

E3S Legacy: An Electronic Book



A Science & Technology Center

Berkeley
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Center for Energy Efficient
Electronics Science

Objective

To develop a comprehensive educational resource

on energy efficient electronics including

nanoelectronics, nanomechanics,

nanophotonics, nanomagnetics

to motivate **high school students** to

pursue academic studies and careers in

the **STEM fields**



Today's Deliverables

Themes I, III, & IV meet in groups

- Create outline:
 - Chapter titles
 - Authors
 - Assigned reviewers
 - Send to nicolemcintyre@berkeley.edu

Theme II Members: join other groups



Example Outline

Chapter	Title	Assigned Authors
0	Energy-Efficiency Limit of Digital Computing	T. King Liu
1	Introduction to MEMS/NEMS	J. Lang
2	Fabrication of Micro/Nano Systems	M. Sara., J. Patil, F. Niroui
3	Electromechanical Actuators	J. Han, A. Ye
4	Logic Relay Design	U. Sikder, S. Almeida
5	Reliability Limits of N/MEM Relays	B. Osoba, T. King Liu
6	Adhesion in NEM Switch	B. Saha, J. Wu
7	Tunneling NEM Switches – Squitches	F. Niroui
8	The STRITCH-Switch Device	A. Almeida, D. Zubia
9	Relay-based Integrated Circuits	R. Naous, V. Stojanovic
10	Conclusions and Outlook	



Assign Reviewers

Chapter	Assigned Authors	Assigned Reviewers
0	T. King Liu	A. Vidana
1	J. Lang	T. Esatu
2	M. Sara., J. Patil, F. Niroui	S. Almeida
3	J. Han, A. Ye	D. Zubia
4	U. Sikder, S. Almeida	R. Naous
5	B. Osoba, T. King Liu	J. Lang
6	B. Saha, J. Wu	F. Niroui
7	F. Niroui	J. Han
8	A. Vidana, D. Zubia	J. Wu
9	R. Naous, V. Stojanovic	A. Ye



Template

To keep formatting
consistent

CHAPTER #: CHAPTER TITLE

Authors: List the name of the authors for this chapter.

Affiliations: List the authors' affiliations here.

""Section #: Section Title""

Include here the main body of this section. Follow the instructions below for including subsections, figures, equations and references. A brief example is provided on the next page.

[[Image(1-1.png, desc= "This is the caption for image 1.1 for Chapter 1")]]

""Subsection #: Subsection Title""

Include here the main body of this subsection.

""References""

[1] J. O. Lee, Y. Song, M. Kim, M. Kang, J. Oh, H. Yang, J. Yoon, "A sub-1-volt nanoelectromechanical switching device", Nat. Nanotechnol., vol. 8, pp. 36-40, 2013.

Instructions for including figures, tables, equations and references:

Example Section numbering for Chapter 1: 1.1, 1.2, 1.3, etc

Example Subsection numbering for Chapter 1: 1.1.1, 1.1.2, 1.2.1, 1.2.2, etc

Including figures: Do not include the figures in the main body of the text. Instead type `[[Image(Image#.png, desc= "Caption here")]]` as a place holder. Upload your images separately to the corresponding dropbox folder. Use the following naming convention for the image files: Image#.png (note: For image number use "Chapter number-Image index", for example the second figure in Chapter 1 will be 1-2)

Including Equations: Save equations as image files and follow the same steps as explained above to include the equations in the document. Equations should be in "Cambria Math" font. (If you do not have access to this font let me know)

Including Tables: Save tables as image files and follow the same steps as explained above for the figures to include the tables in the document. Tables should be in "Arial" font.

Including References: Use IEEE referencing style. An example is shown above.

Font Styles: Follow the following formatting to include special font styles.

Instead of **bold** include ""bold""

Instead if *italic* include ""italic""

Instead of ^{superscript} include ^superscript^

Instead of _{subscript} include „subscript,“



Timeline

Task	Due Date
Outline	Today
Assign Authors & Reviewers	Today
Write first draft	January 20
Internal review	February 17
Revise Drafts	March 16
External Review	April 14
Revise Drafts	May 5
Finalize formatting	June 2



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