Table of Contents

Foreword vii
Workshop Committees
Assessment of Learning with Blocks Languages
Assessing Knowledge in Blocks-Based and Text-Based Programming Languages (POSITION) Briana Morrison, $Georgia\ Tech,\ USA$
The Challenges of Studying Blocks-based Programming Environments (PAPER)
The Impact of Distractors in Programming Completion Puzzles on Novice Programmers (POSITION) Kyle Harms, $Washington\ University\ in\ St.\ Louis,\ USA$
Java as a Second Language: Thoughts on a Linguistically-informed Transition to Typing Languages (POSITION)
Learning Analytics for the Assessment of Interaction with App Inventor (POSITION)
Measuring Learning in an Open-Ended, Constructionist-Based Programming Camp: Developing a Set of Quantitative Measures from Qualitative Analysis (POSITION)
Profiling Styles of Use in Alice: Identifying Patterns of Use by Observing Participants in Workshops with Alice (PAPER)
Quizly: A Live Coding Assessment Platform for App Inventor (PAPER)
Blocks Language Design
Design of a Blocks-Based Environment for Introductory Programming in Python (PAPER)
Lambda in Blocks Languages: Lessons Learned (POSITION)

Jens Mönig, Communications Design Group, SAP Labs, Germany
A Module System for a General-Purpose Blocks Language (PAPER)
Robotics Rule-Based Formalism to Specify Behaviors in a Visual Programming Environment
(POSITION)
Ten Things We've Learned from Blockly (POSITION)
Blocks, Text, and Structured Editing
Blocks at Your Fingertips: Blurring the Line Between Blocks and Text in GP (POSITION)
$ \begin{array}{c} \text{Integrating Droplet into Applab} \longrightarrow \text{Improving The Usability of a Blocks-Based Text Editor (PAPER)} \dots \\ \text{David Anthony Bau, } \textit{Phillips Exeter Academy, USA} \end{array} $
Lack of Keyboard Support Cripples Block-Based Programming (POSITION)
Thinking in Blocks: Implications of using Abstract Syntax Trees as the underlying program model (PAPER)
Towards Making Block-Based Programming Accessible for Blind Users (POSITION)
New Domains for Blocks Languages
Block-Based Programming Abstractions for Explicit Parallel Computing (PAPER)
Blocks In, Blocks Out: A Language for 3D Models (PAPER)
A Blocks-Based Editor for HTML Code (PAPER)

David Anthony Bau, Phillips Exeter Academy, USA David Bau, Google and MIT, USA
From Interest to Usefulness with BlockPy, a Block-based, Educational Environment (POSITION)87 Austin Bart, Virginia Tech, USA Eli Tilevich, Virginia Tech, USA Cliff Shaffer, Virginia Tech, USA Dennis Kafura, Virginia Tech, USA
Pushing Blocks All the Way to C++ (PAPER)91 Jonathan Protzenko, Microsoft Research, USA
Scratch Data Blocks: Providing an API to the Scratch online community from within Scratch (POSITION)
Using Blocks to Get More Blocks: Exploring Linked Data through Integration of Queries and Result Sets in Block Programming (PAPER)
New Features for Blocks Environments
Incorporating Real World Non-coding Features into Block IDEs (POSITION)
Online Community Members as Mentors for Novice Programmers (POSITION)
Programming Environments for Blocks Need First-Class Software Refactoring Support (POSITION)109 Peeratham Techapalokul, Virginia Tech, USA Eli Tilevich, Virginia Tech, USA
Transparency and Liveness in Programming Environments for Novices (POSITION)
Visual Debugging Technology with Pencil Code (POSITION)
Pedagogy of Blocks Languages
App Inventor Instructional Resources for Creating Tangible Apps (POSITION)
Approaches for Teaching Computational Thinking Strategies in an Educational Game (POSITION) 121 Aaron Bauer, University of Washington, USA Eric Butler, University of Washington, USA Zoran Popović, University of Washington, USA