Using Copyrighted Work in Your ECE Thesis or Dissertation

Working in accord with copyright law is not only an ethical scholarly and professional habit. It is also a good way to protect yourself from legal penalties and from disciplinary action by your university or employer. This guide addresses the two most common cases in which copyright law impinges on the work of ECE thesis and dissertation writers.

Part 1: Reusing your own published work

Strange as it may seem, the copyright for thesis material that you have authored (or coauthored) in a journal or conference proceeding likely no longer belongs to you. While publishing agreements may vary, typically they transfer the copyright from the author to the publisher. Therefore, you should secure permission from your publisher in order to include previously published material in your thesis.

The good news is that some of the major publishers in ECE fields—IEEE journals included—grant such permission to students in their standard publishing agreements, so no request for permission to reprint is required. Furthermore, publishers who do not have such a default policy are typically very responsive to email requests (provided you find the right contact) and grant permission free of charge.

Your request for permission should

- Introduce yourself
- Fully cite and describe the work you wish to use
- Explain that the work will be used in your thesis for nonprofit purposes (unless that is not the case!)

Whether you have permission by default or by request, be sure to acknowledge the permission and credit the published source at the appropriate place in your thesis:

- Your publisher might specify where in the thesis credit should appear, as well as the specific language for the credit.
- A master’s thesis might be a repackaging of a single paper, in which case the appropriate place for credit would be someplace in the introductory chapter, or possibly the acknowledgments.
- A doctoral dissertation might comprise one or several chapters each of which repackages a published paper, in which case the appropriate place for credit would be either in the introductory paragraph of each chapter or in an unnumbered footnote at the bottom of the first page of each chapter.

If the publisher does not specify language for the credit, the following is standard:

This work was previously published in A. Student et al. [1] and is used/reprinted/adapted here with permission.

Provide the complete citation of the published work in your reference list.

Finally, if you have permission by request, be prepared to provide a copy of the permission via email to the Graduate College when you deposit your thesis.

PDF with hyperlinks at: go.illinois.edu/ecethesis
Using Copyrighted Work in Your ECE Thesis or Dissertation (Cont.)

Part 2: Using the work of others—figures

Naturally, the copyright restrictions described in Part 1 also apply to previously published material by other authors. However, for ECE thesis writers, the typical use of work by others involves not text but the following:

- Data graphics (e.g., histograms, line graphs, heat maps)
- Bitmapped images (e.g., photographs, x-rays, MRI, SEM, AFM, ultrasound)
- Illustrations (e.g., drawings, flow charts, schematic diagrams, networks)

In ECE theses, as in engineering writing generally, all such visual elements are labelled as figures.

Of course, you should always credit the source of a borrowed figure. The question is whether you need express permission because the figure is protected by copyright. In making this determination, the basic precept to keep in mind is this:

*Original creations are protected by copyright. Facts and data, and their representations, are not protected.*

Accordingly, many of the typical figures an ECE student might wish to use are not protected and may be reprinted without permission (but with credit). Examples may include graphs, tables, and charts that straightforwardly represent data or processes, and basic photographs of devices and equipment.

The more creative choices that have gone into making the figure, the more likely that you will need permission. Such creative choices may include the use of color; perspective and dimension; text and typography; legends, symbols, and icons; arrangement and compilation; and exploded, zoomed-in, or cutaway views. An elaborate visualization of a novel power system simulator may well be protected. Likewise, a photograph of a person or scene used to evaluate your image compression algorithm may be protected.

If you determine that a figure may be protected, you have some options:

- Find and email the copyright holder (usually the publisher of the book, journal, or web site) and request written permission to use the figure in your thesis. Follow the guidelines in Part 1.
- Describe the gist in words, and provide a citation for readers who want to see the details.
- Re-render the figure for your purposes, so that it is significantly transformed from the other, and in the caption or discussion write something like “adapted from [X]”.
- Find a substitute figure that is either (1) in the public domain (e.g., the copyright is expired or the figure is published by the US government) or (2) under an open content license such as the works shared on Creative Commons or Wikimedia Commons.

Feel free to consult with staff in ECE Editorial Services about the best course of action in dealing with your particular copyright issue. But know that we cannot and do not provide legal advice!

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