

Finding Quality Information: Library Session for ENCS 282

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What we will cover

- Researching the Web
- Library resources for research, including:
 - Specialized databases
 - Library catalogue
 - Subject guides
 - Resources for locating information
- Research tools

Goal: Help you ID & describe a technical problem - **Place it within current research** - Even help you with your budget

Keyword searching

- Example topic:

Reducing emissions in snowmobiles

Concept #1:

Snowmobile

Related terms:

- Off road vehicle

Broader concepts:

- Automobile

Related concepts:

- Internal combustion engine
- Two-stroke or four-stroke engine

Concept #2:

Emissions

Related terms:

- Air pollution
- Noise
- Exhaust
- Fuel consumption
- Performance

Researching the Web

- Project: <http://articles.sae.org/12805/>
- **Google Scholar:** <http://scholar.google.ca/>
 - Set up Find it @ Concordia
<http://library.concordia.ca/help/howto/googlescholar.php>
 - Set up to use with RefWorks
<http://library.concordia.ca/help/howto/refworks-exporting.php#gs>
- **Google:** <https://www.google.ca/>
 - Try the Advanced Search

Researching the Web

- Google Books:

<http://books.google.ca/>

Google search results for "internal combustion engine emissions".

Web News Images Videos **Books** More Search tools

About 181,000 results (0.48 seconds)

Ad related to internal combustion engine emissions ⓘ
Combustion Engine Kit
www.acornonline.com/
Build Your Own Internal Combustion Engine Model Kit for Ages 10 and Up

Internal Combustion Engines: Improving Performance, Fuel...
books.google.ca/books?isbn=0857092057
Institution of Mechanical Engineers - 2011 - No preview - [More editions](#)
This volume contains the papers of the Internal Combustion Engines: Performance Fuel Economy and Emissions" conference held in November 2011.

FUNDAMENTALS OF INTERNAL COMBUSTION ENGINES
books.google.ca/books?isbn=8120346807
H. N. GUPTA - 2012 - [Preview](#) - [More editions](#)
Providing a comprehensive introduction to the basics of Internal Combustion Engines, this book is suitable for: Undergraduate-level courses in mechanical engineering, aeronautical engineering, and automobile engineering.

Handbook of Air Pollution from Internal Combustion Engine...
books.google.ca/books?isbn=0080532756
Eran Sher - 1998 - [Preview](#) - [More editions](#)
This handbook is an important and valuable source for engineers and researchers in the area of internal combustion engines pollution control.

Combustion Engines Development: Mixture Formation, ...
books.google.ca/books?isbn=3642140947
Günter P. Merker, Christian Schwarz, Rüdiger Teichmann - 2011 - [Preview](#) - [More editions](#)
Combustion Engines Development nowadays is based on simulation, not only of the transient reaction of vehicles or of the complete driveshaft, but also of the highly unsteady processes in the carburation process and the combustion chamber of ...

Library Resources: Specialized Databases

- **Compendex/INSPEC (Engineering Village)**
 - Focused on engineering
 - No fulltext
 - Scholarly content
- **Academic Search Complete**
 - Multidisciplinary
 - Some fulltext
 - Scholarly content
- **ProQuest Business Databases**
 - Covers industry information
 - Some fulltext
 - Includes trade journal articles
- Access: <http://library.concordia.ca/research/databases/>

Combining keywords in databases

- **AND:**
 - Tells the database that words connected with this term **MUST APPEAR** in the results. Good for **NARROWING** a search.
- **OR:**
 - Tells the database that at least **ONE** of the words connected with this term must appear in the results. Good for **BROADENING** a search.
- Phrase searching using **“quotes”**
- *** : Wildcard/Truncation symbol.** Usually used at the end of a word and causes the database to find that word with different endings. **Ex: manage* would find: manager, managers, management, manageable, etc.**

Combining keywords in databases

Example 1:

Two-stroke engine **AND** Emission*

Example 2:

Emission* **OR** air pollution

DATABASE

☐ All ☒ Compendex ☒ Inspec ☒ GEOBASE

SEARCH FOR

AND ▼

AND ▼

two-stroke engine or internal combustion eng

emissions or air pollution

in

in

in

Turn Off AutoSu

All fields

Subject/Title/Abstract

Abstract

Author

Author affiliation

Title

ISSN

Source title

Controlled term

Country of origin

Advanced Search screen in Engineering Village

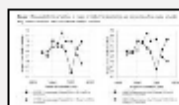
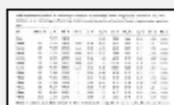
 Preview

- ...the poisoning effects on a catalytic converter and emission-engine's performance
- ...with and without a catalytic converter, including the light-off temperature
- ...analysis shows that the catalytic converter lowers the torque and power

Engine particulars	Test bed fitted with a four/50:475, four-cylinder, 0.796, water-cooled, four-stroke gasoline engine with carburetor, 1.3 liter
Maximum rated power output	40kW at 5,000rpm
Maximum rated torque output	160Nm at 3,500rpm



	Average	Range
core sites		
Western tanager (sp/ha)	2.67	0.00-10.00
Prothonotary warbler (sp/ha)	30.9	0.00-120.00
Eastern bluebird		
Prothonotary warbler (sp/ha)	18.22	0.00-100.00
Western tanager (sp/ha)	2.67	0.00-10.00
Prothonotary warbler (sp/ha)	30.9	0.00-120.00
Eastern bluebird	2.67	0.00-10.00
Western tanager (sp/ha)	2.67	0.00-10.00
Prothonotary warbler (sp/ha)	30.9	0.00-120.00



 Citation/Abstract  Full text  Full text - PDF

 Preview

...already supplying materials for catalytic converters in Honda automobiles, and
...as the key component in catalytic converters, but it does not "can" the
...largest suppliers of automotive catalytic converters, the U.K.'s Johnson Matthey

 Preview

...evaluate both infrared (IR) and catalytic gas-detection devices, as both offer ...in certain applications. Both catalytic and IR detectors rank among industry's ...and lifecycle costs. Catalytic sensors Single-point

 Citation/Abstract Full text

Relevance

Sort

[+ Full text](#)

Peer reviewed

[-] Source type

Dissertations & Theses (5820)

 [Newspapers \(5674\)](#)

Trade Journals (5642)

Wire Feeds (3765)

 Government & Official Publications (3091)

[More options...](#)

⊕ Publication title

⊕ Document type

Subject

catalytic converters (3062)

automotive components (2247)

exhaust systems (2162)

catalysts (1561)

automobile industry (1509)

[More options...](#)

Library Resources: Library Catalogue



- Concordia Libraries catalogue is called CLUES
<http://clues.concordia.ca/>
- Descriptive record for everything the library owns
- Particularly good for discovering **books**
- Can tell you if the library has a **subscription** to a **journal**



Asif Faiz, Surhid Gautam. “Technical and policy options for reducing emissions from 2-stroke engine vehicles in Asia”. *International Journal of Vehicle Design* 34.1 (2004): 1-11.

Library Resources: Subject Guides

- **Library Homepage**

<http://library.concordia.ca/>

- **Guides by Subject**

<http://library.concordia.ca/#browseSubject> tab


- **Guides for Engineering & Computer Science**

<http://library.concordia.ca/research/subjects/?id=engcompsci>

- Capstone & other design classes

<http://library.concordia.ca/research/subjects/eceng/capstone.php>

Resources for Locating Information

- Click on “**Find it @ Concordia**” 
- **Google:** search title of article in “quotes” (add author’s name if necessary) – **must have VPN** if off campus
- Check **CLUES:** <http://clues.concordia.ca/>
 - Journal title
 - Conference title
 - Book title

Resources for locating information

- What to do if Concordia doesn't have what you want and you can't find it on the Web?
 - **CREPUQ/BCI card**
<http://library.concordia.ca/services/circulation/crepuq.html>
 - **Interlibrary Loans (Colombo)**
<http://library.concordia.ca/research/ill/>
- For additional help: **Ask A Librarian**
<http://library.concordia.ca/help/questions/>

Research tools

- VPN

<http://library.concordia.ca/research/databases/offcampus.php?guid=vpn>



- Ask A Librarian



- RefWorks

<http://library.concordia.ca/help/howto/refworks.php>

What is RefWorks?


 RefWorks 

Call Number RD 73 S785S87 2011eb

Author [Rosen, Jacob](#)

Title **Surgical Robotics** [electronic resource] : Systems Applications and Visions / edited by Jacob Rosen, Blake Hannaford, Richard M. Satava

Publisher Boston, MA : Springer Science+Business Media, LLC, 2011

Years available	Connect to full-text	
	View this document at SpringerLink	

Robotic Advances in Aerospace Manufacturing.

Authors: [Presher, Al](#)

Source: [Design News](#). Apr2013, Vol. 68 Issue 4, p42-47. 4p.

Document Type: Article

Subject Terms: ***ROBOTICS**
*INDUSTRIAL robots
*COMPUTER vision

Company/Entity: [FANUC Robotics America Inc.](#)

People: [BLANCHETTE, Chris -- Interviews](#)

Abstract: The article reports that in an interview with the national manager of **robotics** company Fuji Automatic Numerical Controls (FANUC) **Robotics** America, Chris Blanchette declared that a major development with **robotic** systems is the addition of new robot elements to support advanced manufacturing needs. The elements include high accuracy tools using secondary encoders, **robotic** mechanical arms that are rigid, and interfaces to vision systems to get data and create a more adaptive process.

ISSN: 0011-9407



Modular autonomous robotics platform for educational use

Lumsden, James¹; Ortega-Sanchez, Cesar¹ 

Source: *IEEE Region 10 Annual International Conference, Proceedings/TENCON*, p 1577-1582, 2010, *TENCON 2010 - 2010 IEEE Region 10 Conference*; **ISBN-13:** 9781424468904; **DOI:** 10.1109/TENCON.2010.5686047; **Article number:** 5686047; **Conference:** 2010 IEEE Region 10 Conference, TENCON 2010, November 21, 2010 - November 24, 2010; **Sponsor:** IEEE Fukuoka Section; IEEE Region 10; **Publisher:** Institute of Electrical and Electronics Engineers Inc.

Author affiliation:

¹ Electrical and Computer Engineering, Curtin University, Perth, Australia

Abstract:

Robotics is a field that continues to grow as robots become common in environments as varied as households and the battlefield. This paper presents a low cost robotics development platform using commercial off-the-shelf parts for educational and academic use. It is a direct response to the high cost and limited functionality of existing platforms. A navigation and obstacle-avoidance Fuzzy Controller is provided to accelerate the typical development process for a mobile robot. The fundamental aim is to facilitate future robotics projects by producing an inexpensive, modular and highly accessible platform that improves upon existing commercial offerings. ©2010 IEEE (36 refs)

Main heading: Robots

Controlled terms: Education - Navigation - Navigation systems - Robotics

Uncontrolled terms: Autonomous navigation - Autonomous robotics - Commercial off the shelves - Development platform - Direct response - Educational robotics - Educational use - Fuzzy controllers - High costs - Low costs - Obstacle avoidance - Typical development

Classification Code: 434.4 Waterway Navigation - 716.3 Radio Systems and Equipment - 731.5 Robotics - 901.2 Education

Database: Compendex



References

Gregorio, P., Ahmadi, M., & Buehler, M. (1997). Design, control, and energetics of an electrically actuated legged robot. *Systems, Man, and Cybernetics, Part B: Cybernetics, IEEE Transactions on*, 27(4), 626-634.

Lumsden, J., & Ortega-Sanchez, C. (2010). Modular autonomous robotics platform for educational use. *2010 IEEE Region 10 Conference (TENCON 2010)*, 1577-82. doi: 10.1109/TENCON.2010.5686047

Presher, A. (2013). Robotic advances in aerospace manufacturing. *Design News*, 68(4), 42-47.

Rosen, J., Hannaford, B., Satava, R. M., & SpringerLink. (2011). *Surgical robotics*. Boston, MA: Springer Science+Business Media, LLC.



legged robot



Scholar

About 40,900 results (0.07 sec)

Articles

[Design, control, and energetics of an electrically actuated legged robot](#)

P Gregorio, M Ahmadi, M Buehler - *Systems, Man, and ...*, 1997 - [ieeexplore.ieee.org](#)

Case law

Abstract To study the design, control and energetics of autonomous dynamically stable legged machines we have built a planar one-legged robot, the ARL Monopod. Its top running speed of 4.3 km/h (1.2 m/s) makes it the fastest electrically actuated legged robot ...


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