

100 REASONS TO

SCIENCE

A WORD FROM THE EDITOR

Science is everywhere. Understand science and you will see the world differently. The sun becomes a giant nuclear reactor full of beautiful equations keeping us alive, while Facebook can be transformed into maths that describes you and your friends. Whilst the most amazing scientific phenomena are happening inside you right now.

To celebrate 100 years since the Faculty of Science (University of Malta) was founded **THINK** has prepared a focus stuffed with exciting research. Francesca Vassallo explains how crystals are not just pretty rocks but also medicines and life-giving molecules (pg. 22). Claude Bajada writes about the first arithmetic book in Maltese (pg. 18), how microwaves do not harm health, and graph theory, maths that describes networks like Google and Twitter (pg. 20). Focus editor Jessica Edwards finds out about species invading Maltese waters and threatening the environment (pg. 29). Whilst Natasha Padfield talks about climate models for the Mediterranean and how Malta's air pollution is being sussed (pg. 34). There is a lot more research happening at Faculty that is trying to discover a brighter future, but first a bit

THINK
SPECIAL FEATURE

science **100**

A Faculty Reborn



Prof. Charles V. Sammut

During the mid-1970s, the Faculties of Science and Arts were closed down, and the Bachelor programmes phased out. Most of the foreign (mainly British) academics left Malta, as did some Maltese colleagues. Those few who stayed were assigned teaching duties at the newly established Faculty of Education and Faculty of Engineering. Relatively little research took place, except when funds were unnecessary, and it is thanks to these few that scientific publications kept trickling out.

In 1987, the Faculties of Arts and Science were reconstituted. The Faculty of Science had four 'divisions'

how we grew...

1887

Faculty of Arts and Science is founded, which includes a course in Latin, Mathematics and Natural Philosophy and English Literature and Natural History for medicine students. A Faculty of Literature and Science is founded. It includes a course in science amongst others.

1800

Canon F.S. Caruana is appointed to rectorship and the university reopens.

1838

The Faculty of Philosophy and Arts is founded which includes a four year course of Mathematics, Latin, Logic, Physics, Political Economy, and Statistics.

1879

Napoleon Tagliaferro publishes a paper of Transcendental Functions at Sorbonne. This was the first scientific paper to be published as part of this faculty.

which became the Departments of Biology, Chemistry, Physics, and Mathematics. In the same year, I returned from the UK to join the Faculty.


Things gradually improved as more staff and students joined. However, equipment was either obsolete or beyond repair. The B.Sc. (Bachelor of Science) course was re-launched with an evening course. Faculty members worked flat out in very poor conditions. The Physics and Mathematics building was still shared with Engineering. Despite these problems, we had a Faculty and identity. Nevertheless, we wanted our courses to be of

international repute—our guiding principle.

During the 1990s, yearly budgets had improved slightly along with experimental facilities. Computers and the occasional capital investment helped immensely. Research output increased, as did student numbers, while postgraduate Masters and Ph.D. students started to appear.

Since 2005, some faculty members have been working hard to secure European Regional Development Funds (ERDF) by submitting proposals to reinforce our research infrastructure. A total of six projects were approved with a combined budget of nearly €5 million.

This has resulted in new, state of the art research facilities and an exponential increase in research output, bolstered by additional academic staff and research student numbers of close to 80.

Students are now organised and active through S-Cubed, the Science Students' Society. This leading organisation is one of the three faculty pillars: the academic and support staff, and the student body. Together, we have made giant strides and the future looks bright. 

Special thanks to Prof. Stanley Fiorini who helped us compile our timeline, aided by Prof. Josef Lauri.

1915

The Faculty of Science is established as an independent faculty.

1942

Luftwaffe and Italian air force bombs the Physics Lab.

1960s

Four major departments are founded: Biology, Chemistry, Mathematics, and Physics.

1970s

Department of Biology acquires Fort St Lucian which becomes the Department's marine station.

1978

Science courses suspended by Prime Minister Dom Mintoff (Labour Party).

1987

Science courses restored by Prime Minister Eddie Fenech Adami (Nationalist Party)

1997

Fifth Department of Statistics and Operations Research founded.

2015

Sixth Department of Geosciences founded.

2009-2015

Faculty of Science takes part in EU projects totalling over €160M with the Faculty receiving over €1.5M.