Formatting Guidelines and Deposit Procedures

Thesis & Dissertation Office
The Purdue Graduate School
IUPUI Graduate Office
Updated 9/5/2018
IUPUI School of Science
&
Final Approval
All M.S. & Indianapolis Awarded Ph.D.s.

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Thesis/Dissertation Formatting

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- Deadlines
- Formatting Guidelines
- Formatting in MS Word Template
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Fall 2018 Deposit Deadlines

All Masters candidates & Ph.D. candidates with Indianapolis as their campus location

October 10:
Last day for Exam Only and Degree Only registrants to have a mandatory format review of a thesis (post-defense) by the IUPUI Graduate Office. To begin thesis review process, contact Summer Layton at sllayton@iupui.edu.

October 12:
Last day for Exam Only and Degree Only registrants to upload format-approved thesis document to Purdue via HammerRR and complete ScholarWorks upload.

November 19:
Last day for General Candidacy registrants to have a mandatory format review of a thesis (post-defense) by the IUPUI Graduate Office. To begin thesis review process, contact Summer Layton at sllayton@iupui.edu.

December 7:
Last day for General Candidacy registrants to upload format-approved thesis document to Purdue via ProQuest and complete ScholarWorks upload.
Fall 2018 Deposit Deadlines

*Ph.D. candidates with West Lafayette as campus location*

**October 12:**
Exam Only and Degree Only registrants must submit their thesis to HammerRR at least 12 hours prior to October 12th. Send an email to your contact at least 15 business days in advance of deposit date to schedule final thesis format checks.

**December 7:**
General candidacy registrants must submit their thesis to HammerRR at least 12 hours prior to December 7th. Send an email to your contact at least 15 business days in advance of deposit date to schedule final thesis format checks.
Spring/Summer 2019 Deposit Deadlines

Visit The Graduate School’s Graduation Dates & Deadlines Calendar

**Spring 2019**

**March 1, 5pm (ET):**  
Final Deposit Deadline for Exam Only and Degree Only registrants

**April 26, 5pm (ET):**  
Final Deposit Deadline for General Candidacy registrants

**Summer 2019**

**June 21, 5pm (ET):**  
Final Deposit Deadline for Exam Only and Degree Only registrants

**July 26, 5pm (ET):**  
Final Deposit Deadline for General Candidacy registrants

Your department will have earlier deadlines than this. You are required to meet all departmental deadlines.
Formatting Guidelines
Paper & Font Guidelines

• 8 ½” x 11” should be default setting.

• Avoid using A4 settings.

• You may use 11” x 17” paper settings for large tables as long as pagination placement remains the same.

• Times New Roman font is required.

• Main text is 12 point font. 14 point is used for major and title headings. 10 point is accepted for footnotes, table and figure captions.

• University format requirements emphasize consistency.

• Font size variations in tables, figures, captions, symbols or when using mathematical/scientific terms is generally acceptable.
Spacing Guidelines

- Spacing on the title page, statement of approval page, and all front matter pages (excluding Abstract) should be spaced at 1.5 lines to avoid wasting space.

- Main body text spacing will be determined by style guidelines:
  - APA
  - Chicago
  - MLA

- Double spacing and 1.5 line spacing are considered standard.

- Long quotations, headings, and captions may be single spaced.

- Multi-lined headings, subdivision headings, figure captions, table captions, footnotes, and endnotes are normally single spaced.
Paragraph Guidelines

• Avoid having a single line of a paragraph appear at either the bottom or top of a page – always have at least 2 lines together.

• Turn on your “Widow Control” function in Word or LaTeX.

• Avoid headings with no text underneath at the bottom of pages.

• Avoid running headers (as used in APA style).
Pagination Guidelines

• All pages are numbered except title page.

• Use Arabic numerals throughout document:
  • Title page is technically page number 1, but the number is hidden.

• Page numbers go in the upper right corner of the page:
  • $\frac{1}{2}”$ below the top edge
  • 1” from the right edge

• Page numbers must be in the same font and size as text (Times New Roman 12pt).
Thesis/Dissertation Formatting Using Microsoft Word
MS Word Templates

- You can find MS Word templates for PC & Mac in the Templates section of the Thesis/Dissertation Office webpage.
  - Keep in mind that although these templates are created with Purdue formatting requirements in mind, you may have to manually format part of your thesis/dissertation while using these files, which can take time if you are not familiar using MS Word’s advanced features.

- The Thesis|Dissertation Office recommends that you use puthesis, the LaTeX template for Purdue theses and dissertations.
  - Engineering students, MS Word is not an option—LaTeX/Overleaf is required

- If you have an issue and cannot resolve it using Microsoft’s help pages, send an email to theshishelp@purdue.edu with WORD TEMPLATE in the subject line.
TITLE PAGE - REQUIRED

- No visible page number, but technically page 1.

- Spacing already formatted on this page.

- Date is graduation month and year (May, August, December only) Example: December 2018.

- Title page includes campus location –
  - West Lafayette, Indiana
  - Indianapolis, Indiana
STATEMENT OF COMMITTEE APPROVAL - REQUIRED

- Page 2

- First three committee member sections cannot be removed. You may add or delete the fourth and fifth committee member lines.

- Needs approval from Head of the Graduate Program.
DEDICATION - OPTIONAL

• Page 3

• Center on page.

• Non-English text is allowed.

• No heading (title) is used.

• Not listed in the Table of Contents.
ACKNOWLEDGMENTS

This page is OPTIONAL.

To copy & paste your work on this page, please highlight this text and replace it.

If you are not including acknowledgements, delete this page.

If you are acknowledging only one person, change the title to ACKNOWLEDGMENT.

**ACKNOWLEDGMENTS - OPTIONAL**

- Title is centered on page and typed in 14 point ALL CAPS font.

- 3 single-spaced blank lines between heading and first line of text.

- Text spacing should be 1.5 lines.

- Not listed in the Table of Contents.
TABLE OF CONTENTS

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TABLE OF CONTENTS - REQUIRED

- Title is typed in **ALL CAPS**.
- Page numbers must be in a straight line along right margin.
- Ensure there are no gaps in your leader dots: … … … … … … … … … … … … … …
- Do not list any titles before and including the Table of Contents in your Table of Contents.
- Text spacing should be 1.5 lines.
LIST OF TABLES

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In order to generate a List of Tables easily, you will need to assign a caption to all of the tables in your document. After this has happened, click on the References Ribbon, select Insert Table of Figures, under general select Table from drop down box, select OK. Be sure to indent subsequent lines of captions.

If you use landscape pages, make sure the landscape page numbers match what is listed in your List of Tables.

LIST OF TABLES - REQUIRED (if including any tables in thesis)

• Page numbers must be in a straight line along right margin.

• Ensure there are no gaps in your leader dots: … … … … … … … … … .. .. … … … ..

• Title is typed in ALL CAPS.

• Text spacing should be 1.5 lines.

• Single space table and have 1 extra entry between captions.
LIST OF FIGURES

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In order to generate a List of Figures easily, you will need to assign a caption to all of the tables
in your document. After this has happened, click on the References Ribbon, select Insert Table of
Figures, under general select Figures from drop down box, select OK. Be sure to indent
subsequent lines of captions.

If you use landscape pages, make sure the landscape page numbers match what is listed in your
List of Figures.

LIST OF FIGURES - REQUIRED
(if including any figures in thesis)

• Page numbers must be in a straight line along right margin.

• Ensure there are no gaps in your leader dots: … … … … … … … … … … … … … … …

• Title is typed in ALL CAPS.

• Text spacing should be 1.5 lines.

• Single space table and have 1 extra entry between captions.
**EXTRA HEADINGS - OPTIONAL**

- Most candidates place these sections at the beginning for the reader’s convenience.

- You may use double columns in this section to help reduce section to one page.

- Text spacing should be 1.5 lines.

- If inserting a table, remove the gridlines.
ABSTRACT

Author: LastName, FirstName, Middle Initial. Choose Degree
Institution: Purdue University
Degree Received: Choose Graduation Term
Title: Type Your Thesis Capitalizing the First Letter of Major Words. Do Not Use All Caps. Be sure to indent subsequent lines of your title.
Committee Chair: FirstName LastName

REQUIRED SECTION

Two different kinds of paragraph spacing will be used on this page. The first three lines, where your personal information is included, make up the introduction block or introduction paragraph. Use only single space and set Before/After space setting to zero (in Paragraph setting box).

In the main body of the abstract, use the same spacing you use throughout the rest of your document (either double spacing or 1.5 line spacing).

To copy & paste your work here, please highlight the paragraphs to replace the text.

Keep the section break below to allow Chapter 1 to start page 1.

ABSTRACT - REQUIRED

• Type your thesis title in Common Title Case.

• Do not use all caps on your title or put it in quotation marks.

• Titles/departments of major professor(s) not required.
  • Some departments do require additional professor information.

• Do not include images, tables, figures, or equations in this section.
1.1 The Basics
This template is best used with MS Office 2013 on a PC or MS Word 2016 on a Mac. It is suggested
to turn on the Show/Hide tool (%) that can be found on the Home ribbon so you can track your
spacing and section breaks.

Review the Template Guide before you begin. Use it for troubleshooting. If you can’t find a
solution there, try Microsoft’s extensive help pages.

1.2 Margins
Margin requirements are 1” left, bottom, right, and top margins. 1.5” top margins are required on
Title and Statement of Approval pages.

1.5” left margin is recommended by Boiler Copy Maker for screw & post bindings – if you wish
to have a hard bound copy made. Hard bound copies are not required for submission to the
Graduate School; we will work solely with the PDF copy you upload to ProQuest, requiring 1” left
margin.

1.3 Heading Styles
There are many heading styles that have been added to the Styles Ribbon. There are Purdue
Headings 1-6 above. You will have to manually change the text back to normal style after you
apply the heading. You will want to use these styles so you can generate a table of contents without
any issues. If you open the navigation toolbar [Ctrl + F] and under the search document bar you
choose “Headings” you will be able to easily track which headings will go in your table of contents.

If after you apply a Style to a heading and you receive Error! Bookmark not defined in your
Table of Contents after updating the page number, go back to your heading that is causing the issue
and make sure there is still a style applied to it. You can update the entire table to resolve the issue
– if you had previously formatted the Table of Contents, you may have to re-format.

• Must be consistently organized across all chapters - including chapters that include
previously published articles.
• Check for blank lines at the tops of pages.
• Chapter/major headings always start at the top of a new page.
• Use 14 point ALL CAPS on chapter/major headings.
• Text starts 3 single-space lines below chapter/major heading.
• All text will be 12 point Times New Roman font. Table and figure captions, data within
tables, and footnotes may be adjusted to a smaller font (10-point minimum).
• Justify (preferred) or left align text throughout document (do not use a combination).
1.4 Inserting a Table of Contents

In order to insert an automatic table of contents, you will have needed to apply styles to your headings (as shown above). Once your headings have been assigned a style, you can then insert a table of contents that will automatically populate with the correct heading level indentations, leader dots, and page numbers. This will also create an embedded link from your table of contents to the section in your thesis in both a MS Word doc and in a PDF file.

To insert the table, follow these instructions:
1. In Ribbon above, click References
2. Click ‘Table of Contents’ on the left hand side of the ribbon
3. Choose ‘Custom Table of Contents’ below the built-in tables
4. After a Table of Contents box pops up, click “OK”, without making any changes within the box

Typically, inserting a table of contents, list of figures, and list of tables should be the last step in the formatting practice. If you’ve made changes to content that moves a heading to a different page number, all you’ll need to do is go back to your inserted table of contents, right click, select ‘Update Field’, and select “Update page numbers only”. This will make changes to your page numbers and won’t affect the headings.

1.5 Notes

If you are planning to include List of Figures and List of Tables, we recommend you using the following method to insert your captions:
1. In Ribbon above, click References
2. In Captions section, click on Insert Caption
3. Next to Label, chose Table or Figure
4. Click OK
5. Type your caption next to the table/figure number

• Use Purdue custom pre-loaded Styles in Microsoft Word to assign headings. This eliminates the need to add extra spacing around sub-headings.
  • Using Styles also helps your document meet accessibility standards.
• All template margins are set to 1" margins all around. You may adjust the left margin ONLY to accommodate print binding (max 1.5").
To create a table of contents you will need to assign a heading style to each heading in your entire document then follow the steps below:

1. Locate your Table of Contents page above
2. In the Ribbon above, click References
3. In the Table of Contents section, click Table of Contents
4. Look past the built-in Table of Contents and select Insert Table of Contents
5. Under the General section in the Show Levels box, select the number of headings you want to show in the Table of contents – 3 levels are common, but it can incorporate all levels, if you wish.

1.6 Page Numbers
Page numbers will go in the upper right hand corner of each portrait page. If you are using any landscape orientation pages, the page number will go in the lower right hand corner with vertical text (see page 11 for example). Page number font and font size needs to be the same as the main body text.

1.7 Issues with Pagination
Occasionally, page numbers will overlap due to section breaks. To fix this issue, simply click on the page number and locate the Design ribbon at the top of the page. Click the drop down arrow on page number > Format page numbers > under the Page numbering section choose Continue from previous section.

**MAIN BODY**

- Page numbers go in the upper right hand corner of the page.
- Ensure that page numbers are 0.5" from top edge or page and 0.5" from bottom edge of top margin. If additional space is added into the top margin, please remove before converting your document to PDF.
- Single space and justify block quotes and indent 0.5" from right margin.
If only one table (or figure) is desired on one page, center the table (or figure) on the page.

You can have more than one table on a page.

Table captions go ABOVE tables.

Single space captions.

You can use tables within your text or you can place all tables at the end of each chapter.

Single-space text within tables.

<table>
<thead>
<tr>
<th>After Space Setting</th>
<th>Where to Use It</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 (equal to single line spacing)</td>
<td>After lowest level subheadings</td>
</tr>
<tr>
<td>18 (equal to 1.5 line spacing)</td>
<td>After higher level subheadings</td>
</tr>
<tr>
<td>24 (equal to double spacing)</td>
<td>After figure captions or table captions</td>
</tr>
<tr>
<td>36 (equal to 3 single spaced blank lines, equal to 1 inch)</td>
<td>After title page blocks, major headings and chapter headings</td>
</tr>
</tbody>
</table>
## OVERSIZED TABLES

- Tables can split between pages.
OVERSIZED TABLES

• Place a table continuation notation above the split table.

• “Table #, continued” on all pages besides the first page.

• You'll need to manually split the table at the bottom of each page in order to add a continuation notation above.

In order to add the table continuation above the table, you'll need to split the table. You can achieve this by selecting the table, choose Layout ribbon, find the Merge section, and click Split Table. You will want to place the cursor on the line that you'd like to move to the next page before selecting Split Table.

OR

Add a new row above the table and merge the cells to form one cell above the table so you can type the continuation. This row should not have any borders outside of a bottom border to begin the continuation of the table.
FIGURES

- If one figure is desired on the page, center it vertically (and horizontally) on the page.
- You can have more than one figure on a page.
- Figure captions go BELOW the Figure.
- Single space captions.
- You can use figures within your text or you can place all figures at the end of each chapter.
• Figures can split between pages.

• Figure caption should be placed on the first page of the figure.
OVERSIZED FIGURES

- Place a figure continuation notation ABOVE the split figure.
- Include “Figure #, continued” on all pages besides the first page
LARGE TABLES & FIGURES

• If you have large figures and tables that can fit onto one page, but leaves no room for captions, simply place the caption on the page BEFORE the figure or table.

• Center caption vertically on the page.
2.4 Landscape Page

You may use landscaped pages for large tables or figures that normally will not fit within left and right margins. Note that page numbers will need to be added manually with a text box (that is in place in the bottom right-hand corner). A normal page number will show up in the upper right-hand corner when adding pagination. You will need to unlink this page and the next page's pagination to previous in order to keep the pagination in the correct place. Use the page number text box in the lower right corner of this page for additional landscape pages.

To achieve adding a landscape page, you will need to add a Next Page section break on the previous page. You will also need to add a Next Page section break to the end of this page to convert back to a portrait orientation. It is beneficial to open the Show/Hide control on the Home Ribbon in the Paragraph section so you can see where all extra spacing is and where section and page breaks are.

Captions may be no smaller than size 10 font. Make every effort to allow the text to stay on same page as figure or table; if needed, the text may overflow to the next page. Oversized pages (11x14 or 11x17) may be used to accommodate larger tables.

Figure 2.4 Snowy Hoyde Hall

- If you turned your landscape page up like a portrait page, the page number should be in the same place as a portrait page number.

- Instructions for landscape page creation can be found in the MS Word Template Guide.

- LaTeX template does this automatically.
REFERENCES - REQUIRED

• References can collectively appear at the end of your document OR you can include them at the end of each chapter - do not place in both locations.

• References can appear in alphabetical or numerical order.

• Use a style accepted by your department and use it consistently.

• Avoid inconsistent spacing in and between entries.

• Don’t let a reference entry be split between two pages – if one of your entries appears on two pages: push down the entire entry so it appears all together on the second page.

References can collectively appear at the end of your document OR you can include them at the end of each chapter. References may either be a separate section (like shown in this template) or they may be listed after each chapter. If references are placed at the end of the chapters, they will need to begin on a new page.

Examples:

(APA style in alphabetical order)

-OR-

(APA style in Endnote referenced order)

Follow your department’s style for your References section.

To copy & paste your work on this page, please highlight this text and replace it.
REFERENCES - REQUIRED

- If included as part of a chapter:
  - Treat as first-order subdivision.
  - Begin the section on the next page.

- If included as a section:
  - Treat as a major division/chapter-style heading.
  - Title typed in ALL CAPS.

Include reference entries here using the style preferred by your department.

References may either be a separate section (like shown in this template) or they may be listed after each chapter. If references are placed at the end of the chapters, they will need to begin on a new page.

References and Appendix placement may be changed to fit the needs of the author.

Examples:

(APA style in Alphabetical order)


-OR-

(APA style in Endnote referenced order)


Follow your department’s style for your References section.

To copy & paste your work on this page, please highlight this text and replace it.
APPENDIX - OPTIONAL

• If you are only including one appendix, simply name it APPENDIX.

• 1” top margin.

• Heading in ALL CAPS.

• Left margin must always be 1” (but you can adjust right and bottom margins if necessary).
APPENDICES - OPTIONAL

• If you are including multiple appendix sections (appendices), name them APPENDIX A. TITLE, APPENDIX B. TITLE, APPENDIX C. TITLE, etc.

• Do not include the “APPENDICES” line in the Table of Contents.

• You can, but are not required to, include appendix table and figure captions within your List of Figures and Tables.
FOOTNOTES - OPTIONAL

- Footnotes may be single spaced and 10 point font.

- You may adjust the bottom margin if it keeps a footnote all together on one page.

- Please avoid footnotes that continue on multiple pages.
VITA - OPTIONAL

• Major division page:
  • 1” top margin.
  • ALL CAPS title.

• Style of Vita determined by department.

• There are 2 style options for the Vita:
  • Narrative
  • C.V.

• Heading will always be VITA, regardless of your vita style.
VITA

Jane Doe

EDUCATION

- Doctor of Philosophy, May 2016
  Purdue University
  Department of Forestry and Natural Resources
- Master of Science, May 2011
  Purdue University
  Department of Forestry and Natural Resources
- Bachelor of Science, May 2009
  Purdue University
  Department of Forestry and Natural Resources

TEACHING EXPERIENCE

- FNR 10300 – Introduction To Environmental Conservation
- FNR 34100 – Wildlife Habitat Management

VITA - OPTIONAL

- Do not include photographs or creative formatting.

- Font, font size, and line spacing should match the main body of your document.

- DO NOT INCLUDE PRIVATE DATA (such as home address, cell number, social security number, etc.)

- Keep in mind—Your university email will be not be available after graduation
PUBLICATIONS

OPTIONAL SECTION

This is where you can place a list of publications or alternately, you can include a PDF of a published article. This article may either be in color or black and white.

Steps to insert a PDF into a document without having to screenshot:
1. Select Insert ribbon.
2. Select Object in the Text section.
4. Locate your file and click Open (after saving each page of your PDF as a separate file).
5. Your file will open, close the file—it will automatically show up in your document and fit within the required margins.
6. Repeat this method for each page of your PDF.

If you have questions or need any guidance inserting a PDF into your document, contact our office.

All pages of publications need page numbers sequential to the number in the rest of your thesis. You may need to block out original page numbers to prevent confusion. You may use the landscape textbox and rotate it to fit in the upper right hand corner of the page. You will need to ensure the page number is horizontal when using the text box.

If you have only one publication, list the title as PUBLICATION.

PUBLICATIONS - OPTIONAL

• Place list of publications, conference proceedings, publication .tiff, etc. here.

• Scans of original publications may be used if they are legible – page numbers and left margin must match the rest of the document.
  • (suggest inserting PDF file as an object in MS Word to prevent distortion of journal article).

• Want to use articles as chapters? Check with the Thesis/Dissertation Office.
Thesis/Dissertation Formatting Using LaTeX & Overleaf
THE MAGIC AND MYSTERY OF A PROPERLY FORMATTED THESIS

A Dissertation
Submitted to the Faculty
of
Purdue University
by
Hermione J. Grauger

In Partial Fulfillment of the
Requirements for the Degree
of
Doctor of Philosophy

May 2019
Purdue University
Indianapolis, Indiana

puthesis LaTeX TEMPLATE

• You can find puthesis (the LaTeX documentclass) and help on Purdue’s engineering webpage.

• LaTeX is free and is available for a wide range of operating systems.
  • Web-based Overleaf licensures with loaded puthesis is now available.

• Most LaTeX theses/dissertations are approved the first or second time.

• LaTeX or Overleaf is MANDATORY for Engineering & Technology.
puthesis LaTeX TEMPLATE

• puthesis has not been updated to Purdue’s new formatting requirements.
  • (Updates are in progress but not yet available.)
• The LaTeX template uses the previous standards:
  • 2” top margin on pages with chapter/major division headings.
  • 1.5” left margin.
  • Mini-headers on each page of your Table of Contents & List of Tables/Figures.
  • Cover pages before References, Appendix, & Vita.
  • Lowercase Roman numerals for Front Matter pages.
    • Chapter 1 starts with Arabic number 1.
THE PURDUE UNIVERSITY GRADUATE SCHOOL
STATEMENT OF COMMITTEE APPROVAL

Dr. Obi-Wan Kenobi, Co-Chair
   Department of Electrical and Computer Engineering
Dr. Albus Dumbledore, Co-Chair
   Department of Mechanical Engineering
Dr. Minerva McGonagall
   Department of Computer Graphics Technology
Dr. Inigo Montoya
   Department of Mechanical Engineering

Approved by:
   Dr. Zaphod Beeblebrox
      Head of the Graduate Program

• Ensure you are using an up-to-date version of puthesis.
• Page ii must be the Committee Approval page
• LaTeX is not error proof:
  • Some blank pages may have to be removed (after Abstract or between appendices and between chapters).
  • Watch for consistency with dates, degrees, names, etc.
  • The mini-headers on each page of your Table of Contents & List of Tables/Figures may not automatically appear on all pages as required.
  • Be sure the default paper size is Letter Setting 8 ½” x 11”.
• If you have an issue and cannot resolve it using the extensive FAQ section on the puthesis main page, send an email to thesishelp@purdue.edu with PUTHESIS in the subject line.
OVERLEAF TEMPLATE

• Overleaf is an online collaborative scientific writing and publishing tool. It is designed to make the process of writing, editing, and producing scientific papers much quicker for both authors and publishers.
  • Real-time online collaboration
  • Rich Text editing
  • Online LaTeX editing
  • Real-time preview while editing and writing
  • Type on the left, view on the right
  • Ability to publish immediately to the journal of your choice
Modeling of Trap Induced Dispersion of Large Signal Dynamic Characteristics of GaN HEMTs

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Abstract

We propose here a non-linear GaN HEMT model for CAD including a trapping effects description consistent with both small signal and large-signal operating modes. It takes into account the dynamics of the traps and thermionic emission in the model of the relaxation time model. This model is elaborated through low-frequency S-parameter measurements complementary to more classical high-frequency characteristics. A 8H15mm AlN/GaN HEMT model was designed and particularly validated in large-signal pulsed RF operation. It is also shown that thermal and trapping effects have opposite effects on the output conductance, thus opening the way for separate characteristics of the two effects.

Introduction

Gallium Nitride (GaN) High Electron Mobility Transistors (HEMTs) are one of the next-generation devices for the development of a number of RF applications, including high-power amplifiers for telecommunications and radars, due to their high breakdown voltage, high frequency, high current capability, and their high temperature capability. However, they are prone to parasitic effects such as thermal effects and especially trapping effects. One convenient way to identify the impact of trapping effects is to monitor the average drain current of the transistor versus an increasing RF input power. Those trapping effects have been extensively studied using a number of techniques such as pulsed measurements, pulsed measurements, pulsed measurements, and frequency dispersions measurements. At the same time, models have been proposed that take those effects into account.

1. Introduction

Gallium Nitride (GaN) High Electron Mobility Transistors (HEMTs) are one of the next-generation devices for the development of a number of RF applications, including high-power amplifiers for telecommunications and radars, due to their high breakdown voltage, high frequency, high current capability, and their high temperature capability. However, they are prone to parasitic effects such as thermal effects and especially trapping effects. One convenient way to identify the impact of trapping effects is to monitor the average drain current of the transistor versus an increasing RF input power. Those trapping effects have been extensively studied using a number of techniques such as pulsed measurements, pulsed measurements, pulsed measurements, and frequency dispersions measurements. At the same time, models have been proposed that take those effects into account.

Figures:

1. Figure 1: Representation of the dependence induced by traps on the average drain current.

Polycrystalline measurements were performed for a GaN HEMT in high-frequency high-power HEMTs of 60% for a large number of output loads. For all devices, we obtain the same shape of the average drain current which is schematically shown in Figure 1. The average current decrease is due to the impact of traps, which increases with the gate and drain voltages, and decreases with the power input for the power measurement. Indeed, the number of trapped levels is roughly proportional to the maximum value of the drain-source voltage, because the uncertainty of the trap and current time constants is then the ratio of the trap and current time constants. When the power input is pulsed, the average drain current increases with increased traps, corresponding to the capture and emission of traps. For example, if the RF input power is pulsed, the current calculation would be due to the capture and emission of traps.
\documentclass[article]{article}
\usepackage[english]{babel}
\usepackage[utf8]{inputenc}
\usepackage{amsmath}
\usepackage{graphicx}
\usepackage{colorinlistoftodos}
\title{Your Paper}
\author{Raniere Silva}
\date{\today}
\begin{document}
\maketitle
\begin{abstract}
Your abstract.
\end{abstract}
\section{Introduction}
Your introduction goes here! Some examples of commonly used commands and features are listed below, to help you get started. If you have a question, please use the help menu ("?") on the top bar to search for help or ask a question.
\section{LaTeX Examples}
\subsection{How to Leave Comments}
Comments can be added to the margins of the document using the \texttt{\todo} command, as shown in the example on the right. You can also add inline comments:
\begin{verbatim}
\todo[inline, color=green!40]{This is an inline comment.}
\end{verbatim}
\subsection{How to Include Figures}
First you have to upload the image file (JPEG, PNG or PDF) from your computer to writeLaTeX using the upload link in the project menu. Then use the includegraphics command to include it in your document. Use the figure environment and the caption command to add a number and a caption to your figure. See the code for Figure 1 in this section for an example.
\begin{figure}
\centering
\end{figure}
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SCHEDULING AN APPOINTMENT?

School of Engineering

• Your department must review & approve your document formatting.
• Department contacts will send formatting document to Graduate Office when approved.
• Submissions directly from students are not accepted.

WL-awarded Ph.D.s:

• The Thesis/Dissertation Office offers pre-defense formatting consultations. You can schedule on their website.

School of Science

• Send an email with your content-final document (as a PDF) to Summer Layton slayton@iupui.edu
• The earlier in the term you can schedule your defense and deposit the better.
• NEW: If you would like a pre-check of your formatting prior to your defense, you can send me your document. This will hopefully help reduce formatting errors at deposit time.
Required Forms
REQUIRED FORMS

MASTER’S THESIS
• Electronic Thesis Acceptance Form (ETAF)
  • aka Form 9

DOCTORAL DISSERTATION
• Electronic Thesis Acceptance Form (ETAF)
  • aka Form 9
  • Certificate of Completion for Survey of Earned Doctorates (SED)

GRADUATE SCHOOL EXIT QUESTIONNAIRE
• IUPUI students are **NOT** required to take the Graduate School Exit Questionnaire – it is for West Lafayette students only.
• If you are receiving your degree from WL, you will be required to take the survey as part of the deposit process.
REQUIRED FORMS

Survey of Earned Doctorates (SED)

• All Ph.D. candidates are required to complete the Survey of Earned Doctorates in their final semester.
  • Indianapolis Ph.D.s: Choose IUPUI as your campus location.
  • West Lafayette Ph.D.s: Choose Purdue University – Main Campus as your campus location.

• Save a copy of your Certificate of Completion for your records.

• Complete the SED prior to initiating your ETAF. Your deposit cannot be accepted without the completion of this survey.
The Electronic Thesis Acceptance Form (ETAF) will become available when your Form 8: Request for Examining Committee has been fully approved.

The ETAF should be initiated on or before the day of your final defense and will be available through your Plan of Study portal.

You will not be able to make any edits to a submitted ETAF. If your selections need editing, contact us.

IUPUI students are NOT required to take the Graduate School Exit Questionnaire – it is for West Lafayette students only.
What content is on the ETAF?
1. The Purdue Thesis/Dissertation Agreement
2. Embargo and Confidentiality Agreements
3. Research Integrity and Copyright Disclaimer
4. ADA Accessible Document Statement
5. iThenticate certification date (by committee chair)
DEPOSIT: STEP 1

TO INITIATE THE THESIS ACCEPTANCE FORM

1. Access the myPurdue page at https://mypurdue.purdue.edu
2. Log-in using your Purdue Career Account credentials
3. Select the Academics tab
• Find the **Graduate Student** section and click the *Graduate School Plan of Study*

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**Graduate School Plan of Study**

Use the link above to submit a plan of study for your graduate degree, request changes to an approved graduate plan, view your funding account, submit an examination request, or complete the Graduate School’s **Candidate Exit Questionnaire**.

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**ETAF**

• Click on **Form 9: Electronic Thesis Acceptance Form (ETAF)**

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Welcome GRADUATE

The pages below provide access to your personal academic information. This system does not have a timeout feature, so it is your responsibility to keep your information secure by clicking the "Logout" button or closing the web browser once you have finished this session.

The Graduate School posts upcoming graduation-related dates and deadlines on the [Graduation Deadlines Calendar](#) webpage. However, check with your department's **Graduate Contact** to see if an earlier internal student submission deadline has been established for any of the forms below. Early submission deadlines are encouraged to allow sufficient time for departmental review.

**Plan of Study Generator**

Every degree-seeking graduate student must submit a plan of study and obtain all required departmental approvals prior to the first day of the session of anticipated graduation. The Graduate School recommends submitting the plan at least a month in advance of the posted deadline to allow sufficient time for department review.

**Form 8 (Request for Appointment of Examining Committee)**

Students requesting a preliminary (doctoral only) or final examination are encouraged to submit the Form 8 at least three weeks in advance of the exam date. The form must be submitted and receive all departmental approvals at least two weeks prior to the exam. Non-thesis option master's students are not required to use the Form 8.

**Form 9: Electronic Thesis Acceptance Form (ETAF)**

Form 9 was designed to allow for any time after the first defense has been scheduled. Students should submit the ETAF and receive all departmental approvals before submitting the thesis or dissertation to ProQuest. For more information, visit the [Thesis/Dissertation Office](#) webpage.

**Doctoral Candidate Exit Questionnaire**

Survey of Earned Doctorates (SED)

Doctoral students must complete both the Exit Questionnaire and SED prior to their dissertation deposit appointment.

**Master's Candidate Exit Questionnaire**

Thesis-option students must complete this survey prior to their deposit appointment. All other master's students should complete the survey prior to the last day of classes in the session of graduation.
ETAF

- Click *Initiate Thesis/Dissertation Acceptance Form*
If you have submitted Form 8 more than once (for multiple graduate degrees), you will select the degree that pertains to the thesis or dissertation you are currently depositing.
Review your Thesis/Dissertation Committee. If the list is correct, click **Save and Continue**.

If you need to make a change to the list, click **Save without Submitting**, log out of the Graduate School Database, and contact your department’s Plan of Study Coordinator. Ask him/her to email pugrad@iupui.edu with your updated committee list. After you receive a confirmation email that your list has been updated, login to the Graduate School Database again and complete the form.
Carefully read all material on the Thesis/Dissertation Agreement page, make your selection, and then click **Save and Continue**.
Carefully read all material on the Embargo and Confidentiality page, discuss your options with your major professor, make your selection(s).

Embargo and Confidentiality Agreements:

Embargo Agreement

The deposited thesis’ main content remains unpublished until released. The abstract will be available for viewing.

1. Students may choose from 1 month, 4 months, 6 months, 12 months, 2 years, chosen date, or an indefinite embargo period.
2. This program is commonly used when applying for patents, pending publications, or when proprietary rights are involved.
3. By agreement, Master of Fine Arts students automatically request an “indefinite” embargo period when submitting their ETD to HammerRR to allow sufficient time for marketing and publication of their works.

Request for Embargo: ☐ Yes ☐ No
Carefully read all material on the Embargo and Confidentiality page, discuss your options with your major professor, make your selection(s) and click **Save and Continue**.
Carefully read all material on the Research Integrity and Copyright Disclaimer page. To proceed with this form and deposit your thesis or dissertation, you must click “Yes, I certify”. After you have made your selection, click Save and Continue.
Carefully read all material on the ADA Accessible Document page. To proceed with this form and deposit your thesis or dissertation, you must click "Yes, I certify". After you have made your selection, click *Save and Continue*. 

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**ADA Accessible Document Statement**

According to *Purdue University Policy, Electronic Information, Communication and Technology Accessibility (S-5)*: As a public university and federal contractor, Purdue University is required to adhere to Sections 504 and 508 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act. This standard specifies the means by which the University ensures compliance with these laws.

*I certify that in the preparation of this thesis/dissertation, I have to the best of my ability, created an accessible document that is in compliance with sections 504 and 508 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act.*

*Please check Yes to certify the above statement.*

[Yes, I certify]

[Save and Continue]
Confirm that you have completed all sections (completed sections are marked with a check), and then click *Preview Thesis/Dissertation Form*.
Confirm that all your information and responses are correct, and then click *Submit.*
If your form has been successfully submitted, you will see your decision has been successfully submitted in red at the top of the screen.

The form will now proceed to the Chair of your Thesis/Dissertation Committee (or if you requested a Confidentiality Period longer than 1 year, the form will proceed to the Office of Sponsored Programs).
Once your ETAF has been approved through the ‘Thesis Form Head’, you will receive an email containing a notification that you may proceed with the deposit process. At this point, you will be able to log-in to your Plan of Study portal and find the link to submit your thesis to the Graduate School.

**IUPUI STUDENTS: DO NOT SUBMIT YOUR THESIS UNTIL YOU RECEIVE FORMATTING CLEARANCE FROM sllayton@iupui.edu**

You will be given specific instructions regarding how to proceed with your HammerRR submission when your document formatting is acceptable and you are approved to upload.

Submission to HammerRR without these specific instructions will cause your document to be rejected by Purdue without review.
Confidentiality vs Embargo
EMBARGO (HammerRR sponsored program)

• Reasons to request an Embargo:
  - Pending patents
  - Pending publications
  - Proprietary rights
    ◦ Information that may be protected under law (concepts, designs, techniques, etc.)

• You can request an Embargo by marking the appropriate response on your ETAF & when submitting to HammerRR.
  - You can choose 6 months, 1 year, 2 years, or indefinite.

• HammerRR will only publish your Abstract.
CONFIDENTIALITY (Purdue University Graduate School sponsored program)

• Reasons to request confidentiality (indefinite):
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  • ITAR restricted information
  • Government contract
  • Commercially sponsored

• Reasons to request confidentiality (up to 2 years):
  • Commercially sensitive information, which, if released might prejudice the interest of any person including the author, the University, or an external company. Publication would cause you or third parties mentioned in the text to be open to legal challenge
CONFIDENTIALITY (Purdue University Graduate School sponsored program)

- To request confidentiality for beyond 2 years you must be under a contractual agreement with a Sponsoring Organization. You will need to provide both the name of the Sponsoring Organization and the Contract Number. This information will be verified by Sponsored Program Services.
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Confidentiality vs Embargo

ADDITIONAL INFORMATION

• Embargo and Confidentiality can be stacked.
  • Your thesis will not be released from Purdue until after the confidentiality period has expired. Once your thesis is delivered to HammerRR, the Embargo period will begin.

• Embargo/Confidentiality periods can be cancelled or extended if needed.
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• After a confidentiality period has expired (and we haven’t received notification of an extension) your thesis will be delivered to HammerRR and will be published the day following the expiration of confidentiality period.
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- You and your major professor can find out more about iThenticate on the Executive Vice President for Research and Partnerships’ Avoiding Plagiarism page.
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• ScholarWorks is a **required** upload, and must be completed prior to the final deposit deadline.
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• This process continues until the upload is approved.
• ScholarWorks will make your thesis or dissertation available after graduation.
  • If you have requested confidentiality and/or embargo ensure these options are selected. For delays of more than 1 year, select 1 year delay and email pugrad@iupui.edu to request additional time for delay of publication.
• Go to the IUPUI ScholarWorks for more information: scholarworks.iupui.edu

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Deposit Fee

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• The West Lafayette Bursar’s Office will email you an electronic bill within 2 months after your deposit appointment.

• Please follow the payment instructions on the bill.
Questions?