

Open Textbooks

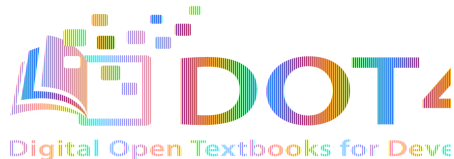
by Glenda Cox & Michelle Willmers

Digital Open Textbooks for Development project, Centre for Innovation in Learning and Teaching,
University of Cape Town

24 August 2021



Centre for
Innovation in
Learning and
Teaching



The Digital Open Textbooks for Development project

Three-year (2018-2021) research, advocacy and implementation initiative, following in wake of Research on Open Educational Resources for Development (ROER4D) and other CILT open education initiatives (since 2007).



Dr Glenda Cox
Principal Investigator



Bianca Masuku
Researcher



Michelle Willmers
Publishing &
Implementation
Manager

Welcome NWU OER Fellows and ...

Is this anyone's first workshop?

Previous workshops:

Introduction to OER and open pedagogy

Adaptation and localisation of open educational resources

OER and social justice

Open licensing

“Grappling with Open”
Professional development
and student advocacy for OER

Alagappa University

Army Institute of Education

*Cape Peninsula University of
Technology*

HELP university

IQ Academy

Nelson Mandela University

Project SMART

*Research Institute for Open
Education, Suqian University/Open
University of Jiangsu*

STEAM Foundation

*St Joseph's college of Commerce
Autonomous Bengaluru India*

St Peter's College

The IIE

UNESCO

UNISA

University of Cape Town

University of Eswatini

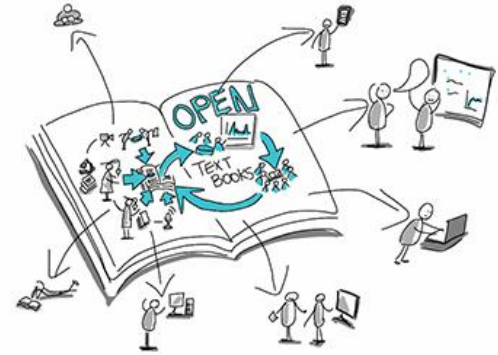
University of Limpopo

University of Mumbai

DOT4D overview: Open textbooks for social justice



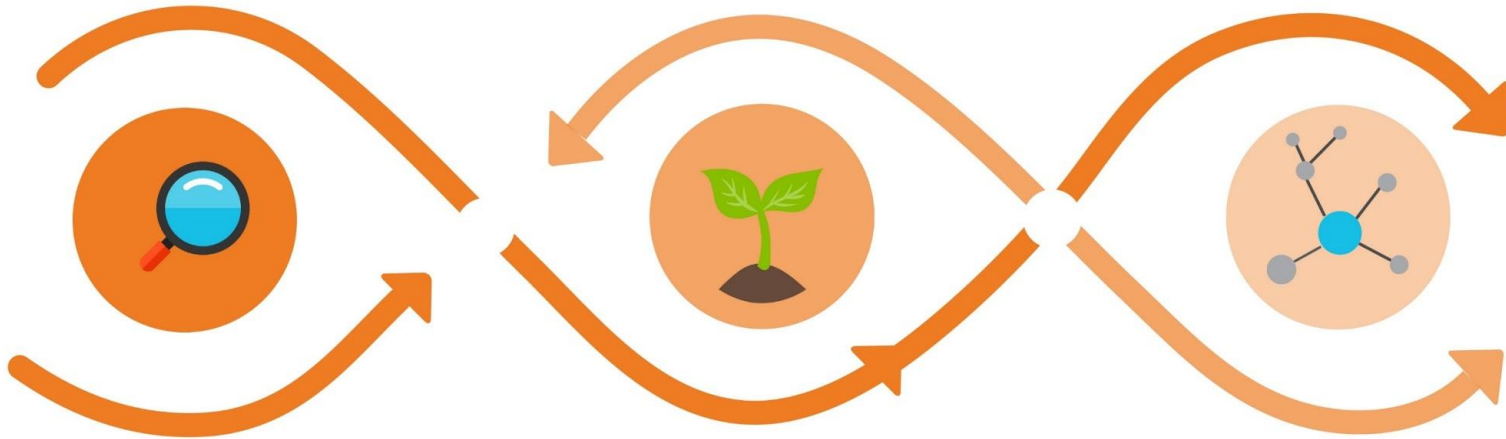
Open textbooks are digital, free to use and openly licensed teaching materials.



Open textbook definition

Open textbooks are digital, free to use and openly licensed collections of **course-related** teaching and learning content published on platforms and in formats that provide **affordances** for the integration of multimedia and ancillary practice or assessment components.

These locally published textbooks present opportunities for **inclusive, collaborative authorship** strategies. The open licensing aspect also means that these resources can be legally shared and redistributed, both within and beyond the institution.



Research

Identify optimal approaches to open textbook design and publishing.

Grants

Support open textbook publishing at UCT that prioritises strategies for integrating student perspective, curriculum transformation and sustainability.

Advocacy

Inform current open education policy initiatives at institutional and national levels.

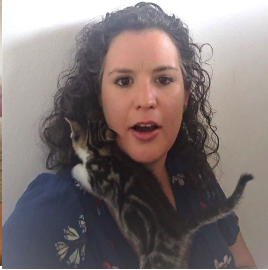
UCT open textbook authors in the DOT4D study



[Kensleyrao Apajee](#)
Mechanical Engineering



[Chris Barnett](#) & [Cesarina Edmonds-Smith](#)
Chemistry



[Stella Papanicolaou](#)
Architecture



[Dr Juan Klopper](#)
Surgery



[A/Prof. Abimbola Windapo](#)
Construction



[A/Prof Maria Keet](#),
Computer Science



[Jonathan Shock](#),
Mathematics



[Dr James Lappeman](#),
Marketing



[Tim Low](#),
Statistics

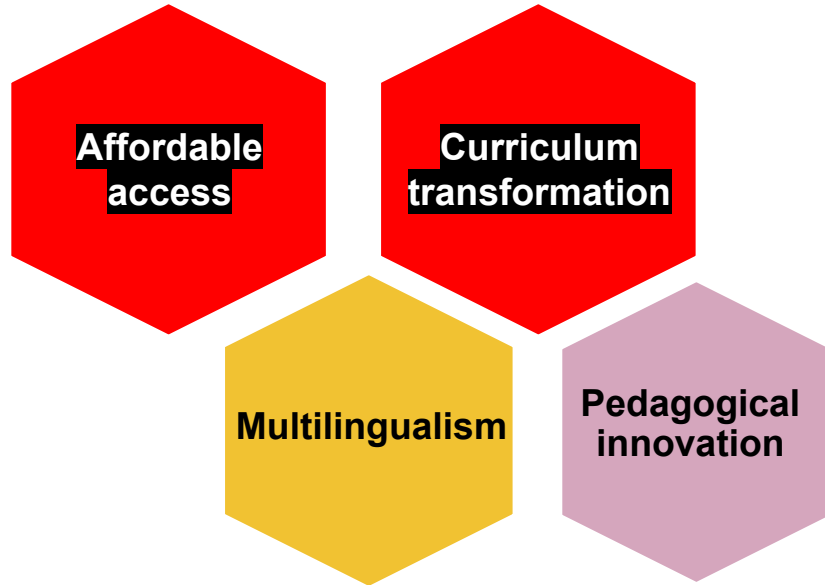


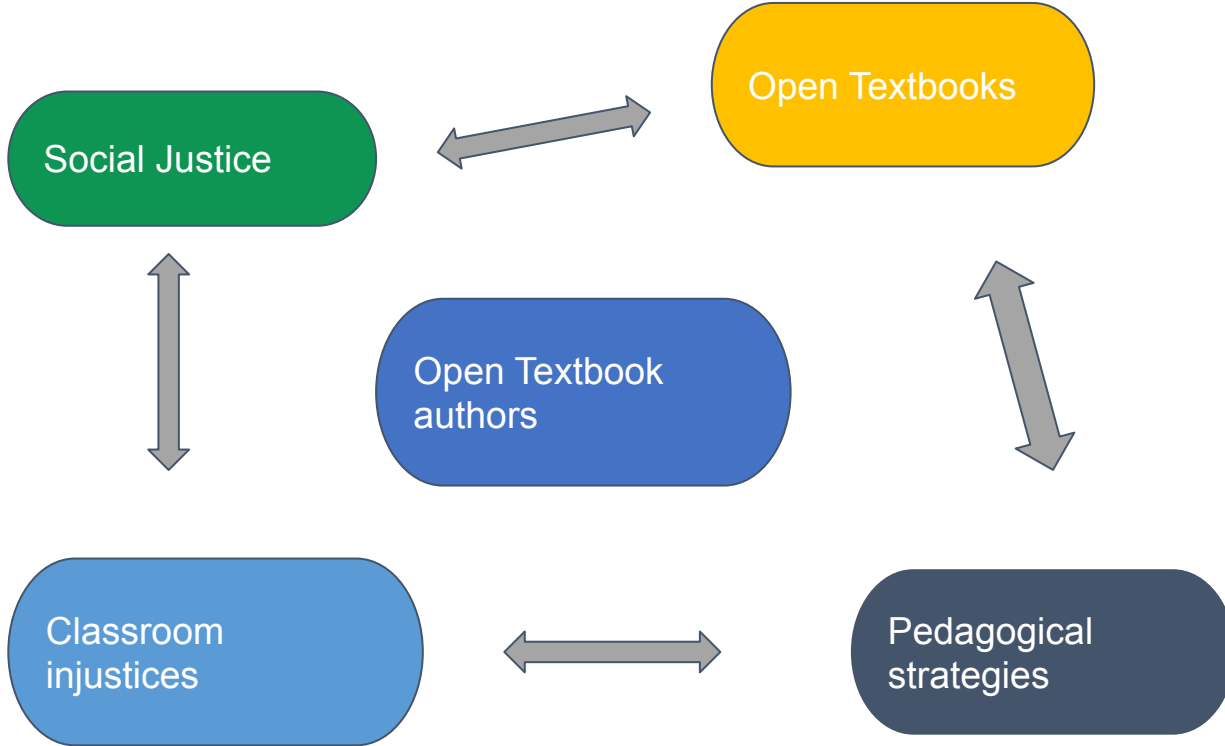
[Dr Michael Held](#),
Orthopaedic Surgery



[Dr Claire Blackman](#)
Mathematics

SUMMARY OF FINDINGS: DRIVERS AND IMPERATIVES





Fraser (2005) social justice framework

Dimension	Injustices	Affirmative response <i>Addresses injustice with ameliorative reforms</i>	Transformative response <i>Addresses the root causes of inequality</i>
Economic	Maldistribution <i>of resources: economic inequality</i>		
Cultural	Misrecognition <i>attributes of people & practices accorded less respect, status inequality</i>		
Political	Misrepresentation <i>Lacking right to frame discourse</i>		

Social justice framework in the open textbook context



Injustices in current textbook practices

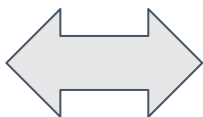
Cost and value
Inequality of access

Textbooks from the Global North and the need for curriculum transformation

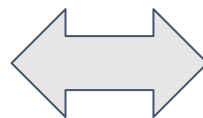
Lack of power/lack of voice of for eg. students in materials

Affirmative response

Cost savings and **access** to materials



Open accessible textbooks created with local, **relevant** content



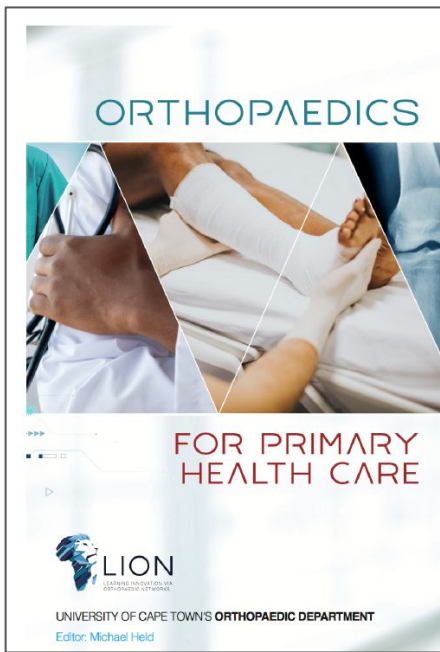
Students create and review content

Transformative response

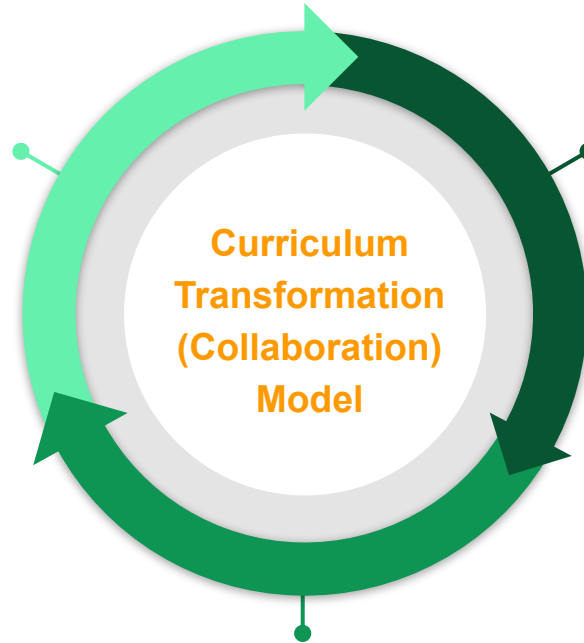
Institutional, national or regional funding mechanisms

Policy that mandates and rewards the creation of local, relevant, open textbooks

Policy that mandates and rewards collaboration and student inclusion



Publishing
Phase 1: Initiative as self-publisher
Phase 2: Library as publisher



Authorship
Lead author as editor-in-chief + students and colleagues

Quality assurance
Students and colleagues

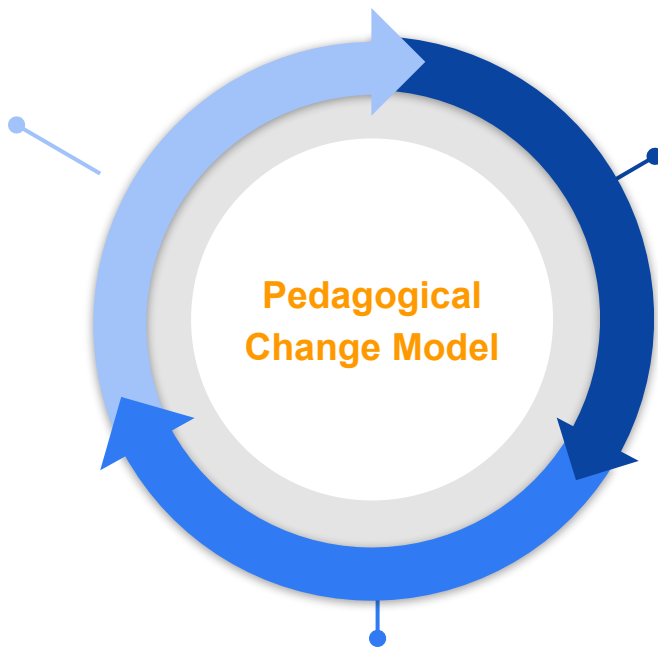


Resourcing:

- DOT4D grant R50 000
- DOT4D publishing consultation



Publishing
 Phase 1: Initiative as self-publisher
 Phase 2: Library as publisher
 Initiative as self-publisher



Authorship
 Lead author as editor-in-chief with student co-authors
 Content development facilitator with student and colleague co-authors

Quality assurance
 Student review, institutional intermediary editorial support, institutional Intermediary publishing support

Students and colleagues



Resourcing

Modern Architectures

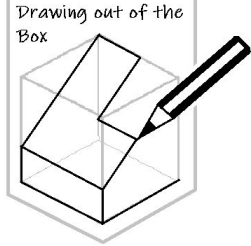
- DOT4D grant R66 000
- DOT4D publishing support

Ingxoxo (Chemistry 1)

- DOT4D grant R73 180



What didn't work?



Resourcing

Mechanical Engineering Drawing

- DOT4D grant R21 900
- DOT4D publishing support

Mathematics MAM1000W

- DOT4D grant R20 000

Open Surgery Textbook

- DOT4D grant R60 000

Publishing



**Student empowerment /
Pedagogical change /
Curriculum transformation**

Authorship

Solo authorship + students

**Lead author as editor-in- chief
with colleague co-authors**

**Solo student author + UCT
intermediary support**

Quality Assurance

**Student and proof reader or intermediary
Student review, Colleague review
Supervisor review**

Institutional Intermediary editorial support

Why?

- In 3 cases solo authorship did not work (but it can work)
- Time and timing

Any questions?

Open textbook production at UCT



A VIEW FROM THE PUBLISHING TRENCHES AT UCT

Range of authorship, content development, quality assurance and publishing models (generally collaborative), often influenced by discipline.

Range in degree of technological sophistication in content delivery, but growing demand for and expectation of dynamic, interactive publishing platform(s).

Challenge of where to publish/host content.

New roles and responsibilities managing editorial and publishing processes (academic and service provider partners).

Challenge of time and resourcing (compounded by protracted cycles of time and challenge of alignment with semester cycles).

The open textbook lifecycle



Who pays for this?

What support do I need?

What is the problem you are trying to address?

Affordable access / Curriculum transformation
Multilingualism / Pedagogical innovation

Has it been done before?

What constitutes success?

Manuscript development

- Scoping and textbook outline
 - Audience
 - Problem
 - Platform
- Authorship strategy
 - Copyright & licensing
 - Stylesheets & templates
 - Accessibility, diversity & inclusion
- Student involvement
- Quality assurance

Resource production

- Resource conceptualisation and publishing approach
 - Audience
 - Problem
 - Platform
- Content design and presentation
 - Stylesheets & templates
 - Accessibility, diversity & inclusion
- Editing and proofreading
 - Stylesheets & templates
 - Accessibility, diversity & inclusion
- Student involvement
- Quality assurance

Publishing

- Imprint articulation:
 - Licensing
 - Citation details
 - Edition numbering
- Platform release
- Marketing and dissemination
- Track usage and adoption
- Source reviews
- Maintain the resource

Editor-in-Chief / Editorial Team / Project Manager to drive the process, articulate content management plan and curate content

Any questions?

OER and open textbook production at your institution



Manuscript development ...

What makes sense in your context?

What are your main challenges?

**Solo author +
student
involvement**

Content
review

Graphics
production

**Solo student
author + UCT
intermediary
support**

**Lead author as
editor-in-chief
with student
co-authors**

**Lead author as
editor-in-chief
with colleague
co-authors**

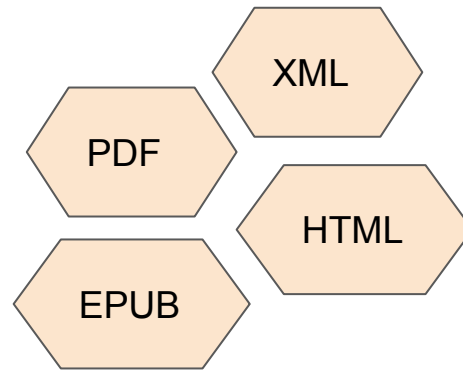
**Lead author as
editor-in-chief
with student
and colleague
co-authors**

**Content development
facilitator with student
and colleague
co-authors**

Resource production ...

What makes sense in your context?

What are your main challenges?



**Dedicated or
departmental
website**

**Externally
hosted
publishing
platform**

**Institutional
publishing platform
or repository**

**Disciplinary or
network publishing
channel**

Pressbooks

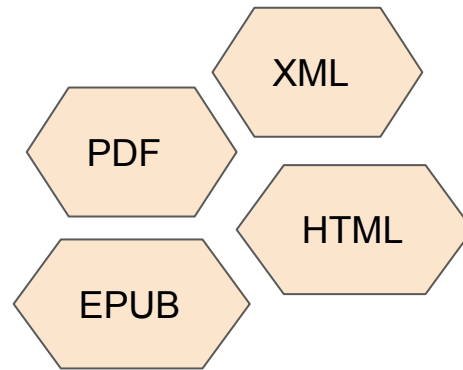
Manifold

GitHub

Publishing ...

What makes sense in your context?

What are your main challenges?



**Author as
self-publisher**

**Initiative as
self-publisher**

**Libraries + institute/dept
as co-publishers**

External publisher

JAMBOARD

https://jamboard.google.com/d/1b7WG-9tyx9BNi6QERXA_0WST22qbjem2WaN68ybxHak/viewer

OPEN TEXTBOOKS IN SOUTH AFRICAN HIGHER EDUCATION

Join the network...

Email glenda@uct.ac.za

Read the Call to Action: <https://bit.ly/3D3Gdr9>

Useful resources

BCcampus Self-Publishing Guide: <https://opentextbc.ca/selfpublishguide/>



Commonwealth of Learning Guide to Developing Open Textbooks:
<http://oasis.col.org/handle/11599/2390>

Rebus Guide to Publishing Open Textbooks (So Far):
<https://press.rebus.community/the-rebus-guide-to-publishing-open-textbooks/>


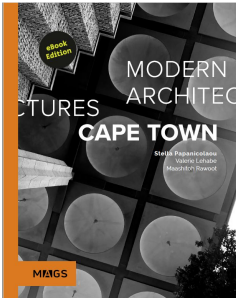
Mind the Gap: A Landscape Analysis of Open Source Publishing Tools and Platforms:
<https://mindthegap.pubpub.org/>

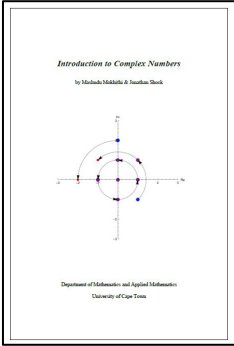
Appendix:
**Read more about DOT4D grantee
initiatives and outputs**



Grantee	Grant initiative	Output	Discipline
<p>Dr Chris Barnett & Dr Cesarina Edmonds-Smith</p>	<p>Ingxoxo</p> 	<p>Online discussion forum on first-year chemistry concepts (with focus on isiXhosa translation). “Living textbook” still in “closed” (classroom-only) prototyping and content development phase.</p> <p>Addressing: Pedagogical innovation Curriculum transformation Multilingualism</p>	<p>Department of Chemistry, Faculty of Science</p>
<p>Dr James Lappeman & Dr Paul Egan</p>	<p>Marketing to South African Consumers</p> 	<p>Open textbook comprised of 21 chapters co-published online in PDF, HTML and EPUB formats and in print by Liberty Institute of Strategic Marketing and UCT Libraries.</p> <p>Addressing: Cost Curriculum transformation</p>	<p>Liberty Institute of Strategic Marketing, Faculty of Commerce</p>

Grantee	Grant initiative	Output	Discipline
<p>Dr Michael Held & Learning Innovation through Orthopaedic Networks (LION)</p>	<p>Orthopaedics for Primary Health Care</p> 	<p>Open textbook comprised of 52 chapters co-published with UCT Libraries and made available on their Continental Open Access Platform.</p> <p>Addressing: Cost Curriculum transformation</p>	<p>Orthopaedic Research Unit, Faculty of Health Sciences</p>
<p>Associate Professor Maria Keet</p>	<p>An Introduction to Ontology Engineering</p> 	<p>Open textbook comprising new edition of world's first textbook for computer scientists in this subfield (first published 2018), including new chapter co-written with former female student and focus on multilingual approach.</p> <p>Addressing: Cost Curriculum transformation Multilingualism</p>	<p>Department of Computer Science, Faculty of Science</p>

Grantee	Grant initiative	Output	Discipline
<p>Tim Low</p>	<p>Introduction to Probability” (isiXhosa version)</p> 	<p>Two chapters translated from existing <i>Introstat</i> (2013) open textbook as proof-of-concept collaboration between author, students and linguistics academics. Translations in the process of being finalised for release in line with faculty transformation and multilingual efforts.</p> <p>Addressing: Curriculum transformation Multilingualism</p>	<p>Education Development Unit, Faculty of Commerce</p>
<p>Stella Papanicolaou and team</p>	<p>Modern Architectures: Cape Town</p> 	<p>Open textbook profiling Modern Movement architecture of Cape Town in the context of the decolonial gaze. Part of a series of outputs and activities in the Modern Architectures in the Global South initiative. Student content also shared on uctma.gs Instagram page.</p> <p>Addressing: Pedagogical innovation Curriculum transformation</p>	<p>School of Architecture Planning and Geomatics, Faculty of Engineering and the Built Environment</p>

Grantee	Grant initiative	Output	Discipline
<p>Dr Jonathan Shock</p>	<p>Introduction to Complex Numbers</p> 	<p>First prototype chapter for the <i>Introduction to University Level Mathematics for a South African Audience</i> open textbook, which is being designed to replace the prescribed work for first-year mathematics students in line with faculty transformation efforts.</p> <p>Addressing Cost Curriculum transformation</p>	<p>Department of Mathematics and Applied Mathematics, Faculty of Science</p>