# GETTING YOUR TEXTBOOK PUBLISHED

THOMAS W. JUDSON (RETIRED)
DEPARTMENT OF MATHEMATICS AND STATISTICS
STEPHEN F. AUSTIN STATE UNIVERSITY
NACOGDOCHES, TX 75962

# GETTING YOUR TEXTBOOK PUBLISHED

- Should I write my textbook in LaTeX, HTML, Word, or something else.

- Should I make my textbook open source?

- What about copyright?

- Should I make a webpage for my textbook?

- Should I make an HTML version, a print version, or both?

- How do I get paid for my efforts?

- If I make a print version, what sort of inventory do I need to keep in my garage?

# WRITING YOUR TEXTBOOK

- I have written my textbook in Microsoft Word. What now?

- My textbook was written in LaTeX. Isn't this the preferred way of writing mathematics?

- I want a print version and an HTML version of my textbook. My university says that the online version of my textbook must be accessible. What's that?

- I have a blind student who requires a braille version of my textbook. What do I do?

- I have heard about PreTeXt. Is this something that I should look into?

# PRETEXT

- **PreTeXt is a set of XML tags and is structured in a manner very similar to LaTeX. Extensible Markup Language (XML) is a markup language that defines a set of rules for encoding documents in a format which is both human-readable and machine-readable (https://pretextbook.org/).**

- **PreTeXt source is processed by XSLT (Extensible Stylesheet Language Transformations) into the target format—print, HTML, PDF, ePuB, and braille.**

- **Books created with PreTeXt can be hosted on the Runestone Academy (https://landing.runestone.academy/)**

# WHAT IS POSSIBLE IN PRETEXT

- **Check out the showcase ([https://pretextbook.org/examples/showcase/html/frontmatter.html](https://pretextbook.org/examples/showcase/html/frontmatter.html)) and sample articles ([https://pretextbook.org/examples/sample-article/html/derivatives.html](https://pretextbook.org/examples/sample-article/html/derivatives.html)).**

- **The PreTeXt catalogue ([https://pretextbook.org/catalog.html](https://pretextbook.org/catalog.html)) now lists 80 projects.**

- **PreTeXt is now the authoring language for Runestone ([https://runestone.academy](https://runestone.academy)).**

# A SIMPLE PRETEX EXAMPLE

```xml
<?xml version="1.0" encoding="UTF-8"?>
<pretext>
  <book>
    <title>Hello World!</title>
    <chapter>
      <title>My Great Chapter</title>
      <p>This is a PreTeXt document.</p>
    </chapter>
  </book>
</pretext>
```

# WHAT ABOUT THE MATH?

```
<me>
  \frac{d}{dx} \int_1^x \frac{1}{t}\, dt
</me>
```

produces

$$\frac{d}{dx} \int_1^x \frac{1}{t}\, dt$$

# WHAT IS COPYRIGHT?

- Copyright is a type of intellectual property that protects original works of authorship as soon as an author fixes the work in a tangible form of expression. In copyright law, there are a lot of different types of works, including paintings, photographs, illustrations, musical compositions, sound recordings, computer programs, books, poems, blog posts, movies, architectural works, plays, and so much more!

- Everyone is a copyright owner. Once you create an original work and fix it, like taking a photograph, writing a poem or blog, or recording a new song, you are the author and the owner.

- You can register your copyright at https://www.copyright.gov/registration/ but it costs.

# OPEN SOURCE AND OPEN ACCESS

- **Open access (OA) refers to the free, immediate, online availability of research outputs such as journal articles or books, combined with the rights to use these outputs fully in the digital environment. OA content is open to all, with no access fees.**

- **The term open source refers to any textbook whose source is made available for use or modification as users or other authors see fit. Unlike traditional textbooks, open source textbooks are developed as a public, open collaboration and made freely available to the public.**

- **The two most common open source licenses are GNU Free Documentation License (GNU FDL or simply GFDL) and the Creative Commons (CC) license.**

# WHY OPEN SOURCE?

Availability—Every student has a book on the first day of class.

Interactive versions

Ease of maintenance

Open source books are universally available via the Internet.

Open source textbooks can be made available in a variety of formats: print, PDF, HTML, ePub, Jupyter Notebooks, and braille.

Open source textbooks can be read on a variety of devices: paper, desktop, laptop, tablet, smartphone, Kindle.

Commercial publishers have difficulty duplicating the access that open source textbooks can provide.

Free from market forces and available at zero or low cost

# GNU FREE DOCUMENTATION LICENSE

- All previous authors of the work must be attributed.

- All changes to the work must be logged.

- All derivative works must be licensed under the same license.

- The full text of the license, unmodified invariant sections as defined by the author if any, and any other added warranty disclaimers (such as a general disclaimer alerting readers that the document may not be accurate for example) and copyright notices from previous versions must be maintained.

- Technical measures such as DRM may not be used to control or obstruct distribution or editing of the document.

# CREATIVE COMMONS (CC) LICENSE

CC provides an author flexibility (for example, they might choose to allow only non-commercial uses of a given work) and protects the people who use or redistribute an author's work from concerns of copyright infringement as long as they abide by the conditions that are specified in the license by which the author distributes the work.

There are several versions of the CC License.  The most common are CC BY-SA, CC BY-NC, and CC BY-SA-NC.  BY is Attribution (must give the author credit), SA is Share-like (may distribute derivative works only under a license identical to ("not more restrictive than") the license that governs the original work), and NC is Non-commercial (only for non-commercial purposes).

# OTHER ADVANTAGES

- Interactive Features: GeoGebra (geometry demonstrations), JSXGraph (interactive graphs), WeBWorK (homework system), Skulpt (in-browser Python), Sage Cells (open source Mathematica, Maple, Matlab), Audio and Video players, MathJax (typesetting math).

- Maintenance: Every reader is a copy-editor (students are the best), typos and errors can be fixed easily and quickly.

- Freed From Market Sources: The best book for the course that you are teaching is the one that you wrote and others may find your book useful.

- Open source textbooks written in PreTeXt are accessible.

# I WOULD LIKE TO BE PAID FOR MY EFFORTS

- It is easy to self-publish and even make a small profit on each printed textbook.

- Print on demand is better than carrying an inventory in your garage.

- Amazon Publishing (https://amazonpublishing.amazon.com/)

- Lulu (https://www.lulu.com/)

- 619 Wreath (https://www.619wreath.com/)

- Ingram Spark (https://www.ingramspark.com/)

- For web hosting (https://pretextbook.org/doc/guide/html/web-hosting.html) try Amazon or SquareSpace for something with a paywall.

- For a host page, try WordPress and Namecheap.  Books can also be hosted on Github.

# THANK YOU FOR LISTENING

Thomas W. Judson, Professor (retired)
Department of Mathematics and Statistics
Stephen F. Austin State University
P.O. Box 13040-3040 SFA Station
Nacogdoches, TX  75962

EMAIL: judsontw@sfasu.edu

UTMOST WEBSITE: https://utmost.aimath.org