PREFACE

This special issue is a tribute to Corrado Böhm who will live forever in the memories and hearts of those people having had the privilege of sharing in his life and work. We recall some keystones of Corrado's activity as researcher and teacher.

Corrado's PhD thesis was singularly innovative and led to the construction of the first meta-circular compiler. Corrado described a machine, a language and a translation method for executing the programs written in the machine's language, as well as a parsing technique that was a particularly important contribution. Corrado and his student Giuseppe Jacopini proved that each flow diagram can be built using only three basic diagrams: sequential composition, alternative clauses and while loop. This result, now known as the Böhm-Jacopini Theorem, provides a sound basis for "structured programming", a discipline which improves the quality and the clarity of programs by eliminating jumps between instructions, compulsory in all high-level modern languages. One of the main results in λ-calculus is the possibility of internally discriminating different values: we can always apply two different normal forms to suitable λ-terms to obtain two arbitrary λ-terms as results. This Böhm Theorem has important consequences for semantics: no λ-calculus model can equate different normal forms. There is a remarkable clear connection between Corrado's PhD thesis and the Böhm Theorem. Both results spring from the original question of what a system can say about itself. We end this brief exposition of (some of) Corrado's research achievements, addressing the interested reader to the paper *Gems of Corrado Böhm*, a contribution of one of us to the Special Issue, that delves into a selection of such achievements.

Corrado's teaching was equally extraordinary. To follow Corrado's lessons has always been an unforgettable experience for students. Only a minor part of each lecture was the presentation of subject matter from the teacher's desk. During much of the lecture period students engaged with each other in free discussions, subtly guided by Corrado's questions. Corrado was an exceptional research master: his enthusiasm was compelling and he made himself available any time of the day or night to discuss technical problems with everybody. A key to Corrado's success in inspiring people to research was his total and unwavering confidence in the abilities of his pupils. This strong encouragement in turn allowed his students to trust in themselves and to express their ideas freely.

This Special Issue collects a selection of the papers contributed by some of Corrado's friends and colleagues in response to a call for journal papers we issued to honour his memory. We are grateful to all the colleagues who contributed articles to this special issue and to their reviewers. Finally, we thank Stefan Milius and Fabio Zanasi for accepting to publish this Special Issue and for their support during its preparation.

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