolution 2022). In *26th ACM International Systems and Software Product Line Conference - Volume A (SPLC '22)*, September 12–16, 2022, Graz, Austria. ACM, New York, NY, USA, 1 page. <https://doi.org/10.1145/3546932.3547018>

WORKSHOP SUMMARY

Just like software in general, software product lines are subject to frequent changes. This introduces evolution as a second problem dimension in addition to variability, which is the primary problem dimension addressed by software product line engineering.

Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the owner/author(s).
SPLC '22, September 12–16, 2022, Graz, Austria
© 2022 Copyright held by the owner/author(s).
ACM ISBN 978-1-4503-9443-7/22/09.
<https://doi.org/10.1145/3546932.3547018>

Traditionally, the methods and tools applied for revision control and variant management are radically different and mutually disjoint although research has already suggested that evolution and variability can be tackled in a holistic way.

VariVolution offers a collaborative forum to present and work on this research direction. With the fourth edition of the VariVolution workshop, we follow the topics and intentions of previous years [1–4], conveying concepts of software evolution to the variability management community. The objectives of the workshop are:

- Conceptual approaches and technical solutions towards uniform, i.e., chronological and logical versioning
- Variation control systems
- Concepts enabling software product line modernization
- Evolution problems concerning specific variability mechanisms (e.g., delta-oriented, annotation-based)
- Variability- and evolution-friendly software development processes (e.g., reactive, incremental, agile)
- Tools implementing previous listed concepts
- Investigation and classification of real-world problems caused by combination of variability and evolution
- Industrial challenges and lessons learned

VariVolution aims to establish collaborations on evolving variability by raising the awareness for open problems, presenting novel techniques, and providing a discussion forum for future research.

We received two submissions for the fifth edition of VariVolution, out of which the program committee accepted two short papers to be included in the workshop.

Website: <https://sites.google.com/view/varivolution2022/>

REFERENCES

- [1] Lea Gerling, Sandra Greiner, Kristof Meixner, and Gabriela Karoline Michelon. 2021. Fourth International Workshop on Variability and Evolution of Software-Intensive Systems (VariVolution 2021). In *Proceedings of the 25th ACM International Systems and Software Product Line Conference - Volume A (Leicester, United Kingdom) (SPLC '21)*. 204.
- [2] Jacob Krüger, Sofia Ananieva, Lea Gerling, and Eric Walkingshaw. 2020. Third International Workshop on Variability and Evolution of Software-Intensive Systems (VariVolution 2020). In *Proceedings of the 24th ACM Conference on Systems and Software Product Line: Volume A - Volume A (Montreal, Quebec, Canada) (SPLC '20)*. Article 34, 1 pages.
- [3] Lukas Linsbauer, Somayeh Malakuti, Andrey Sadovykh, and Felix Schwägerl. 2018. 1st Intl. Workshop on Variability and Evolution of Software-Intensive Systems (VariVolution). In *Proceedings of the 22nd International Systems and Software Product Line Conference - Volume 1 (Gothenburg, Sweden) (SPLC '18)*. 294.
- [4] Michael Nieke, Lukas Linsbauer, Jacob Krüger, and Thomas Leich. 2019. Second International Workshop on Variability and Evolution of Software-Intensive Systems (VariVolution 2019). In *Proceedings of the 23rd International Systems and Software Product Line Conference - Volume A (Paris, France) (SPLC '19)*. 320.