

# Contents

<b>List of illustrations</b>	<b>vi</b>
<b>Abbreviations</b>	<b>viii</b>
<b>Foreword</b>	<b>xi</b>
<b>Preface</b>	<b>xiii</b>
<b>Introduction</b>	<b>1</b>
<b>1. Background</b>	<b>3</b>
<b>2. Computing education at Hatfield: up to 1965</b>	<b>15</b>
<b>3. Computing education at Hatfield: 1965 onwards</b>	<b>36</b>
<b>4. Computing provision at Hatfield</b>	<b>68</b>
<b>5. Service for other educational establishments</b>	<b>98</b>
<b>6. The people involved</b>	<b>105</b>
<b>Timelines</b>	<b>121</b>
Appendix 1 Seminar on the teaching of computational science at University of Liverpool, 1965	131
Appendix 2 UK government working group report on computer education, 1967	134
Appendix 3 J.A.P. Hall pamphlet: introducing the Department of Mathematics, 1959	139
Appendix 4 Conference: 'The computing laboratory in the technical college', Hatfield College of Technology 1960	142
Appendix 5 Hatfield and Elliotts – the relationship	144
Appendix 6 Proposal to buy or rent a digital computer, 1961	149
Appendix 7 Opening of digital computer unit 1964	153
Appendix 8 Scope of operation of the digital computer unit, 1964	155
Appendix 9 Conference on digital computer education, Hatfield, May 1963	157
Appendix 10 Proposed Diploma in Technology in Computer Science, 1964	158
Appendix 11 A first-year exam paper from 1968	162
Appendix 12 Report on the running of the BSc Computer Science, 1970	165
Appendix 13 Computing facilities 1963–69	169
Appendix 14 Proposal for a new computer centre, November 1967	172
Appendix 15 (Requirements) specification of the multi-access computer system, 1969	174
<b>Bibliography</b>	<b>177</b>
<b>Index</b>	<b>179</b>

### Staff of the new department

The initial members of the department in 1959 consisted of Mr Hall together with eight mathematicians transferred from other departments.<sup>29</sup> The department had the support of a panel of eight visiting lecturers for some of the evening courses. The first member of staff to be appointed to the department with direct experience of computers and computer programming was Dr R.W. Sharp, who was recruited from the de Havilland Aircraft Company in 1959, where he had been employed in the mathematical services division as a programmer/analyst. Mr Hall announced Dr Sharp's appointment in one of his 'Department of Mathematics Memos', No. 3, dated 23 July 1959:<sup>30</sup> 'Our new member of staff is R.W. Sharp BSc PhD ARCS, at present working at de Havilland's Mathematical Services Division. His specialist interests are Numerical Analysis and Mathematical Statistics.' Roger Sharp later said that 'It was evident that there was going to be an opportunity for developing computing at the College, and that was really my objective in coming here.'<sup>31</sup>

The primary roles of the department were to teach mathematics to students in the other departments and to conduct most of the mathematics examinations in those departments. However, under the 'inspiring and perceptive leadership'<sup>32</sup> of Mr Hall, short courses on subjects of a specialised character were provided by staff of the department, and a series of monthly seminars was initiated. The majority of the seminars were conducted by visiting mathematicians from industry or academia, and both the short courses and seminars were soon well-established regular features of the department. At the first seminar, entitled 'The use of Boolean algebra in the design of switching circuits' and given by Mr Hall on 13 October 1959, he demonstrated a binary adder that technicians at The Polytechnic, Regent Street, had constructed for him. Other seminars included that held on 31 January 1961, 'Non-numerical Applications of Computers', given by Dr Seymour Papert, at that time a member of staff of the Autonomics Division of the National Physical Laboratory (he subsequently moved to MIT), and that held on 5 December 1961, 'Computational aspects of Spectral Analysis', given by Dr Sharp.

In 1960/61 a visiting mathematicians lectureship programme was instituted. At the end of the 1960/61 session a party of 120 sixth-formers, accompanied by staff from 12 schools, spent a day in the college participating in a varied programme aimed at showing the place of mathematics in modern education within science and technology. This was to become an annual event, with over 2,000 pupils participating over the ensuing years.

29. The lecturers transferred from other departments were A.J. Collins, R.D. Johnson, G.E. Morris, G.A. Randall, H. Retkin, B.D. Sharp, J. Stevens and K. Wolfenden.

30. Mr Hall's departmental memos became a frequent and renowned source of information, being produced almost monthly.

31. Interview with Dr Sharp on his retirement, *Horizon*, 47 (July 1991), p. 2.

32. Dr P.W. Kingsford, 'A History of the University of Hertfordshire, 1944-1968', unpublished.