Message from the Chairs of MSR 2021

Welcome to the 18th International Conference on Mining Software Repositories (MSR), held on May 17 to 19, 2021 online, virtually co-located with the 43rd International Conference on Software Engineering (ICSE 2021). MSR is a thriving research community that organizes a yearly conference that has gained a solid reputation amongst software engineering researchers.

MSR 2021 was originally planned to be held in Madrid, Spain in May 2021. The COVID-19 pandemic that has swept the world during the last year has forced the parent event organizers to cancel ICSE and hold it virtually. Similar to other co-located events, MSR decided to also move to a virtual format.

This year, we received 196 submissions across the five paper tracks of the conference: the technical track, the data showcase, the mining challenge, the hackathon, and the registered reports track. For the fifth year in a row, MSR used double-blind reviewing in both the technical and mining challenge tracks to reduce reviewer bias and to ensure fairness in the review process. Due to the specific requirements of the tracks, the hackathon, data track, and the registered reports track followed a single-blind review model. Where possible, all MSR 2021 tracks encouraged Open Science policies to enable the sharing of tools and data for reviewers and fellow researchers.

The technical track received 141 submissions (110 full and 31 short), pertaining to three paper categories: research, tool, and practice. After one desk rejection, 109 full papers and 31 short papers underwent our review process. We accepted a total of 48 out of 140 papers, with an overall acceptance rate of 34.3% across the technical track. By paper length, our acceptance rates are 38 out of 109 full papers (34.9%) and 10 out of 31 short papers (32.3%).

All technical track submissions were reviewed by at least three members of the program committee. To further ensure the quality of the reviews and fairness of the final decision, we also continued with the leading reviewer model this year, where a fourth reviewer moderated the discussion and wrote a final meta-review for the paper. The reviews were released to the authors several weeks before final decisions on the manuscripts were made. The authors were then given an opportunity to respond to the reviews, and reviewers were required to respond to the authors' response if one was provided. The authors could also withdraw their manuscript after seeing the reviews if they desired. We did not fix any quota on the number of papers to be accepted. Rather, the acceptance decisions were made based on the program committee's discussions on the content and quality of each paper individually. Following its tradition, MSR 2021 accepted or rejected papers based on their submitted length, and did not permit downgrading a paper from a full paper to a short paper.

New to MSR 2021: We introduced a Hackathon track and a Shadow PC. The goal of the hackathon was to provide the opportunity for participants to work with world-class researchers on relevant problems and research questions that explore problems and solutions in open

source software development. Individuals came together virtually to define research questions, form teams, and scope problems.

The goal of the Shadow PC was to train the next generation of program committee (PC) members and to expose early-career researchers (PhD students, postdocs, new faculty members, and industry practitioners) to the review process of the technical track.

Continuing tracks: This is the 9th year in a row for MSR to feature a data showcase track. The data showcase track encourages submissions of data sets that can be used to further advance research in the mining software repositories area. MSR 2021 also continues the tradition of the Mining Challenge, where researchers from across the community apply their mining techniques to a common dataset. For the fifth year in a row, we issued an open call for challenges, which attracted five competitive proposals. From those, one was selected to provide the Mining Challenge for 2021: ManySStuBs4J, a dataset of fixes to Java simple bugs. For the second time, MSR 2021 featured a Registered Reports track, with the goal of eliminating under-powered, selectively reported, or researcher-biased studies. With preregistration, authors can submit an experimental plan, including hypotheses and expected outcomes, and get feedback before data is collected. Registered reports could obtain in principle acceptance at Springer's Empirical Software Engineering Journal or continuity acceptance. Finally, MSR 2021 will also have 3 exciting tutorials for both newcomers and seasoned MSR attendees.

Awards: As is tradition, a selection of the best technical track and (for the sixth year) data showcase papers, will be invited to submit an extended version for consideration in a special issue of the Springer Journal on Empirical Software Engineering (EMSE). The invitees will be announced during the opening session of MSR 2021. MSR 2021 will also recognize technical papers with ACM SIGSOFT Distinguished Paper Awards as well as FOSS Awards, which are granted to papers that show outstanding contributions to the FOSS community. MSR also recognizes the best paper from the data showcase track with a Best Data Showcase Paper Award. Finally, following the practice of the last editions, MSR 2021 will also present a Most Influential Paper award honoring a paper from MSR 2011 that stood the test of time and that has shown to have a high impact on the MSR community. These awards will be announced at MSR 2021.

For the fourth time, the MSR community recognizes outstanding contributions in the MSR field through the establishment of two series of awards: the Ric Holt MSR Early Career Achievement Award, and the MSR Foundational Contribution Award. The Ric Holt MSR Early Career Achievement Award recognizes outstanding junior researchers who provided outstanding contributions in the MSR field. The MSR Foundational Contribution Award recognizes individuals, or groups of individuals, who produced fundamental contributions in the MSR field, where such contributions have helped many others (not limited to the MSR community) to advance the state of the art. This year, Bogdan Vasilescu, from Carnegie Mellon University, USA, was awarded the Ric Holt MSR Early Career Achievement Award for his contributions in understanding socio-technical behaviour of software developers. Bram Adams from Queen's

University, Canada, was awarded the MSR Foundational Contribution Award for his contributions and evangelism in the field of release engineering.

Finally, we are also very happy to have Nicole Forsgren and Leslie Miley as our keynote speakers this year and three additional mini-keynotes by Raula Gaikovina, Patanamon (Pick) Thongtanunam, and Lauren Peate.

Our first keynote speaker, Nicole Forsgren, is the VP of Research & Strategy at GitHub. She is author of the Shingo Publication Award-winning book Accelerate: The Science of Lean Software and DevOps, and is best known for her work measuring the technology process and as the lead investigator on the largest DevOps studies to date. She has been an entrepreneur (with an exit to Google), professor, sysadmin, and performance engineer. Nicole's work has been published in several peer-reviewed journals. Nicole earned her PhD in Management Information Systems from the University of Arizona, and is a Research Affiliate at Clemson University and Florida International University. Her 2021 keynote, entitled "Mind the gap: Bridging methods across academia and industry to make things awesome" will describe her own industry-impacting research and provide tips for how researchers and industry practitioners can partner more closely together for more awesome outcomes.

Our second keynote speaker, Leslie Miley, is a Silicon Valley native who has held engineering leadership roles at Slack, Twitter, Apple, and executive roles at Google and The Obama Foundation. He has been featured in USA Today, TechCrunch Disrupt, and Wired's 2017 Next List. He advises several startups founded by women and minorities and is an investor in a fund dedicated to diverse entrepreneurs. You can reach him as @shaft on Twitter. His MSR 2021 keynote, entitled "Decolonizing your Data. A simple guide to identifying and remediating age old biases in your data lakes".

The mini-keynotes will be presented in a joint session, followed by a panel discussion. The mini-keynotes will be given by Raula Gaikovina from NAIST, Japan, Patanamon (Pick) Thongtanunam from University of Melbourne, Australia, and Lauren Peate from Multitudes, New Zealand. The goal of the mini-keynotes is to showcase the exciting work of prominent early-career researchers and industry practitioners in the MSR community.

The diverse MSR 2021 program would not have been possible without the contributions of a large organizational team. We thank all members of the technical track Program Committee (115 members this year), the chairs of the Mining Challenge (Miltiadis Allamanis, Rafael-Michael Karampatsis, and Charles Sutton), the chairs of the Data Showcase (Mario Linares-Vasquez and Baishakhi Ray), the chairs of the Registered Reports (Tegawendé F. Bissyandé and David Lo), the chairs of the Hackathon Track (Jim Herbsleb, Audris Mockus and Alexander Nolte), the Tutorials chairs (Marco D'ambros and Minghui Zhou), and all members of their reviewing teams. We appreciate all the effort put into reviewing and discussing the submitted papers and providing constructive reviews to the authors. A special mention goes to the technical-track PC members who agreed to serve as our emergency reviewers!

Last, but not definitely least, we want to thank all our MSR community members who are dedicated to attending and participating in MSR "wherever" it takes place! We thank all the authors for their submissions and the whole MSR community for their continuous contributions to the topic.

We hope you have a great time at MSR 2021 and enjoy the program we have in store for you. Let's wish we will see each other in person in MSR 2022!

Even if finally we cannot meet in person in MSR 2021, ¡bienvenidos a MSR 2021! Welcome to MSR 2021! :)

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