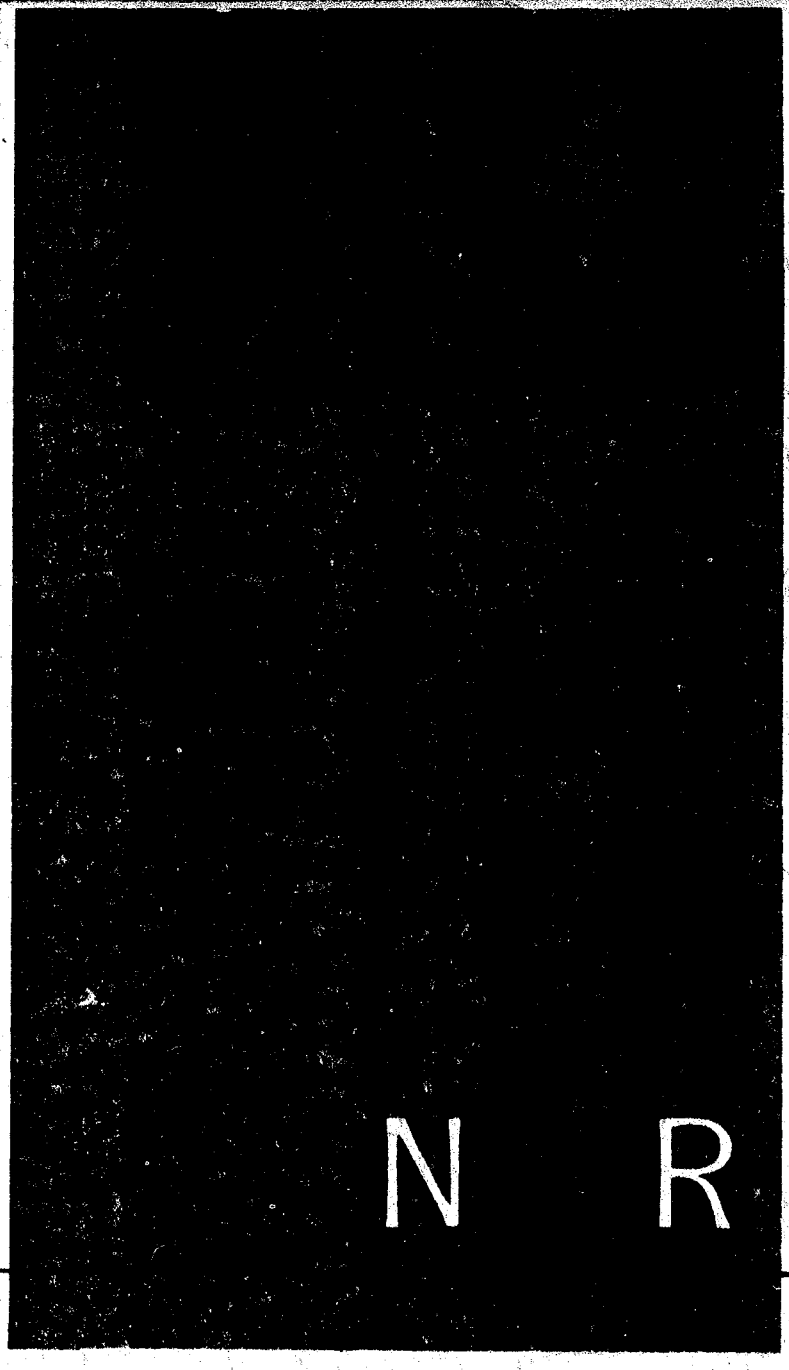
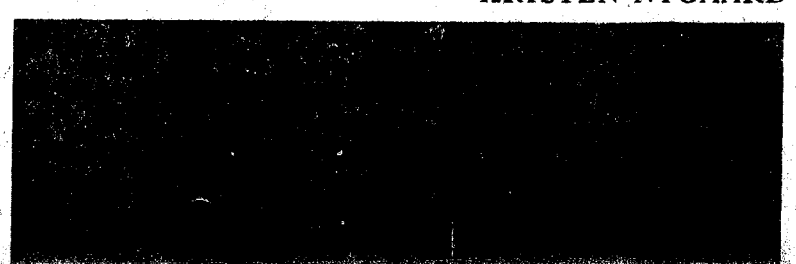


NORSK REGNESENTRAL
NORWEGIAN COMPUTING CENTER

SIMULA

A language for programming and description of discrete event systems. Introduction and user's manual

BY
OLE-JOHAN DAHL AND
KRISTEN NYGAARD



5th EDITION SEPTEMBER 1967
NORWEGIAN COMPUTING CENTER
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Preface to the 5th Edition

This report presents the SIMULA language. The first part, the chapter INTRODUCTION, contains a brief outline of the basic approach to system description and simulation reflected in the language. The second part, THE SIMULA LANGUAGE, gives the language definition and serves as a user's manual.

No comprehensive SIMULA textbook has been written, but two examples and some basic ALGOL 60 information are contained in part III.

SIMULA has been in increasing use at UNIVAC 1107 and 1108 installations since the beginning of 1965, and a revised version of "Report on the Use of SIMULA" is now being written, giving a survey of SIMULA jobs and application areas. The "SIMULA Tracing and Debugging System" is described in a separate report, and another report will be issued describing the procedures for giving output to the "KINGMATIC" drawing machine.

The changes from the first to the fifth edition of this manual consist mainly of the introduction of additional procedures and a worked example.

The authors have recently developed a new general programming language, named SIMULA 67. ("SIMULA 67 Common Base Definition", June 1967.) This language, now being implemented on various computers, is a major extension of the SIMULA presented in this manual. SIMULA 67 has also extended simulation capabilities over the present SIMULA.

Some of those who have contributed to SIMULA in various ways are mentioned in the introduction. We should also like to thank UNIVAC staff for assistanse, particularly Nicholas Hubacker and Joseph Speroni who helped us to find our way through the UNIVAC 1107 ALGOL compiler.

Björn Myhrhaug and Sigurd Kubosch have been members of our team for a long time, and their contributions have been indispensable.

Oslo, September 1967