Table of Contents

D. Gries
Eliminating the Chaff—Again:
Banquet Speech at Marktoberdorf 1996 1

C.A.R. Hoare
Envoi at Marktoberdorf 1996 9

Part 0. Designing Proofs and Programs 11

E.W. Dijkstra

Heuristics for a Very Simple Euclidean Proof (EWD1180) 13
Complete DAGs (EWD1204) 17
A Result of Rabbit Removal (EWD1208) 19
For the Record: Painting the Squared Plane (EWD1212) 25
The Marriage Agency (EWD1214) 27
Courtesy Dr. Birgit Schieder (EWD1215) 29
WLOG, or the Misery of the Unordered Pair (EWD1223) 33
My Simplest Theorem (EWD1232) 35
The Transitive Closure of a Wellfounded Relation (EWD1241) 37
The Formula for $\sin.(\alpha + \beta)$ (EWD1244a) 41
A Kind of Converse of Leibniz's Principle (EWD1245) 43
The Strengths of the Academic Enterprise (EWD1175) 45

W.H.J. Feijen, A.J.M. van Gasteren
On a Method for the Formal Design of Multiprograms 53

D. Gries
Foundations for Calculational Logic 83

Part 1. Examples of Protocol Design 127

J.-R. Abrial, L. Mussat
Specification and Design of a Transmission Protocol by Successive Refinements Using B 129

B. von Karger
Formal Derivation of a Protocol in CSP 201

Part 2. Languages and Models for Program Design 213

F.L. Bauer
Genesis of Algorithmic Languages 215

M. Broy
Mathematical Methods in System and Software Engineering 271

C.A.R. Hoare
Unified Theories of Programming 313

Part 3. Programming Paradigms 369

K. Fisher, J.C. Mitchell
On the Relationship Between Classes, Objects and Data Abstraction 371

G. Smolka
The Oz Programming Model 409

A Foundation for Higher-order Concurrent Constraint Programming 433

Part 4. Mechanical Proof Assistance 459

L.C. Paulson
Tool Support for Logics of Programs 461

N. Shankar
Machine-Assisted Verification Using Theorem Proving and Model Checking 499