Robert Andrew Spencer

Curriculum Vitae
2017

PERSONAL DATA

DATE OF BIRTH	27 November 1994
PLACE OF BIRTH	Cape Town — South Africa
NATIONALITY:	South Africa
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EDUCATION

Currently reading	MASt in Mathematics from **University of Cambridge**	
2016	B.Sc. (Hons) (Mathematics) from **University of Cape Town**	— Detailed List of Marks
2015	B.Sc. (Mathematics, Applied Mathematics and Physics) from **University of Cape Town** (3rd Year) *awarded with distinction in Applied Mathematics, Mathematics, Physics and the degree with distinction.*	— Detailed List of Marks
2012	Matriculation from **Westerford High School** Online Courses from **MITx and EdX**	— Detailed List of Marks — Detailed List of Marks

SCHOLARSHIPS

2017	Skye Foundataion Scholarship	Skye Foundation	(£30 000)
	Skye Cambridge Scholarship	Cambridge Trust	(£8 000)
2016	Innovation Scholarship	National Research Foundation	(R50 000)
	Roderick Noble Scholarship	University of Cape Town	(R5 000)
2015	Vice Chancellor's Scholarship	University of Cape Town	(R40 000)
	Science Faculty Scholarship	University of Cape Town	(R15 000)
2014	Vice Chancellor's Scholarship	University of Cape Town	(R40 000)
	Science Faculty Scholarship	University of Cape Town	(R15 000)
	Twamley December Scholarship	University of Cape Town	(R2 000)
2013	Vice Chancellor's Scholarship	University of Cape Town	(R40 000)
	Computer Science Department Entrance Scholarship	University of Cape Town	(R10 000)
	Allan Gray Orbis Scholarship		(R100 000)

University Achievements

2015	Dean's Merit List
	MAM3040W Class Medalist
	PHY3021F Class Medalist
	PHY3022S Class Medalist
2014	Dean's Merit List
	PHY2014F Class Medalist
2013	Dean's Merit List
	PHY1004F Class Medalist
	CSC1015F Top 3

Work Experience — References available on request

2017 — Present	**Firmware Contract**
	Avionic radio firmware
	— Southwestern Electronics
2017	**Software Development Intern**
	Android UI Systems (Litho)
	— Facebook LTD
2016	**Undergraduate Mathematics Tutor**
	— University of Cape Town
2015	**Software Development Intern**
	— Amazon Web Services
2014 — 2017	**Contract Web Developer**
	Backend system design
	Software development — front- and back-end
	Database design
	— Playwhoo.com
2013	**Contract Software Developer**
	Metrological DBMS development
	— InterMet South Africa
2013	**Contract Software Developer**
	System design and development
	Database design
	— Docubot Document Management Software

Computer Skills

LANGUAGES	Python, C, C++, SQL, HTML, css, bash, Delphi Pascal, Mathmatica
OPERATING SYSTEMS	Ubuntu Linux , Microsoft Windows
APPLICATIONS	git, LaTeX
OTHER	Algorithm design/analysis, system administration

Languages

ENGLISH:	Mother Tongue
AFRIKAANS:	Basic

INTERESTS AND ACTIVITIES

Recreational Programming; Piano; Archery; Terrain Simulation; Competitive Coding Training; Reading; Electronics; Hiking

EXTRA-CURRICULAR ACHIEVEMENTS
AND RESPONSIBILITIES — REFERENCES AVAILABLE ON REQUEST

2016	South African International Olympiad in Informatics Team Coach
	South African International Olympiad in Informatics Team Leader
	Base leader of Electronics Base, Cederberg Senior Scout Adventure
2015	South African International Olympiad in Informatics Team Coach
	South African International Olympiad in Informatics Deputy Team Leader
2014	South African International Olympiad in Informatics Deputy Team Leader
	South African International Olympiad in Informatics Team Coach
	Base leader of Electronics Base, Cederberg Senior Scout Adventure
	Modern Mathematics International Summer School for Students
2013	South African December Mathematics Training Camp Coach
2012	Base staff of Electronics Base, Cederberg Senior Scout Adventure
	Western Cape Education Department Public Speaking Trophy
	Google Code-In
2009 — 2012	Organising committee member, COMPUTERS ROBOTS AND ELECTRONIC DESIGNS Club
2011	Publication in English Alive
2009	Founder of Westerford COMPUTERS ROBOTS AND ELECTRONIC DESIGNS Club

HIGH SCHOOL ACHIEVEMENTS

2012	Honikman Honour Award
	Academic Honours
	Prefect
	Best One Act Play Script
	Goldblatt Play Characterisation Award
	Noel Taylor Public Speaking Trophy
	Van Vlaanderen Trophy for Highest Marks in Physical Science and Mathematics
	Grade Prize for Physical Science, Advanced Programme Mathematics, English, Geography
	Service to COMPUTERS ROBOTICS AND ELECTRONIC DESIGNS Club (founder)
	Mathematics Tutor Claremont High School
2011	Best One Act Play Director
	Librarian

OLYMPIADS

2016	ACM International Collegiate Programming Contest (Thailand)	—
	Standard Bank IT Challange	Winning Team Western Cape
	NSUCRYPTO International Students' Olympiad in Cryptography	Winning Student
2015	ACM International Collegiate Programming Contest (Morocco)	—
	Standard Bank IT Challange	Winning Team Nationally and Western Cape
2014	International Mathematics Competition (Bulgaria)	Second Prize
	Standard Bank IT Challange	Winning Team Western Cape
2013	International Olympiad in Informatics (Australia)	Bronze Medal
	International Mathematics Competition (Bulgaria)	Honourable Mention
	South African Tertiary Mathematics Olympiad	Winner (undergraduate section)
2012	International Mathematics Olympiad (Argentina)	Honourable Mention
	International Olympiad in Informatics (Italy)	—
	South African Computer Olympiad	Winner
	UCT Mathematics Competition	Winner
	Mintec Science Olympiad	Western Cape Representative
	SAASTA Science Olympiad	1st in Western Cape
	Inter-Provincial Mathematics Olympiad	Western Cape A Team Captain (winners)
2011	International Mathematics Olympiad (Netherlands)	Honourable Mention
	South African Computer Olympiad	Bronze
	Baltic Way Mathematics Competition (Germany)	—
	UCT Mathematics Competition	Top 10
	Inter-Provincial Mathematics Olympiad	Western Cape A Team (winners)
	English Olympiad	Silver Award
2010	UCT Mathematics Competition	Top 10
	South African Computer Olympiad	Bronze
	Inter-Provincial Mathematics Olympiad	Western Cape A Team (winners)
2009	South African Mathematics Olympiad	Winner
	South African Computer Olympiad	Top 20
	UCT Mathematics Competition	Top 10
	Invitational World Youth Mathematics Intercity Competition (South Africa)	—
	Inter-Provincial Mathematics Olympiad	Western Cape A Team (winners)
2008	UCT Mathematics Competition	Winner
	Inter-Provincial Mathematics Olympiad	Western Cape A Team (winners)

Bachelor of Science (Mathematics Hons)
University of Cape Town

MODULE NAME	GRADE
Topology	91
Algebra	80
Differential Geometry	100
Cryptography	93
Graph Theory	81
Homologial Algebra	95
String Theory	89
Seminar	98
Project Seminar	98
Project	100
AVERAGE	**93**

Third Year Bachelor of Science
University of Cape Town

COURSE CODE	COURSE NAME	GRADE	GRADE POINTS
MAM3000W	Mathematics 3000	86	72
MAM3040W	Applied Mathematics 3040	88	72
PHY3021F	Advanced Physics A	88	36
PHY3022F	Advanced Physics B	80	36
	AVERAGE	**86**	

Second Year Bachelor of Science
University of Cape Town

COURSE CODE	COURSE NAME	GRADE	GRADE POINTS
MAM2000W	Mathematics 2000	94	48
MAM2046W	Applied Mathematics 2046	88	48
PHY2014F	Waves, Vibrations & Electromagnets	88	24
PHY2015F	Classical & Quantum Mechanics	88	24
CSC2001F	Computer Science 2001	87	24
	AVERAGE	**90**	

First Year Bachelor of Science
University of Cape Town

COURSE CODE	COURSE NAME	GRADE	GRADE POINTS
MAM1000W	Mathematics 1000	90	36
MAM1019H	Fundamentals of Mathematics	97	18
MAM1043H	Modelling and Applied Computing	87	18
MAM1044H	Dynamics	100	18
PHY1004W	Matter and Interactions	96	36
CSC1015F	Computer Science 1015	96	18
CSC1016F	Computer Science 1016	91	18
	AVERAGE	**94**	

Online Courses

Institution	Course Code	Course Name	Grade
Berkley	CS188.1x	Artificial Intellegence	92
MIT	6.002x	Circuits and Electronics	95

Matriculation
Westerford High School

Subject	Grade
English Home Language	82
Afrikaans First Additional Language	81
Mathematics	99
Life Orientation	87
Geography	85
Music	84
Physical Sciences	93
Mathematics: Probability, Data Handling and Geometry	90
Advanced Program Mathematics (IEB)	96
Average	**89**