

Edinburgh Mathematical Society.

LIST OF MEMBERS—Thirty-Fifth Session, 1916-17.

- 1 E. P. ADAMS, Princeton, New Jersey, U.S.A.
 JOHN R. AIREY, M.A., D.Sc., Principal, The Technical Institute,
 West Ham, London, E.
 V. RAMASWAMI AIYAR, M.A., Deputy Collector, Arni, India
 JOHN ALISON, M.A., F.R.S.E., Headmaster, George Watson's
 College, Edinburgh
- 5 R. E. ALLARDICE, M.A., Professor of Mathematics, Stanford
 University, California, U.S.A.
 ALBERT H. AMOR, M.E., A.M.I.C.E., F.G.S., 2 Idrone Terrace,
 Blackrock, Co. Dublin
 WM. ANDERSON, M.A., F.R.S.E., George Watson's College,
 Edinburgh
 JAMES ARCHIBALD, M.A., F.R.S.E., 1 Leamington Terrace,
 Edinburgh
 R. C. ARCHIBALD, B.A., M.A., Ph.D., Brown University,
 Providence, R.I.
- 10 JOHN BALLANTINE, M.A., High School, Falkirk
 A. J. GUNION BARCLAY, M.A., F.R.S.E., 3 Chandos Avenue,
 Oakleigh Park, London, N.
 C. G. BARKLA, D.Sc., F.R.S., Professor of Natural Philosophy,
 The University, Edinburgh
 CHARLOTTE C. BARNUM, Ph.D., 345 West Fifty-seventh Street,
 New York, N.Y., U.S.A.
 RALPH M. BARTON, A.B., University of Minnesota, Minnea-
 polis, Minnesota, U.S.A.
- 15 G. C. BEATTIE, D.Sc., F.R.S.E., Professor of Applied Mathe-
 matics and Experimental Physics, South African College,
 Cape Town
 ROBT. J. T. BELL, M.A., D.Sc., 146 Hyndland Road, Glasgow
 (*Co-Editor of Proceedings*)
 PETER BENNETT, Royal Technical College, Glasgow
 EDWARD BLADES, M.A., B.Sc., George Watson's Ladies' College,
 Edinburgh
 JAMES BOLAM, Leith Nautical College, Leith
- 20 Professor N. N. BOSE, Reid Christian College, Lucknow, India
 WILLIAM BRASH, M.A., B.Sc., High School, Stirling
 S. BRODETSKY, D.Sc., The University, Bristol
 Professor T. J. FA BROMWICH, M.A., F.R.S., 1 Selwyn Gardens,
 Cambridge
 A. BROWN, M.A., B.Sc., Professor of Applied Mathematics,
 South African College, Cape Town

- 25 F. G. W. BROWN, B.Sc., F.C.P., 25 Wellwood Road, Goodwayes, Essex
 T. A. BROWN, M.A., B.Sc., 141 Craiglea Drive, Edinburgh
 WALTER BROWN, M.A., B.Sc., Allan Glen's School, Glasgow
 A. G. BURGESS, M.A., F.R.S.E., The Academy, Rothesay
 RAYMOND K. BUTCHART, B.Sc., 8 Martin Street, Maryfield, Dundee
- 30 J. W. BUTTERS, M.A., B.Sc., F.R.S.E., Rector, The Academy, Ardrossan
 GEORGE CALDER, M.A., B.Sc., 42 Warrender Park Terrace, Edinburgh
 JOHN F. CAMERON, M.A., Fellow and Tutor of Caius College, Cambridge
 CHARLES CAMPBELL, M.A., Glasgow Academy, Glasgow
 JOHN CAMPBELL, B.Sc., Allan Glen's School, Glasgow
- 35 GEORGE A. CARSE, M.A., D.Sc., Lecturer on Natural Philosophy, The University, Edinburgh
 H. S. CARSLAW, Sc.D., Professor of Mathematics, The University, Sydney, N.S.W.
 W. S. CATTO, M.A., B.Sc., George Watson's College, Edinburgh
 CHARLES CHREE, M.A., D.Sc., F.R.S., 75 Church Road, Richmond, Surrey
 J. B. CLARK, M.A., F.R.S.E., Headmaster, George Heriot's School, Edinburgh
- 40 ROBERT COMLINE, B.A., Daniel Stewart's College, Edinburgh
 PETER COMRIE, M.A., B.Sc., F.R.S.E., 19 Craighouse Terrace, Edinburgh (*President*)
 S. A. COREY, Wapello Coal Company, Hiteman, Iowa, U.S.A.
 W. B. COUTTS, M.A., B.Sc., F.R.S.E., George Heriot's School, Edinburgh
 JAMES I. CRAIG, M.A., B.A., Survey Department, Cairo, Egypt
- 45 G. E. CRAWFORD, M.A., 9 Keswick Road, East Putney, London, S.W. 15
 JAMES CRAWFORD, M.A., Castle View, Kilbirnie
 LAWRENCE CRAWFORD, M.A., D.Sc., Professor of Mathematics, South Africa College, Cape Town
 H. DATTA, B.Sc., Mathematical Department, The University, Edinburgh
 R. F. DAVIS, M.A., 17 Fairlawn Court Mansions, Chiswick Park, London, W.
- 50 JAMES W. DIPPY, Swallowfield, Midhurst Road, Benton, Northumberland.
 J. MACALISTER DODDS, M.A., Peterhouse, Cambridge
 A. C. DIXON, M.A., F.R.S., Professor of Mathematics, Queen's College, Belfast
 JAMES M. DOGGART, B.A., High School, Kirkcaldy.

- CHAS S. DOUGALL, M.A., Rector, The Institution, Dollar
- 55 JOHN DOUGALL, M.A., D.Sc., Kippen, Stirlingshire
 ISABEL DRENNAN, M.A., B.Sc., 35 Woodburn Terrace, Edinburgh
 DAVID DRYSDALE, M.A., High School, Arbroath
 ROBERT T. DUNBAR, Camperdown Place, Broughty-Ferry
 GEORGE DUTHIE, M.A., B.A., F.R.S.E., Superintending
 Inspector of Schools and Statist, Salisbury, Rhodesia
- 60 Professor JAMSHEDSI EDALJI, 31-33 Karelwadi, Thakordwar,
 Bombay, India
 F. E. EDUARDES, B.A., Harrow School, Middlesex
 ROBERT R. FERGUSON, M.A., Buckreddan Cottage, Kilwinning
 WM. FINLAYSON, 84 Pilrig Street, Edinburgh
 LESTER R. FORD, M.A., Ph.D., Harvard University, Cambridge,
 Mass., U.S.A.
- 65 DAVID KENNEDY-FRASER, M.A., B.Sc., 6 Castle Street,
 Edinburgh.
 MARGARET C. FRASER, M.A., B.Sc., Astell, Cheltenham
 PETER FRASER, M.A., Mathematical Lecturer, The University,
 Bristol
 W. G. FRASER, M.A., H.M.I.S., 18 Glebe Avenue, Stirling
 GEORGE FRECHEVILLE, H.M. Wireless Station, Clifden, County
 Galway
- 70 JAMES M. FREW, M.A., B.Sc., Dollar Institution, Dollar
 J. D. FULTON, M.A., B.Sc., Ladies' College, Queen Street,
 Edinburgh.
 T. J. GABSTANG, M.A., Dunhill House, Petersfield, Hants.
 W. GENTLE, B.Sc., F.R.S.E., George Heriot's School, Edinburgh
 DAVID GIBB, M.A., B.Sc., F.R.S.E., University, Edinburgh
 (*Hon. Librarian*)
- 75 H. T. GERRANS, M.A., 20 St John Street, Oxford
 GEORGE A. GIBSON, M.A., LL.D., F.R.S.E., Professor of
 Mathematics, University, Glasgow (*Hon. Member*)
 JAMES GOODWILLIE, M.A., B.Sc., Lecturer on Mathematics,
 King's College, Aberdeen
 J. G. GRAY, D.Sc., F.R.S.E., Natural Philosophy Department,
 University, Glasgow.
 GEORGE GREEN, M.A., 3 Edgefauld Terrace, Springburn,
 Glasgow.
- 80 Professor Sir A. G. GREENHILL, M.A., F.R.S., 1 Staple Inn,
 London, W.C. (*Hon. Member*)
 W. J. GREENSTREET, M.A., F.R.A.S., The Woodlands, Burgh-
 field Common, near Mortimer, Berks.
 WM. GRIEVE, M.A., B.Sc., High School, Karachi, India.
 GEORGE HAMILTON, M.A., George Heriot's School, Edinburgh
 P. S. HARDIE, M.A., B.Sc., Kedivial Training College, Cairo,
 Egypt
- 85 R. P. HARDIE, M.A., Assistant to the Professor of Logic,
 University, Edinburgh.

- GEORGE HATJIDAKIS, Ph.D., Professor of Mathematics, Piraeus, Greece.
- T. HAYASHI, Professor of Mathematics, Tohoku, Imperial University, Sengai, Japan.
- E. M. HORSBURGH, M.A., B.Sc., Assoc. M.Inst. C.E., Lecturer in Technical Mathematics, The University, Edinburgh (*Hon. Treasurer*)
- PIERRE HUMBERT, 2 Avenue des Anglais, Beaulieu-sur-mer, Alpes Maritimes, France.
- 90 ANDREW HUTCHISON, M.A., B.Sc., Provincial Training College, Glasgow.
- E. LINDSAY INCE, M.A., B.Sc., Trinity College, Cambridge.
- JOHN JACK, M.A., Angel Court, Fortrose
- WM JACK, M.A., LL.D., Emeritus Professor of Mathematics, University, Glasgow (*Hon. Member*)
- JOHN JACKSON, M.A., B.Sc., B.A., F.R.A.S., Royal Observatory, Greenwich, London, S.E.
- 95 JOHN JEFFREY, M.A., B.Sc., Rector, High School, Selkirk
- WM. JEFFREY, M.A., Academy, Banff
- GEORGE JOHNSTONE, M.A., Spier's School, Beith
- J. P. JOHNSTONE, M.A., Sc.D., Churchtown Park, Dundrum, Dublin
- D. M. JOHNSTONE, M.A., B.Sc., George Heriot's School, Edinburgh
- 100 COLIN KESSON, M.A., 94 Camperdown Road, Scotstoun.
- ARCHIBALD KING, M.A., B.Sc., La Maisonette, Clarkston, Glasgow
- CARGILL G. KNOTT, D.Sc., F.R.S.E., Lecturer on Applied Mathematics, University, Edinburgh
- ARCHIBALD LANG, M.A., B.Sc., H.M.I.S., 93 Millbrae Road, Langside, Glasgow
- P. R. SCOTT LANG, M.A., B.Sc., F.R.S.E., Professor of Mathematics, University, St Andrews
- 105 GEORGE LAWSON, M.A., Rector, Waid Academy, Anstruther
- ALEXANDER LEIGHTON, M.A., B.Sc., Morgan Academy, Dundee
- H. LEVY, M.A., B.Sc., 60 South Clerk Street, Edinburgh
- WM. A. LINDSAY, M.A., B.Sc., Provincial Training College, Glasgow
- J. BARRY-LOW, M.A., Wrenschtown House, Observatory Road, Cape Town
- 110 WM. H. LOVE, M.A., Provincial Training College, Glasgow
- JOHN H. MACALPINE, M.I.N.A., 5537 Hampton Street, Pittsburg, Pa., U.S.A.
- T. W. MACALPINE, 50 Windsor Road, Church End, Finchley, London, N
- NEIL M'ARTHUR, M.A., B.Sc., Mathematical Department, University, Glasgow (*Vice-President*)
- JAMES A. M'BRIDE, B.A., B.Sc., Allan Glen's School, Glasgow

- 115 JAMES A MACDONALD, M.A., B.Sc., F.R.S.E., H.M.I.S.,
Stewarton, Kilmacollm
W. G. M'EWEN, M.A., 69 Warrender Park Road, Edinburgh
D. C. M'INTOSH, M.A., D.Sc., F.R.S.E., Ladies' College, Queen
Street, Edinburgh
DONALD MACKAY, M.A., Viewforth School, Kirkcaldy
ANGUS M'LEAN, B.Sc., C.E., Principal, Technical College,
Paisley
- 120 CHARLES M'LEOD, M.A., D.Sc., Grammar School, Aberdeen
PETER M'LEOD, M.A., B.Sc., Hillhead High School, Glasgow
D. B. M'QUISTAN, M.A., B.Sc., 19 Viewpark Drive, Rutherglen
THOMAS M. M'ROBERT, M.A., B.Sc., Mathematical Département,
University, Glasgow
JOHN M'WHAN, M.A., Ph.D., Rossville, Cambuslang
- 125 ALEX. B. MANNING, M.Sc., B.Sc., 102 Fordhook Avenue,
Ealing Common, London, W.
WM. L. MARR, M.A., B.Sc., High School for Girls, Aberdeen
ARTEMAS MARTIN, M.A., Ph.D., LL.D., 1532 Columbia Street,
N.W., Washington, D.C., U.S.A.
HENRY LLOYD MEADOWS, M.A., F.R.A.S., Ballyrane, Killinick,
Co. Wexford
DAVID B. MEEK, M.A., B.Sc., Government College, Dacca, India
- 130 J. B. MEIKLEJOHN, M.A., High School, Dundee
JOAQUIN DE MENDIZABAL Y TAMBORRELL, Professor de Mathe-
matique, Palma 13, Mexico
W. J. MILLAR, C.E., late Secretary, Instit. Engineers and
Shipbuilders in Scotland, 31 Marine Place, Rothesay
JOHN MILLER, M.A., D.Sc., F.R.S.E., Professor of Mathematics,
Royal Technical College, Glasgow
JOHN MILLER, M.A., B.Sc., George Watson's College, Edinburgh
- 135 T. HUGH MILLER, M.A., D.Sc., Training College, Isleworth,
near London
WILLIAM MILLER, M.A., Ph.D., D.Sc., Intermediate Inspector,
1 Hume Street, Dublin
CATHERINE MILLS, M.A., B.Sc., 8 Comely Bank Street, Edinburgh
ARCH. MILNE, M.A., D.Sc., F.R.S.E., Provincial Training
College, Edinburgh (*Co-Editor of Proceedings*)
JAMES ROBERT MILNE, D.Sc., Lecturer on Physical Optics, The
University, Edinburgh
- 140 JOHN MILNE, M.A., Mackie Academy, Stonehaven
WILLIAM P. MILNE, M.A., D.Sc., 6 Clifton Park Road, Clifton,
Bristol
JAMES MITCHELL, M.A., B.Sc., F.R.S.E., Cruach, Lochgilphead
GEORGE L. MOFFAT, M.A., B.Sc., The Academy, Glasgow
ALEX. MORGAN, M.A., D.Sc., F.R.S.E., Rector, Provincial
Training College, Edinburgh.
- 145 A. S. MORRISON, M.A., B.Sc., 20 Queensborough Gardens,
Glasgow

- J. T. MORRISON, M.A., B.Sc., F.R.S.E., Professor of Physics, Stellenbosch, Cape Colony
 R. F. MUDIE, B.A., 5 Fintray Place, Broughty-Ferry
 Sir THOMAS MUIR, M.A., LL.D., F.R.S., F.R.S.E., C.M.G., Elincote, Portland Road, Rondebosch, South Africa
 R. FRANKLIN MUIRHEAD, B.A., D.Sc., 64 Great George Street, Hillhead, Glasgow (*Hon. Member*)
- 150 ASUTOSH MUKHOPADHYAY, M.A., LL.D., F.R.A.S., F.R.S.E., Professor of Mathematics, Bhowanipore, Calcutta
 A. M. C. MUTCH, M.A., B.Sc., 34 Osborne Place, Aberdeen
 WALTER G. NAPIER, M.A., B.Sc., Ruby Villa, Sciennes Gardens, Edinburgh
 M. T. NARANIENGAR, M.A., Professor of Mathematics, Central College, Bangalore, South India
 CHARLES NIVEN, M.A., D.Sc., F.R.S., Professor of Natural Philosophy, University, Aberdeen (*Hon. Member*)
- 155 ROBERT NORRIE, M.A., 1 Kilburn Place, Newport-on-Tay
 ANNIE H. NUMBERS, 16 W. Savile Terrace, Edinburgh
 ELEANOR PAIRMAN, M.A., Mathematical Department, University of Edinburgh
 JAMES PAUL, M.A., B.Sc., Royal Technical College, Glasgow
 FRANK R. PEARSON, M.A., George Watson's College, Edinburgh
- 160 WM. PEDDIE, D.Sc., F.R.S.E., Professor of Physics, University College, Dundee
 HENRY T. H. PIAGGIO, M.A., D.Sc., Mathematical Lecturer, University College, Nottingham
 JAMES PHEMISTER, M.A., B.Sc., Mathematical Department, The University, Glasgow
 GEORGE PHILIP, M.A., D.Sc., George Watson's College, Edinburgh
 WM. EDWARD PHILIP, M.A., H.M.I.S., 12 Lauder Road, Edinburgh
- 165 FREDERICK PHILLIPS, B.Sc., F.C.P., F.C.S., F.R.S.E., Mathematical Lecturer, Hartley University College, Southampton
 D. K. PICKEN, M.A., Master of Ormond College, University of Melbourne, Victoria
 P. PINKERTON, M.A., D.Sc., F.R.S.E., High School, Glasgow
 R. H. PINKERTON, M.A., Professor of Mathematics, University College, Cardiff
 HARRY RAINY, M.A., M.D., F.R.S.E., 16 Great Stuart Street, Edinburgh
- 170 PETER RAMSAY, M.A., B.Sc., F.R.S.E., 63 Comiston Drive, Edinburgh (*Hon. Secretary*)
 THOS. T. RANKIN, C.E., B.Sc., Aylesford House, London Road, St Albans, Herts.
 H. W. RICHMOND, M.A., F.R.S., King's College, Cambridge
 M. RODERICK, Pretoria House, West Folkstone
 JAMES RODGER, B.A., Higher Grade School, Burntisland

- 175 EDWARD B. ROSS, M.A., 3 Polwarth Gardens, Edinburgh
 ALEX. D. RUSSELL, B.Sc., F.R.S.E., F.R.A.S., 14 Heugh Street, Falkirk
 K. J. SANJANA, Professor of Mathematics, Bhavnagar, Bombay
 AGNES M. SCOTT, M.A., B.Sc., Argyle Cottage, Liberton
 CHARLOTTE ANGAS SCOTT, D.Sc., Professor of Mathematics, Bryn Mawr College, Pennsylvania, U.S.A.
- 180 R. F. SCOTT, M.A., Master of St John's College, Cambridge
 Professor T. J. J. SEE, M.A., Ph.D., U.S. Naval Observatory, Mare Island, California
 GEORGE SHEARER, M.A., B.Sc., Naval Instructor, H.M.A.S. Australia, c/o G.P.O.
 RODERICK M. SHEARER, M.A., B.Sc., 28 Strathearn Road, Edinburgh
 ALEXANDER SIVEWRIGHT, M.A., Boroughmuir School, Edinburgh
- 185 GLENNY SMEAL, B.Sc., The University, Edinburgh
 The Right Hon. JAMES PARKER SMITH, P.C., J.P., D.L., Linburn Kirknewton, Midlothian
 DUNCAN M. Y. SOMMERVILLE, M.A., D.Sc., F.R.S.E., Professor of Mathematics, Victoria University College, Wellington, New Zealand
 J. E. A. STEGGALL, M.A., Professor of Mathematics, University College, Dundee
 ADAM B. STEWART, M.A., The Ministry of Education, Darb-El-Gamamiz, Cairo, Egypt
- 190 C. A. STEWART, M.A., B.Sc., The City and Guilds (Engineering) College, Exhibition Road, London
 DAVID N. STEWART, M.A., B.Sc., Royal High School, Edinburgh
 THOMAS W. STEWART, M.A., B.Sc., 94 George Street, Edinburgh
 GEORGE D. C. STOKES, M.A., D.Sc., The High School, Glasgow (*Editor of Mathematical Notes*)
 LOUISA STORY, Headmistress, Royal School, Bath
- 195 JAMES STRACHAN, M.A., B.Sc., H.M. Inspector, The Poplars, Grange Road, Darlington
 Professor J. A. STRANG, Canning College, Lucknow, India
 ISABELLA B. SUTHERLAND, M.A., Muir College, Uitenhage, C.P., South Africa
 J. C. SWAMINARAYAN, M.A., Professor of Mathematics, Gujerat College, Amedabad, India
 DAVID G. TAYLOR, M.A., D.Sc., University College, Cardiff
- 200 ALEX. S. TENNANT, M.A., Leith Walk Station House, Edinburgh
 J. A. THIRD, M.A., D.Sc., Spier's School, Beith
 A. W. H. THOMPSON, B.A., 28 Princes' Square, Bayswater, London

- GRACE T. THOMSON, M.A., 17 Riselaw Road, Edinburgh
 JAMES THOMSON, M.A., B.Sc., Gordon's College, Aberdeen
 205 JOHN GRAHAM THOMSON, 34 London Street, Edinburgh
 ROBERT F. THOMSON, M.A., B.Sc., Ashcroft, Falbrooke Road,
 Cambridge
 WM. THOMSON, M.A., B.Sc., LL.D., F.R.S.E., Registrar to the
 Cape University, Cape Colony
 W. L. THOMSON, M.A., George Heriot's School, Edinburgh
 JOHN F. TINTO, M.A., D.Sc., Lyndhurst, Milton Street,
 Carluke
 210 JOHN TURNER, M.A., B.Sc., Royal High School, Edinburgh
 CHARLES TWEEDIE, M.A., B.Sc., F.R.S.E., Lecturer on Mathe-
 matics, University, Edinburgh (*Hon. Member*)
 DAVID TWEEDIE, M.A., B.Sc., School of Engineering, Girza,
 Egypt
 GEORGE D. VALENTINE, M.A., Advocate, 17 Great King Street,
 Edinburgh
 MERLE VIEGRA, M.A., B.Sc., 8 Mentone Terrace
 215 ROBERT WALKER, M.A., Provincial Training College, Glasgow
 W. WALLACE, M.A., F.R.S.E., Moss-side P.O., Belvidere,
 Alberta, Canada
 G. N. WATSON, M.A., Trinity College, Cambridge
 WM. WATSON, M.A., B.Sc., Heriot-Watt College, Edinburgh
 JOHN C. WATT, M.A., Jesus College, Cambridge
 220 JAMES MACPHERSON WATTIE, M.A., B.A., H.M.I.S., 1 Rubislaw
 Dens, North, Aberdeen
 EDWIN WAUCHOPE, Lochview, Lenzie
 J. H. MACLAGAN-WEDDERBURN, M.A., D.Sc., F.R.S.E., 11
 Alexander Street, Princeton, N.J., U.S.A.
 WILLIAM WELSH, M.A., Jesus College, Cambridge
 JOHN W. WHITE, B.A., Victoria Public School, Newhaven,
 Leith
 225 MARGARET P. WHITE, M.A., B.Sc., 1 Learmonth Gardens Lane,
 Edinburgh
 WM. WHITE, B.Sc., A.R.C.S., Anan Glen's School, Glasgow
 EDMUND TAYLOR WHITTAKER, Sc.D., F.R.S., Professor of
 Mathematics, The University, Edinburgh
 ERSKINE D. WILLIAMSON, M.A., B.Sc., Carnegie Institution of
 , Washington Geophysical Laboratory, Washington, D.C.,
 U.S.A.
 DUNCAN K. WILSON, M.A., B.Sc., The Academy, Perth
 230 ROBERT WILSON, M.A., B.Sc., Armstrong College, Newcastle-
 on-Tyne
 ANDREW W. YOUNG, M.A., University College, London, W.C. 1
 Rev. JOHN YOUNG, M.A., B.D., 78 Finnart Street, Greenock.
 W. YOUNG, F.F.A., Actuary's Dept., New York Life Insurance
 Co., 346 Broadway, New York, U.S.A.