

# Call for Papers — EMSE Special Issue on "Software Engineering for Mobile Applications"

**Empirical Software Engineering Journal**

<http://www.springer.com/computer/swe/journal/10664>

## Editors of the Special Issue

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## Description of the Special Issue

As Andreessen [1] reported: “software is eating the world”. Most of today’s industries, from engineering, manufacturing, logistics to health, are run on enterprise software applications and can efficiently automate the analysis and manipulation of several, *heterogeneous* types of *data*. One of the most prominent examples of such software diffusion is represented by the widespread adoption of mobile applications. Indeed, during the recent years, the Global App Economy (GAE) experienced unprecedented growth, driven by the increasing usage of apps and by the greater adoption of mobile devices (e.g., smartphone) around the globe [2]. This mobile application market, which is expected in few years to double in size to \$101 billion [3], represents an attractive *opportunity* for software developers interested to build high quality and successful software applications. In such a competitive market, both “*software quality*” and overall “*user experience and satisfaction*” play a paramount role in the success of such applications [3, 4]. Thus, mobile developers interested in maximizing apps revenue need to efficiently monitor and understand user experience and (perceived) software quality of their mobile applications.

This special issue focuses on software engineering research for mobile applications. Eligible studies should have a strong empirical component. Results may be obtained through any empirical approach, e.g., qualitative (involving developers), quantitative (analyzing industrial or open source data), or experimental. We are particularly looking for innovative papers that address maintenance, testing, or monetization strategies for mobile applications, providing new ways to handle these problems or addressing them in a more unified manner, discussing benefits, limitation and costs of provided solutions. For instance, we are interested in the evaluation of innovative solutions based on “summarization techniques” [6, 7] that leverage and visualize App Stores data in different ways, with the goal to achieve higher “*software quality*” and overall “*user experience and satisfaction*”. We are also looking for original work investigating interesting aspects of mobile software evolution. Submit such papers as “research papers” (see Submission instructions).

We are also interested in experience reports reviewing software engineering practices in the context of mobile applications, e.g., studies that explore how the GUI testing strategies that have been proposed in the last years are used in practical settings, in different App Store Platforms, or on the variety of data that is created in industrial development projects. Submit such papers as “experience reports” (see Submission instructions).

For both types of submission (i.e., “research papers” and “experience reports”) we ask the authors to clarify in their paper how their approach, solution, or technology is specific to the mobile context (compared to a more traditional SE context). It is important to mention that with “mobile apps” we refer to applications that work on mobile devices, thus, including all the possible alternatives of wearable devices (e.g., smart watches).

The evaluation of papers will be based on:

- Underlying methodological soundness and rigor.
- Innovation of the work.
- The significance of the results.
- The quality of the reporting.

## Submission Topics

The topics of interest include, but are not limited to challenges, solutions, and innovations for mobile apps with respect to

- feedback mechanisms
- device and platform fragmentation
- cross platform app development
- testing mobile apps
- native vs JavaScript vs HTML5
- app localization
- challenges faced by developers with multiple roles
- challenges faced by small team of developers
- app deployment
- UX in apps
- legal and privacy issues monetizing apps
- recommending APIs
- mining user reviews
- app evolution
- maintenance of apps
- performance monitoring
- reliability of mobile apps
- resource utilization
- power management
- cloud and connectivity for mobile apps
- best practices for app development
- privacy implications

## Submission deadline

July 31, 2018

## Submission Instructions

Papers should be submitted through the Empirical Software Engineering website (<http://www.editorialmanager.com/emse/>). Please choose "SI: Mobile SE" as the article type.

For formatting guidelines as well as submission instructions, visit [http://www.springer.com/computer/swe/journal/10664?detailsPage=pltei\\_2530593](http://www.springer.com/computer/swe/journal/10664?detailsPage=pltei_2530593)

## References

- [1] M. Andreessen. Why software is eating the world. <https://www.wsj.com/articles/SB10001424053111903480904576512250915629460>, Aug 2011.
- [2] VisionMobile. the new mobile app economy. (Developer economics 2016), 2015.
- [3] App Annie Reveals Future of the App Economy: \$101 Billion by 2020; China to Surpass U.S. This Year. App Annie, 2016
- [4] Y. Tian, M. Nagappan, D. Lo, and A. E. Hassan. What are the characteristics of high- rated apps? A case study on free android applications. In Proceedings of the 2015 IEEE International Conference on Software Maintenance and Evolution (ICSME), ICSME '15, pages 301-310, Washington, DC, USA, 2015. IEEE Computer Society
- [5] W. Martin, F. Sarro, Y. Jia, Y. Zhang, and M. Harman. A survey of app store analysis for software engineering. IEEE Transactions on Software Engineering, PP(99):1-1, 2016
- [6] L. Moreno, A. Marcus: Automatic software summarization: the state of the art. ICSE (Companion Volume) 2017: 511-512
- [7] N. Nazar, Y. Hu, H. Jiang: Summarizing Software Artifacts: A Literature Review. J. Comput. Sci. Technol. 31(5): 883-909 (2016)
- [8] M. Nagappan and E. Shihab, Future Trends in Software Engineering Research for Mobile Apps, 2016 IEEE 23rd International Conference on Software Analysis, Evolution, and Reengineering (SANER), 2016



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