



## THE UNIVERSITY OF MELBOURNE ARCHIVES

<b>NAME OF COLLECTION</b>	John Henry Michell
<b>ACCESSION NO</b>	1963.0002
<b>CATEGORY ACTIVITY</b>	University, individuals Academics - Mathematics
<b>DATE RANGE</b>	1881-1940
<b>SIZE OF COLLECTION</b>	48 cm. (4 archives boxes) Lecture Examination paper
<b>HISTORICAL NOTE</b>	<p>Michell was born at Maldon, Victoria, on 26 October 1863. Educated at Wesley College and the University of Melbourne, he graduated B.A. in 1884. From 1884 until 1890 he studied the Mathematical Tripos at Cambridge and in 1890 was elected Fellow of Trinity College. From 1892 until 1923 he was Lecturer in Mixed Mathematics and from 1923 until retirement in 1928, Professor of Pure and Mixed Mathematics. By 1900 he had published 23 articles, mainly relating to engineering problems and in 1902 he was made Fellow of the Royal Society for his research in Applied Mathematics, especially hydrodynamics and elasticity. In 1937, with M.H. Belz (later Professor of Statistics), he wrote <i>The Elements of Mathematical Analysis</i>, London, Macmillan &amp; Co., 2 vol. He also wrote a number of original essays and lectures, many for the Mathematical Association of Victoria of which he was co-founder in 1906, and performed various experiments to test his deductions, From his retirement until his death in 1940, Michell was an Honorary Research Professor. His brother, A.G.M. Michell, was a distinguished engineer.</p>
<b>DATE OF TRANSFER</b>	January 18 <sup>th</sup> , 1963
<b>ACCESS CONDITIONS</b>	Access: Open
<b>LISTED BY DATE</b>	Patricia Marcard February 1964

RECORDS RECEIVED INTO CUSTODY

NAME: MICHELL, John Henry.

ADDRESS: Deceased.

MAIN ACTIVITY: Mathematician.

DATE TRANSFERRED: January 18, 1965.

GENERAL NOTE: Michell was born at Malden, Victoria, 26 October 1863. Educated at Wesley College and University of Melbourne where he graduated B.A. 1884. 1884-1890 at Cambridge studying the Mathematical Tripos and 1890 elected Fellow of Trinity College. 1892-1923 lecturer in mathematics and 1923-1928 Professor of Mathematics, Melbourne University. By 1900 had published 28 articles, mainly relating to engineering problems and 1902 was made Fellow of the Royal Society for his research in Applied Mathematics, especially hydrodynamics and elasticity. Only other publication The Elements of Mathematics (1937, with MMH. Bell) but wrote a number of original essays and lectures, many for the Mathematical Association of Victoria of which he was co-founder, 1906, and performed various experiments to test his deductions. 1892-1928 mainly taken up by a heavy and conscientiously organized teaching load. From his retirement 1928 until he died, a bachelor, in 1940 Michell was an Honorary Research Professor.

LIST OF RECORDS

The records are arranged as follows:

1. Notes taken as a student
2. Lectures and Addresses
  1. Melbourne University Lectures
  2. Other
3. Articles, Published
4. Notes, Examples, Diagrams, etc.
5. Miscellanea.
6. Biographical.

1. Notes Taken As A Student:

J.H. Michell, Note book and examples  
Upper Mathematics, Melbourne University  
1 vol. n.s.  
1881

2. Lectures and Addresses:

## 1. Melbourne University lectures.

## 1. Mixed Mathematics I, honours

Lecture notes taken from Miss Sylvia Reilly's note books

137 pp. t.s. 1 envelope

no date

## 2. Mixed Mathematics II, pass

1 envelope t.s. and m.s.

1925

## 3. Mixed Mathematics III, honours

1 envelope t.s.

no date

## 4. Principles of Mathematics, 3rd year course

3 envelopes t.s. and m.s.

no date

~~5. Pure Mathematics I, pass~~

(note by M.H. Reiz - all matter included in 'Mathematical Analysis')

1 envelope t.s.

no date

## 6. Pure Mathematics II, honours

2 envelopes t.s.

1924

## 2. Other.

## 1. Maxwell Centenary

notes, draft, and text of address covering H. Clerk Maxwell's work

1 envelope m.s.

no date

## 2. Lecture on Relativity

1 envelope m.s.

no date

3. Articles, Published:

## 1. On the theory of stream lines

from Philosophical Transactions of the Royal Society of London  
pamphlet (2 copies)

1890

## 2. On the bulging of a flat plate

paper for Australasian Association for the Advancement of Science  
(also contains extract from Report of A.A.A.S., 1892, Section A.)

- 
- 1 envelope, 6pp. m.s.  
January 1892
  3. Wave resistance of a ship  
from Philosophical Magazine, January 1898  
printed pamphlet, 16pp. with annotations
  4. Direct determination of stress in an elastic solid; application of plates  
from Proceedings of London Mathematical Society  
printed pamphlet, 24pp. with annotations  
April 1899
  5. Stress in a rotating lamina  
from Proceedings London Mathematical Society  
printed pamphlet, 7pp.  
April 1899
  6. Uniform torsion and flexure of incomplete tubes, with application  
helical springs  
from Proceedings London Mathematical Society  
printed pamphlet 16pp.  
April 1899
  7. Transmission of stress across a plane of discontinuity in an  
isotropic elastic solid, and the potential solution for a plane  
boundary  
from Proceedings London Mathematical Society  
printed pamphlet, 10pp.  
June 1899
  8. Elementary distribution of plane stress  
from Proceedings London Mathematical Society  
printed pamphlet, 26pp.  
January 1900
  9. Some elementary distributions of stress in three dimensions  
from Proceedings London Mathematical Society  
printed pamphlet, 12pp. with annotations  
February 1900
  10. The determination of the stress in an isotropic elastic sphere by  
means of intrinsic equations  
from The Messenger of Mathematics  
printed pamphlet, also m.s. copy  
June 1900

11. Stress in an isotropic elastic solid with an infinite plane boundary  
from Proceedings London Mathematical Society  
printed pamphlet, 11pp.  
June 1900
12. Uniplanar stability of a rigid body  
from Messenger of Mathematics  
printed pamphlet  
July 1900
13. Stress in the web of a plate girder  
from Quarterly Journal of Pure and Applied Mathematics  
printed pamphlet  
1900
14. The theory of uniformly loaded beams  
from Quarterly Journal Pure and Applied Mathematics  
printed pamphlet  
1900
15. The inversion of plane stress  
from Proceedings London Mathematical Society  
printed pamphlet, 8pp.  
November 1901
16. The flexure of a circular plate  
from Proceedings London Mathematical Society  
printed pamphlet  
December 1901
17. The small deformation of curve and surface with application to the vibration of a helix and a circular ring  
for Messenger of Mathematics  
m.s. 22pp.  
no date
18. The uniform flexure and torsion of curvilinearly isotropic beams  
from Quarterly Journal Pure and Applied Mathematics  
m.s. 11pp.  
no date

The following group were found together under the label 'Published papers, m.s. copies':

19. Digest of Legendre's Coefficients; Laplace's Functions; Functions of Bessel  
m.s. 31pp.  
no date

- 
20. Elasticity. Plane strain  
1 envelope m.s.  
no date
21. Grassmann Calculus  
16pp. 1 envelope, m.s.  
no date
22. The funicular polygon  
3pp. 1 envelope, m.s.  
no date
23. General course of dynamics of rigid bodies (including gyroscopes)  
250pp. 1 envelope, m.s.  
no date
24. Numerical and graphical integration of  $B.M.Q^2$   
10pp. 1 envelope, m.s.  
no date
25. Plate uniformly bent  
3pp. m.s.  
no date
26. Sketch of application of Stoke's method of differentiating  
Fourier. Series to Bessel's Function - Series  
11pp. m.s.  
no date
27. Stable and statically determinate frame of  $2n - 3$  bars  
2pp. m.s.  
no date
28. Strain relations  
15pp. m.s.  
no date
- (end of 'Published papers - m.s. copies' group).
29. Summary of and notes on J.H.M.'s articles, made by T.M.Cherry and  
M.L. Uughart  
1 envelope  
1940

4. Notes, Examples, Diagrams, etc.

1. Group labeled 'Notes found on J.H.M.'s desk.'
1. Analysis of strain  
38pp. m.s.  
no date

- 
2. Calculations  
2pp. m.s.  
no date
  3. Case of uniform pressure over circular boundaries  
16pp. m.s.  
no date
  4. Circular or elliptic hole in a flat plate under tension  
17pp. m.s.  
no date
  5. Cylindrical bearing  
35pp. m.s.  
no date
  6. Elasticity. Vector method  
23pp. m.s.  
no date
  7. Error of polar planimeter due to friction of mechanism  
2pp. m.s.  
no date
  8. Flexure and torsion of prisms. Cross method  
33pp. m.s.  
no date
  9. General solution for solids of revolution  
5pp. m.s.  
July 1900
  10. Given initial disturbance - two dimensions  
4pp. m.s.  
no date
  11. Kinematics of a particle. Chapter I.  
55pp. m.s.  
no date
  12. Ordinary theory of loaded beams long in comparison with the breadth  
35pp. m.s.  
no date
  13. Plate cantilever loaded at one point  
9pp. m.s.  
no date
  14. Potential. Scalars and vector fields  
22pp. m.s.  
no date
  15. Single concentrated force - straight boundary and circular boundary  
6pp. m.s.  
no date

- 
16. Train of waves in viscous fluids of depth  $\frac{h}{2}$   
47pp. m.s.  
no date
  17. On the uniform strain of plane plates  
14pp. m.s.  
no date
  18. Wires ( $n^3$  Webb)  
23pp. m.s.  
no date

## 2. Other:

1. Binomial theorem  
notes and examples  
14pp. m.s.  
no date
2. Complex algebra  
11pp. m.s.  
no date
3. Non euclidean space etc.  
1 envelope m.s.  
no date
4. Number theory  
1 envelope m.s.  
no date
5. Problem paper  
5pp. m.s.  
no date
6. Stream line functions  
1 envelope m.s.  
no date

## 5. Miscellanea:

Examination papers, Cambridge University

1. Easter term, 1884  
Mathematical tripos pts. I and II.
2. Easter term, 1886  
Mathematical tripos pt. I
3. Easter term, 1887  
Mathematical tripos pts. I and II.



---

6. Biographical:

1. John Henry Michell, 1863-1940

Biographical article by A.G.M. Michell, J.H.'s brother, reprinted  
from Royal Society, Obituary notices 1940

printed pamphlet

1942

2. Scientific work of the late Professor J.H. Michell F.R.S.

Contains also a list of J.H.M.'s publications and notes by  
D.K. Picken

T.M. Cherry

7pp. t.s.

1940

3. Statement Associate Professor Beiz to University of Melbourne  
Council on death of J.H. Michell

2pp. t.s.

4 March 1940

Patricia Marched,  
Assistant Archivist.

February 1964.