



Colegio de San Juan de Letran
Dominican Avenue, Abucay, Bataan
Library and Media Services

RESEARCH GUIDE: ELECTRONICS

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RESEARCH GUIDES

ELECTRONICS

I. SCOPE NOTE

Electronics is a branch of physics and electrical engineering that deals with the emission, behaviour, and effects of electrons and with electronic devices. [britannica.com](https://www.britannica.com)

II. SEARCH AIDS (BT: Broader Term, RT: Related Term, NT: Narrow Term)

BT:

- Electronics

RT:

- Electronic devices
- Electronic circuits
- Electronic circuits analysis
- Electronic circuits design
- Electronic systems
- Electronic design
- Quantum mechanics
- Solid state electronics
- Diode
- Transistor biasing
- Small/large signal analysis
- Transistor amplifiers
- Industrial control applications
- Electronics instrumentation
- Transducers
- Interfacing technique
- Sensors
- Data acquisition system

NT:

- Semiconductors
- Diode equivalent circuits
- Wave shaping circuits
- Power supply
- Voltage regulation
- Bipolar junction transistor
- Cascade and cascode connection
- Feedback systems
- Differential amplifiers
- Operational amplifiers

- Oscillator circuits
- Filters
- Transistor fabrication
- Programmable logic controllers
- Fire and life safety controls
- Audio-video lighting controls
- Security and surveillance control system
- Building management system
- Optoelectronic devices and sensors

III. INFORMATION RESOURCES

A. LIBRARY RESOURCES

Note: For the appropriate access credentials, please contact the Letran Bataan Library

➤ E-JOURNALS

- Journal of Chemical Education.
https://www.proquest.com/central/publication/publications_41672
- Science Progress.
https://www.proquest.com/central/publication/publications_1586336
- Applied Sciences.
https://www.proquest.com/central/publication/publications_2032433
- IEEE Industrial Electronics Magazine.
https://www.proquest.com/central/publication/publications_75724
- Nature Communications.
https://www.proquest.com/central/publication/publications_546298
- Energies. https://www.proquest.com/central/publication/publications_2032402
- Microsystems & Nanoengineering.
https://www.proquest.com/central/publication/publications_2041946
- Communication Physics.
https://search.proquest.com/central/publication/publications_4669724
- International Journal of Circuit Theory and Applications.
https://search.proquest.com/central/publication/publications_996369
- Frontiers of Environmental Science and Engineering.
https://search.proquest.com/central/publication/publications_2044429
- International Journal of Modern Physics.
https://search.proquest.com/central/publication/publications_2049856
- The Institute of Electrical and Electronics Engineers Inc., IEEE.
https://search.proquest.com/central/publication/publications_2032052

➤ E-THESES

- Moeller, R. M. (2004). Wireless transactions: The rhetorical appeals of consumer electronics marketing (Order No. 3145102). Available from ProQuest Central.

- (305209551). Retrieved from <https://www.proquest.com/dissertations-theses/wireless-transactions-rhetorical-appeals-consumer/docview/305209551/se-2?accountid=190548>
- Salary, R. R. (2018). Computational fluid dynamics modeling and in situ physics-based monitoring of aerosol jet printing toward functional assurance of additively-manufactured, flexible and hybrid electronics (Order No. 10840384). Available from ProQuest Central. (2111371804). Retrieved from <https://www.proquest.com/dissertations-theses/computational-fluid-dynamics-modeling-i-situ/docview/2111371804/se-2?accountid=190548>
 - Shao, L. (2020). Design and automation for high fidelity flexible hybrid electronics (Order No. 28089018). Available from ProQuest Central. (2455727795). Retrieved from <https://www.proquest.com/dissertations-theses/design-automation-high-fidelity-flexible-hybrid/docview/2455727795/se-2?accountid=190548>
 - Rahman, M. (2021). Fabrication of conductive patterns using silver nanoparticles for flexible electronics (Order No. 28491275). Available from ProQuest Central. (2550694193). Retrieved from <https://www.proquest.com/dissertations-theses/fabrication-conductive-patterns-using-silver/docview/2550694193/se-2?accountid=190548>
 - Limkaichong, J. S. (2020). Flexible electronics encapsulation in thin polyester films (Order No. 28029231). Available from ProQuest Central. (2447241115). Retrieved from <https://www.proquest.com/dissertations-theses/flexible-electronics-encapsulation-thin-polyester/docview/2447241115/se-2?accountid=190548>
 - Hardy, M. W. (2008). A comparison of *simulations and traditional laboratory exercises for student learning in secondary electronics instruction (Order No. 3315119). Available from ProQuest Central. (304830531). Retrieved from <https://search.proquest.com/docview/304830531?accountid=190548>
 - Sweatman, B. S. (2009). National systems of innovation in the Japanese and American consumer electronics industries (Order No. 1467631). Available from ProQuest Central. (304962520). Retrieved from <https://search.proquest.com/docview/304962520?accountid=190548>
 - Mendez-Pinero, M. (2001). Development of cost models for electronic assemblies (Order No. 1406607). Available from ProQuest Central. (304746818). Retrieved from <https://search.proquest.com/docview/304746818?accountid=190548>
 - Moore, M. H. (2003). Business strategy: The determinants and effects of vertical integration in the electronics manufacturing services industry (EMSI), 1995–2000 (Order No. 3075283). Available from ProQuest Central. (305267867). Retrieved from <https://search.proquest.com/docview/305267867?accountid=190548>
 - Lee, C. (1997). Strategy formulation in a newly industrialized country's strategic technical alliances: A case study of Taiwan's electronics industry (Order No. 9729550). Available from ProQuest Central. (304340865). Retrieved from <https://search.proquest.com/docview/304340865?accountid=190548>

B. OPEN ACCESS

➤ FREE E-BOOKS

- Whitaker, Jerry C. (2005). The electronics handbook, 2nd edition. Boca Raton: CRC Press Taylor & Francis. <https://www.pdfdrive.com/the-electronics-handbook-second-edition-electrical-engineering-handbook-d159099291.html>
- Schubert, Tomas F. and Kim, Ernest M. (2014). Fundamentals of Electronics: Book 1 Electronic Devices and Circuit Applications. Morgan & Claypool Publisher. <https://www.pdfdrive.com/fundamentals-of-electronics-book-1-electronic-devices-and-circuit-applications-d186374504.html>
- Kishore, K. Lal. (2008). Electronic Devices and Circuits. India: BS Publisher. <https://www.pdfdrive.com/electronic-devices-and-circuits-d33544943.html>

➤ FREE E-JOURNALS

- International Journal of Electronics. <https://www.tandfonline.com/toc/tetn20/current>
- Journal of Electronic Materials. <https://www.springer.com/journal/11664>
- Electrical and Electronic Engineering. <https://www.springeropen.com/p/engineering/electrical-engineering>
- AEÜ - International Journal of Electronics and Communications. <https://www.journals.elsevier.com/aeu-international-journal-of-electronics-and-communications>
- Electronics – Open Access Journal. <https://www.mdpi.com/journal/electronics>
- Electrical & Electronic Technology Open Access Journal. <https://publons.com/journal/60863/electrical-electronic-technology-open-access-journal/>
- Electrical Engineering Open Access Journal. <https://www.springeropen.com/p/engineering/electrical-engineering-journals>

➤ FREE E-THESES

- Zhao, Y. (2019). A Dry Spinning Approach to Smart Fiber-Based Stretchable Electronics. (Thesis). Monash University. Retrieved from <https://doi.org/10.26180/5cb1be1393dec>
- Fan, Y. (2015). Conformable Skin Electronics Based on Spiral Pattern. (Masters Thesis). Arizona State University. Retrieved from <http://repository.asu.edu/items/29837>
- Li, Z. (2016). Corporate social responsibility reporting on labour-practice-related issues in China: evidence from five multinational firms operating in the electronics manufacturing services sector. (Thesis). Queensland University of Technology. Retrieved from <https://eprints.qut.edu.au/102376/>
- Overbosch, O. (. (2012). The consumer electronics market: Electronics stores in an online world. (Masters Thesis). Delft University of Technology. Retrieved from <http://resolver.tudelft.nl/uuid:a271e783-e4ae-4ce4-b178-8d5b80580037>
- Brofors, J. (2021). An Outlook on Automotive OEMs' Positioning in the Value Chains for Power Electronics Systems . (Thesis). Chalmers University of Technology. Retrieved from <http://hdl.handle.net/20.500.12380/302457>
- Mahajan, A. (2015). New Approaches for Printed Electronics Manufacturing. (Doctoral Dissertation). University of Minnesota. Retrieved from <http://hdl.handle.net/11299/175521>

- Šindelář, J. (2020). Návrh řídicí elektroniky airsoftové zbraně: Design of airsoft gun control electronics. (Thesis). Brno University of Technology. Retrieved from <http://hdl.handle.net/11012/193468>
- Štajner, D. (2019). Zalévací hmoty pro výkonovou elektroniku: Potting Compounds for Power Electronics. (Thesis). Brno University of Technology. Retrieved from <http://hdl.handle.net/11012/32712>
- Grossmann, D. (2019). Návrh řídicí elektroniky 3D tiskárny: The design of 3D printer control electronics. (Thesis). Brno University of Technology. Retrieved from <http://hdl.handle.net/11012/61681>
- Rajchl, M. (2018). Návrh elektroniky a senzorky nestabilního robota se sférickou základnou: Design of electronics and sensors for unstable robot with spherical base. (Thesis). Brno University of Technology. Retrieved from <http://hdl.handle.net/11012/83736>
- Whiter, C. (2017). An exploration of compositional & improvisational approaches to jazz & electronics. (Doctoral Dissertation). Royal Holloway, University of London. Retrieved from <https://pure.royalholloway.ac.uk/portal/en/publications/an-exploration-of-compositional-improvisational-approaches-to-jazz-electronics>
<https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.792737>
- Kaulu, G. (2015). Physics student Teachers' conceptions and performance in basic electronics at the University of Zambia . (Thesis). University of Zambia. Retrieved from <http://hdl.handle.net/123456789/4217>
- Chen, Y. (2018). Transient electronics: Materials, mechanics, and applications. (Thesis). Iowa State University. Retrieved from <https://lib.dr.iastate.edu/etd/17157>
- PARK, N. (2015). Development of Integration of Sensors and Circuits for Wearable Electronics. (Thesis). University of California – San Diego. Retrieved from <http://www.escholarship.org/uc/item/29v9q84t>
- Gao, Y. (2020). Experimental and simulated study of flexible electronics – Fabrication of water-soluble Zn/PVA sensor and stretching simulation of GNM/SWNT. (Thesis). Penn State University. Retrieved from <https://submit-etda.libraries.psu.edu/catalog/17790yug31>
- Olofsson, J. (2015). High Power Motor Control Electronics for a Rear Axle Steer-By-Wire System . (Thesis). Chalmers University of Technology. Retrieved from <http://hdl.handle.net/20.500.12380/219445>
- Yong, J. H. M. (2019). High-performance printable electronics for memory and neuromorphic application. (Doctoral Dissertation). University of Melbourne. Retrieved from <http://hdl.handle.net/11343/225642>
- Grau, G. F. M. N. (2016). Gravure-printed electronics: Devices, technology development and design. (Thesis). University of California – Berkeley. Retrieved from <http://www.escholarship.org/uc/item/1bn3t372>
- Liu, F. (2020). Layer by layer printing of nanomaterials for large-area, flexible electronics. (Doctoral Dissertation). University of Glasgow. Retrieved from <https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.802493>
- Mambo-Matala, N. O. (2012). Amplify: Opening opportunities on outdated electronics. (Thesis). Umeå University. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:umu:diva-57131>

C. PROFESSIONAL ORGANIZATIONS

- The IEEE Electromagnetic Compatibility Society. <https://www.emcs.org/>
- IEEE (Institution of Electrical and Electronics Engineers). <https://www.ieee.org/>
- IET (Institution of Engineering and Technology). <https://www.theiet.org/>
- (SPIE) International Society for Optics and Photonics. <https://spie.org/>
- ACM (Association for Computing Machinery). <https://www.acm.org/>
- EPRI (Electric Power Research Institute). <https://www.epri.com/>
- Institution of Electrical & Electronics Engineer. <https://www.ieee.org/>
- The Institution of Engineering & Technology. <https://www.theiet.org/>
- Electronic Power Research Institute. <https://www.epri.com/>
- American Society for Engineering Education. <http://www.asee.org/>
- IEEE Communication Society. <https://www.comsoc.org/>

D. OTHER RELATED WEB PORTALS

- Build Electronic Circuits. <https://www.build-electronic-circuits.com/>
- Instructables. <https://www.instructables.com/>
- EEV Blog. <https://www.eevblog.com/>
- Predictable Designs. <https://predictabledesigns.com/>
- Circuit Cellar. <https://circuitcellar.com/>
- Circuit Basics. <https://www.circuitbasics.com/>
- Learning About Electronics. <http://www.learningaboutelectronics.com/>
- Electronic Circuit Diagram. <https://freecircuitdiagram.com/>
- Electronic Base. <http://www.electronics-base.com/>
- Robots for Roboticians. <http://robotsforroboticians.com/>
- Electrical Symbols & Electronic Symbols. <https://www.electrical-symbols.com/>
- Gadgetronics. <https://www.gadgetronicx.com/>
- ELECTRONIC TUTORIALS, PROJECTS AND REVIEWS. <https://www.electorials.com/>
- Elektro Magazine. <https://www.elektormagazine.com/>
- Mastering Electronic Design. <https://masteringelectronicdesign.com/>
- Techno Page. <https://tehnopage.ru/>
- Eletronika. <https://www.elektronika.ba/>
- SURFACE MOUNT PROCESS. <https://www.surfacemountprocess.com/>
- Electronics Foru. <https://www.electronicsforu.com/>
- Electronics Hub. <https://www.electronicshub.org/>
- All about Circuits. <https://www.allaboutcircuits.com/>
- Electronic Design. <https://www.electronicdesign.com/>
- Open Electronics. <https://www.open-electronics.org/>

E. RELATED RESEARCH GUIDES

- University Houston Library. <https://guides.lib.uh.edu/ece>
- University of Melbourne. https://unimelb.libguides.com/elec_eng
- Bloomsburg Library. <https://guides.library.bloomu.edu/c.php?g=318635&p=2127019>
- Washington University Library. <https://libguides.libraries.wsu.edu/EE>
- Northwestern Library. <https://libguides.northwestern.edu/eecs>

IV. TUTORIALS

- Electronics Tutorial for Beginners. <https://www.youtube.com/watch?v=czjAfnHgmU4>
- Basic Electronics for Beginners. <https://www.youtube.com/watch?v=uXr4lXyJXuU>
- Learn electronics quick video series tutorials 1 introducing circuits. <https://www.youtube.com/watch?v=-nES34akEJY>
- Electronics Tutorial. https://www.youtube.com/watch?v=XYJ_AUOw4aE
- Basic Electronic components | How to and why to use electronics tutorial. https://www.youtube.com/watch?v=6UTOTgBJ_8E
- Electronics Tutorial #1 - Electricity - Voltage, Current, Power, AC and DC. https://www.youtube.com/watch?v=F_5sV8s9ZEA
- Electronics Tutorial | Basic & Advanced Electronics Tutorial. <http://www.electronicandyou.com/electronics-tutorial-basic-advanced-electronics-tutorial.html>
- Electronics Tutorial #0 – Introduction. https://www.youtube.com/watch?v=0HXEI_Lk3Qo
- Basic Electronics Tutorial 1: Know About Basic Electronic Components. <https://www.youtube.com/watch?v=-tJCsgH95hE>
- Basic Electronics | How & Why Electronics Components Tutorial | Step by step Electronics. <https://www.youtube.com/watch?v=pGYP3QI-5uQ>
- Electronics Tutorial. <https://www.electronics-tutorials.ws/>
- All about Circuits. <https://www.allaboutcircuits.com/video-tutorials/>
- Tutorials Point. https://www.tutorialspoint.com/basic_electronics/index.htm
- Electronics Hub. <https://www.electronicshub.org/tutorials/>
- Electronics Notes. https://www.electronics-notes.com/articles/basic_concepts/
- Circuit Digest. <https://circuitdigest.com/tutorials>

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