

# Third International Workshop on Variability and Evolution of Software-Intensive Systems (VariVolution 2020)

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## ABSTRACT

Modern software systems are subject to continuous evolution in time (i.e., revisions) and space (i.e., variants). Different research communities are concerned with techniques for managing the evolution in these two dimensions, particularly in the areas of software configuration management and software product-line engineering. Unfortunately, due to both research areas acting mostly independent of each other, traditional technologies for managing software evolution do not provide unified support for revisions and variants. To address this problem, the 3<sup>rd</sup> International Workshop on Variability and Evolution of Software-Intensive Systems (*VariVolution*) aims to gather researchers and practitioners from different communities to present, and work on, advances in unifying evolution in time and space. For instance, reference architectures and analysis techniques that integrate both dimensions have been presented and extended during previous workshop editions, aiming to provide means for systematically managing evolving software systems. *VariVolution* offers researchers and practitioners an opportunity to exchange ideas, report real-world case studies, discuss open problems, and initiate new research in a collaborative and open environment.

## 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:

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## WORKSHOP SUMMARY

Software product-line engineering provides methods and tools to systematically manage a portfolio of similar systems based on an integrated platform. Still, evolving such a portfolio is challenging, asking an organization to integrate new (i.e., evolving the variant space) or change existing (i.e., evolving to a new revision) requirements. The two dimensions of time and space are clearly affecting each other and should be considered mutually, adding a new level of complexity. Unfortunately, systematically managing the evolution of time and space based on unified techniques only recently received attention in the software product-line engineering and software-configuration management communities.

*VariVolution* provides a collaborative forum to present and work on this research direction. With the third edition of the *VariVolution* workshop, we follow the topics and intentions of previous years [1, 2], conveying concepts of software evolution to the variability management community. The objectives of the workshop are:

- Conceptual approaches and technical solutions for uniform management of variability in time and space
- Variation control systems and the like
- 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 above concepts
- Investigations and classifications of real-world problems caused by the 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 five submissions for the third edition of *VariVolution*, out of which the program committee accepted three full papers and one short paper to be included in the workshop.

**Website:** <https://sites.google.com/view/varivolution2020/>

## REFERENCES

- [1] Lukas Linsbauer, Somayeh Malakuti, Andrey Sadovykh, and Felix Schwägerl. 2018. 1st Intl. Workshop on Variability and Evolution of Software-Intensive Systems (*VariVolution*). In *SPLC*. ACM.
- [2] Michael Nieke, Lukas Linsbauer, Jacob Krüger, and Thomas Leich. 2019. Second International Workshop on Variability and Evolution of Software-Intensive Systems (*VariVolution 2019*). In *SPLC*. ACM.