



Programming Experience 2018 (PX/18) Workshop

April 10, 2018, Nice, France

Co-located with <Programming> 2018

<http://programming-experience.org/px18/>

Imagine a software development task: some sort of requirements, specification, or goal including performance constraints and perhaps a platform and programming language. A group of developers head into a vast workroom. In that room they design and code—and sometimes they discover they need to explore the domain outside the room and the nature of potential solutions.

The Programming Experience (PX) Workshop is about what happens in that room when one or a couple of programmers sit down in front of computers and produce code. Do they create text that is transformed into running behavior (the old way), or do they operate on behavior directly (“liveness”); are they exploring the live domain to understand the true nature of the requirements; are they like authors creating new worlds; does visualization matter; is the experience immediate, immersive, vivid and continuous; do fluency, literacy, and learning matter; do they build tools, meta-tools; are they creating languages to express new concepts quickly and easily; and curiously, is joy relevant to the experience?

The focus of the workshop is charactering the experience of programming and considering how to improve and evolve it.

During PX/18 we discussed a range of topics including the following: creating programs, liveness, domain-specific languages, psychology of programming, user studies, visual, auditory, tactile, and other non-textual languages, text and more than text, program understanding, error tolerance, non-standard tools, experience of programming and exploratory programming.

PX/18 was the 4th edition of the PX workshop. It followed the Writers' Workshop format, was well attended, and left all participants with lively discussions that extended beyond the end of the workshop. Our post-workshop proceedings allowed authors to reflect on the feedback they got from the program committee and the workshop participants, and improve their submission.

We would like to thank our program committee, all workshop attendees, and most importantly our authors for their contributions, constructive criticism, hard work, and willingness to share their ideas.

Luke Church, Richard P. Gabriel, Robert Hirschfeld, and Hidehiko Masuhara

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Program

A Non-Tabular Spreadsheet with Broad Applicability
by Pavel Bažant and Michaela Maršáľková

ACID for Programmers!
by Friedrich Steimann

An API and Visual Environment to use Neural Network To Reason About Source Code
by Alexandre Bergel, Paulin Melatagia, and Serge Stinckwich

Attention Patterns for Code Animations: Using Eye Trackers to Evaluate Dynamic Code Presentation Techniques
by Louis Spinelli, Maulishree Pandey, and Stephen Oney

Collectors
by Steven Costiou, Mickael Kerboeuf, Alain Plantec, and Marcus Denker

Do Java Programmers Write Better Python? – Studying Off-Language Code Quality on GitHub
by Siegfried Horschig, Toni Mattis, and Robert Hirschfeld

Few Versatile vs. Many Specialized Collections
by Stefan Marr and Benoit Dalozé

Live Programming of Internet of Things in PalCom
by Alfred Åkesson, Mattias Nordahl, Görel Hedin, and Boris Magnusson

Reactive Programming Experience with REScala
by Ragnar Mogk, Guido Salvaneschi, and Mira Mezini

The Exploration Workspace: Interleaving the Implementation and Usage of Plain Objects
by Patrick Rein, and Robert Hirschfeld

The Fun of Being Wrong, or: The Game of Programmer vs. IDE
by Friedrich Steimann

Word Expansion Supports POSIX Shell Interactivity
by Michael Greenberg