



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

RESEARCH GUIDE: MANAGEMENT SCIENCE AND ENGINEERING

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RESEARCH GUIDES

MANAGEMENT SCIENCE AND ENGINEERING

I. SCOPE NOTE

A discipline through the integrated use of systems science, management science, mathematics, economics and behavioral science and engineering methods, combining information technology, studies solving social, economic and engineering management problems. besteduchina.com

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

BT:

- Management Science
- Engineering

RT:

- Management theories
- Management of economic organizations
- Engineering management
- Public management
- Linear programming
- Mathematical programming
- Probable probabilistic models

NT:

- Simplex method
- Duality Theory and Sensitivity Analysis
- Transportation and Assignment Problems
- Goal programming
- Network models
- PERT/CPM Models
- Integer programming
- Nonlinear programming
- Dynamic programming
- Game Theory
- Waiting line models
- Markov processes
- Inventory models
- Simulation models
- Decision analysis

III. INFORMATION RESOURCES

A. LIBRARY RESOURCES

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

➤ **E-JOURNALS**

- Asia Pacific Management Review.
https://www.proquest.com/central/publication/publications_1246353
- The Journal of Product Innovation Management.
https://www.proquest.com/central/publication/publications_46455
- R & D Management.
https://www.proquest.com/central/publication/publications_36079
- Journal of Blacks in Higher Education (Online).
https://www.proquest.com/central/publication/publications_1056397
- IBM Systems Journal.
https://www.proquest.com/central/publication/publications_35072
- Systems. https://www.proquest.com/central/publication/publications_2032325
- European Journal of Engineering Education.
https://www.proquest.com/central/publication/publications_12733
- IEEE Systems Journal.
https://www.proquest.com/central/publication/publications_85494
- International Journal of Technology Policy and Management.
https://www.proquest.com/central/publication/publications_26456
- Journal of Technology Transfer.
https://www.proquest.com/central/publication/publications_25959
- Integrated Environmental Assessment and Management.
https://www.proquest.com/central/publication/publications_29676
- Advanced Materials & Processes.
https://search.proquest.com/central/publication/publications_37377
- Journals of Materials Science.
https://search.proquest.com/central/publication/publications_2043599
- IEEE Electrical Insulation Magazines.
https://search.proquest.com/central/publication/publications_85446
- The International Journal of Engineering Education.
https://search.proquest.com/central/publication/publications_33186
- Engineering Studies.
https://search.proquest.com/central/publication/publications_186195

➤ **E-THESES**

- Savage, G. (2018). Holacratic engineering management: A lean enterprise system engineering innovation (Order No. 10785338). Available from ProQuest Central. (2031043225). Retrieved from <https://www.proquest.com/dissertations-theses/holacratic-engineering-management-lean-enterprise/docview/2031043225/se-2?accountid=190548>
- Shelby, K. R., Jr. (2013). Systems engineering knowledge asset (SEKA) management for higher performing engineering teams: People, process and technology toward effective knowledge-workers (Order No. 3611730). Available from ProQuest Central.

- (1504274591). Retrieved from <https://www.proquest.com/dissertations-theses/systems-engineering-knowledge-asset-seka/docview/1504274591/se-2?accountid=190548>
- Lawanto, O. (2008). Self -appraisal and self -management of cognition and problem difficulty: Relationship and metacognitive changes during an engineering design project (Order No. 3314832). Available from ProQuest Central. (304624843). Retrieved from <https://www.proquest.com/dissertations-theses/self-appraisal-management-cognition-problem/docview/304624843/se-2?accountid=190548>
 - Mac Garrigle, E. F. (2006). A validation of the enterprise management engineering approach to knowledge management systems engineering (Order No. 3614805). Available from ProQuest Central. (1534564604). Retrieved from <https://www.proquest.com/dissertations-theses/validation-enterprise-management-engineering/docview/1534564604/se-2?accountid=190548>
 - Salehi Esfandarani, M. (2017). Exploring contaminant fate within plastic water infrastructure: The nexus of environmental engineering and material science frontiers (Order No. 10602139). Available from ProQuest Central. (2128069541). Retrieved from <https://search.proquest.com/docview/2128069541?accountid=190548>
 - Roggers, R. A. (2012). Mesoporous silicates: Materials science and biological applications (Order No. 3539416). Available from ProQuest Central. (1095700647). Retrieved from <https://search.proquest.com/docview/1095700647?accountid=190548>
 - Serum, E. M. (2019). Exploitation of biomass for applications in sustainable materials science (Order No. 22582506). Available from ProQuest Central. (2287714042). Retrieved from <https://search.proquest.com/docview/2287714042?accountid=190548>
 - Walker, R. A. (2017). Visualizing science dissections in 3D: Contextualizing student responses to multidimensional learning materials in science dissections (Order No. 10281834). Available from ProQuest Central. (1907050459). Retrieved from <https://search.proquest.com/docview/1907050459?accountid=190548>
 - Schwab, P. (2013). Evaluation of online teacher and student materials for the framework for K-12 science education science and engineering crosscutting concepts (Order No. 3603791). Available from ProQuest Central. (1476195950). Retrieved from <https://search.proquest.com/docview/1476195950?accountid=190548>

B. OPEN ACCESS

➤ FREE E-BOOKS

- Callister, William D. (2008). Fundamentals of materials science and engineering: an integrated approach, 3rd edition. New Jersey: John Wiley & Sons, Inc. <https://www.pdfdrive.com/fundamentals-of-materials-science-and-engineering-e29579234.html>
- Wyld, David. (2012). Advances in Intelligent and Soft Computing. New York: Springer. <https://www.pdfdrive.com/advances-in-computer-science-engineering-and-applications-proceedings-of-the-second-international-conference-on-computer-science-engineering-and-applications-iccsea-2012-may-25-27-2012-new-delhi-indi>
- Birge, John M. (2008). Handbooks in Operations Research and Management Science Volume 15. Amsterdam: Elsevier. <https://www.pdfdrive.com/handbooks-in->

[operationsresearch-and-management-science-volume-15-financial-engineering-handbooks-inoperations-research-and-management-science-d184459283.html](https://www.pdfdrive.com/operations-research-andmanagement-science-handbook-the-operations-research-series-d164947777.html)

- Ravindran, Ravi. (2008). Operations research and management science handbook. Boca Raton: CRC Press Taylor & Francis. <https://www.pdfdrive.com/operations-research-andmanagement-science-handbook-the-operations-research-series-d164947777.html>

➤ FREE E-JOURNALS

- Journal Management Science and Engineering. <https://www.sciencedirect.com/journal/journal-of-management-science-and-engineering>
- International Journal of Management Science and Engineering Management. <https://www.tandfonline.com/toc/tmse20/current>
- Journal of Management Science & Engineering Research. <https://ojs.bilpublishing.com/index.php/jmser>
- Scientific Journal of Management Science and Engineering. <http://oaji.net/journal-detail.html?number=1297>
- American Journal of Management Science and Engineering. <http://www.sciencepublishinggroup.com/journal/index?journalid=101>
- MANAGEMENT SCIENCE AND ENGINEERING. <http://cscanada.net/index.php/mse>
- International Journal of Science and Management Studies (IJSMS). <https://www.ijsmsjournal.org/>
- Journal of Materials Science. <https://www.springer.com/journal/10853>
- Materials Science and Engineering Reports. <https://www.sciencedirect.com/journal/materials-science-and-engineering-r-reports>
- Progress in Materials Science. <https://www.scimagojr.com/journalsearch.php?q=17899&tip=sid>
- Journal of Materials Research & Technology. <https://www.letpub.com/index.php?journalid=10243&page=journalapp&view=detail>

➤ FREE E-THESES

- Robinson, G. S. (2012). Integrating engineering management technology into a model for the effective management of an engineering of an engineering education project. (Thesis). University of Johannesburg. Retrieved from <http://hdl.handle.net/10210/4900>
- Olson, B. A. (2012). Problem Management| A System Engineering Management Framework. (Thesis). The George Washington University. Retrieved from <https://www.proquest.com/dissertations-theses/problem-management-system-engineering-framework/docview/937046804/se-2?accountid=190548>
- Ankomah, R. K. (2021). Assessing the total quality management of the engineering department of cocoa processing company limited. (Thesis). Kwame Nkrumah University of Science and Technology. Retrieved from <http://dspace.knust.edu.gh:8080/jspui/handle/123456789/14217>
- Balaji, S. (2011). Material Substitution in Legacy System Engineering (LSE) With Fuzzy Logic Principles. (Master's Thesis). Arizona State University. Retrieved from <http://repository.asu.edu/items/14319>

- Luo, B. (2015). Development of tissue-inspired scaffolds: integrating biology with materials science. (Thesis). Nanyang Technological University. Retrieved from <http://hdl.handle.net/10356/62517>
- Rode, N. A. (2014). Design of Electrospun Hydrogel Fibers Containing Multivalent Peptide Conjugates for Cardiac Tissue Engineering. (Thesis). University of California – Berkeley. Retrieved from <http://www.escholarship.org/uc/item/47j0x87m>
- Wang, P. (2019). Modulating physical and chemical properties of biomaterials in rapid 3D printing. (Thesis). University of California – San Diego. Retrieved from <http://www.escholarship.org/uc/item/9s82800v>
- Kamboj, J. S. (2014). Fatigue Behavior of Ti-6-4 Alloy with Application of Calcium Phosphate. (Thesis). University of California – Irvine. Retrieved from <http://www.escholarship.org/uc/item/68v234wn>

C. PROFESSIONAL ORGANIZATIONS

- American Society for Precision Engineering (ASPE). <https://aspe.net/>
- Association for Facilities Engineering (AFE). <https://afe.clubexpress.com/>
- IEEE Technology and Engineering Management Society (TEMS). <https://www.ieee-tems.org/#zoom=2&lat=20&lon=0&layers=000BT>
- IEEE Robotics and Automation Society (RAS). <https://www.ieee-ras.org/>
- Institute for Operations Research and the Management Sciences (INFORMS). <https://www.informs.org/>
- ASTM International. <https://www.astm.org/>
- Materials Research Society. <https://mrs.org/>
- The Electrochemical Society. <https://www.electrochem.org/>
- Society for Biomaterials. <https://biomaterials.org/>
- American Association for Advancement Science. <https://www.aaas.org/>

D. OTHER RELATED WEB PORTALS

- Modern Management Science & Engineering. <http://www.scholink.org/ojs/index.php/mmse>
- Science Daily. https://www.sciencedaily.com/news/matter_energy/materials_science/
- Scientific. NET. <https://www.scientific.net/>
- American Chemical Society & Material Science. <https://www.acs.org/content/acs/en.html>
- Virtual Library Engineering. <http://vlib.org/Engineering>
- NIST Materials Data Repository. <https://materialsdata.nist.gov/>

E. RELATED RESEARCH GUIDES

- University of Delaware. <https://guides.lib.udel.edu/c.php?g=85283&p=549973>
- Penn State University Libraries. <https://guides.libraries.psu.edu/c.php?g=437988&p=3720210>
- University of Maryland. <https://mse.umd.edu/about/what-is-mse>

IV. TUTORIALS

- Theory and management of organizations: Stanford Management Science and Engineering 180. <https://www.youtube.com/watch?v=kGxtWv6gXC4>
- Elsevier. <https://textbooks.elsevier.com/manualsprotectedtextbooks/9780750663809/Static/index.htm>
- MIT Courseware. <https://ocw.mit.edu/courses/materials-science-and-engineering/>
- Nano Hub. https://nanohub.org/groups/materials/materials_courses
- Tutor. <http://srizam-tutor.blogspot.com/2007/03/introduction-to-mater-sci-eng.html>
- UNSW. <http://www.materials.unsw.edu.au/tutorials/online-tutorials>

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