Innovative Ways to Generate End User Demand for your Library Resources and IEEE Innovations in Technology Transfer

Judy H Brady
IEEE Area Manager for Russia

IEEE
Advancing Technology for Humanity

Agenda

- IEEE and Patent Development
- Universities and Technology Transfer
- Libraries and End-user Engagement
- InnovationQ Plus for Patent Research

And if we have time

- Fun Ideas to Engage End-users

About the IEEE

- World's largest technical membership association with more than 430,000 members in over 160 countries
- Not for profit organization "Advancing Technology For Humanity"
- Four Core areas of activity
  - Membership organization
  - Conferences organizer
  - Standards developer
  - Publisher of journals, conferences, standards, ebooks and elearning
- IEEE *Xplore* by the numbers:
  - Nearly 4 million total documents
  - Over 3 million unique users
  - More than 8 million downloads per month
  - 15 year anniversary in 2015!

IEEE student volunteers in Mumbai

IEEE Day Contest Winner, Colombia

IEEE

IEEE covers all areas of technology

More than just electrical engineering & computer science

MACHINE LEARNING

BIG DATA

OPTICS

RENEWABLE ENERGY

SEMICONDUCTORS

SMART GRID

IMAGING

NANOTECHNOLOGY

SIGNAL PROCESSING

AEROSPACE

COMMUNICATIONS

HUMAN-CENTERED INFORMATICS

BIOMEDICAL ENGINEERING

ELECTRONICS

NEXT GEN WIRELESS

CIRCUITS

CLOUD COMPUTING

CYBER SECURITY

ELECTROMAGNETICS

IEEE

IEEE quality makes an impact

Thomson Reuters Journal Citation Reports® by Impact Factor

IEEE publishes:

17 of the top 20 journals in Electrical and Electronic Engineering

17 of the top 20 journals in Telecommunications

7 of the top 10 journals in Automation & Control Systems

8 of the top 10 journals in Computer Science, Hardware & Architecture

4 of the top 5 journals in Cybernetics

3 of the top 5 journals in Artificial Intelligence

2 of the top 5 journals in Robotics

The Thomson Reuters Journal Citation Reports presents quantifiable statistical data that provides a systematic, objective way to evaluate the world's leading journals.

Based on the 2014 study released June 2015

More info: www.ieee.org/citations

IEEE

IEEE research powers new patents

1790
ANALYTICS

Analysis of Patent Referencing to IEEE Papers, Conferences, and Standards 1997-2014

Report prepared for:

Institute of Electrical and Electronic Engineers
445 Hoes Lane
Piscataway, NJ 08855, USA

Report prepared by:

1790 Analytics LLC
130 Haddon Avenue
Haddonfield, NJ 08033
www.1790analytics.com

May 14, 2015

A study of the top 40 patenting organizations ranks IEEE #1 again

- Over three times more citations than any other publisher
- Patent referencing to IEEE increased 896% since 1997
- The importance of sci-tech literature in patents is rising
- IEEE research is increasingly valuable to innovators

1790 Analytics LLC performed an in-depth analysis of the science references from top patenting firms.

Source: 1790 Analytics LLC 2015

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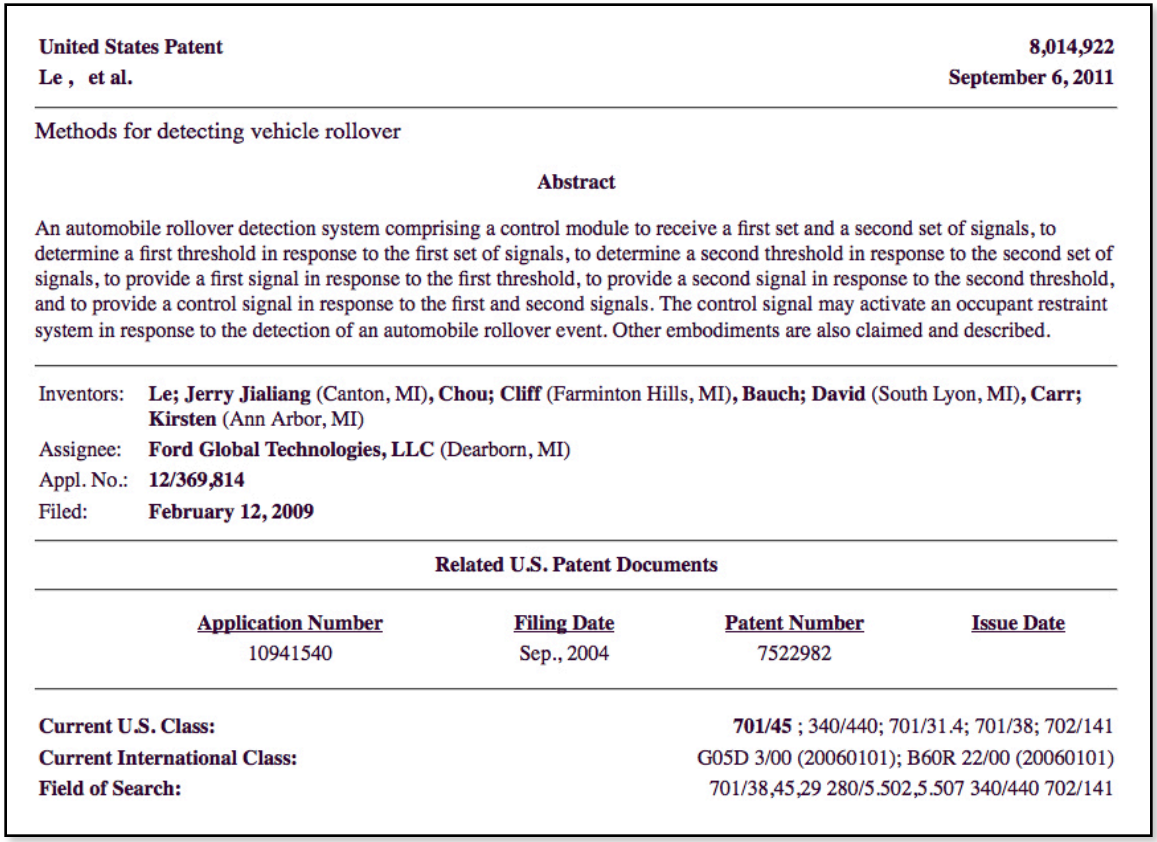
Example of patent citing IEEE research

Sample Patent
Ford Motor Co.
Patent #8014922
"Methods for Detecting Vehicle Rollover"



United States Patent **8,014,922**
Le , et al. **September 6, 2011**

Methods for detecting vehicle rollover

Abstract

An automobile rollover detection system comprising a control module to receive a first set and a second set of signals, to determine a first threshold in response to the first set of signals, to determine a second threshold in response to the second set of signals, to provide a first signal in response to the first threshold, to provide a second signal in response to the second threshold, and to provide a control signal in response to the first and second signals. The control signal may activate an occupant restraint system in response to the detection of an automobile rollover event. Other embodiments are also claimed and described.

Inventors: **Le; Jerry Jialiang** (Canton, MI), **Chou; Cliff** (Farminton Hills, MI), **Bauch; David** (South Lyon, MI), **Carr; Kirsten** (Ann Arbor, MI)
Assignee: **Ford Global Technologies, LLC** (Dearborn, MI)
Appl. No.: **12/369,814**
Filed: **February 12, 2009**

Related U.S. Patent Documents

Application Number	Filing Date	Patent Number	Issue Date
10941540	Sep., 2004	7522982	

Current U.S. Class: **701/45** ; 340/440; 701/31.4; 701/38; 702/141
Current International Class: G05D 3/00 (20060101); B60R 22/00 (20060101)
Field of Search: 701/38,45,29 280/5.502,5.507 340/440 702/141

Source: 1790 Analytics LLC 2013

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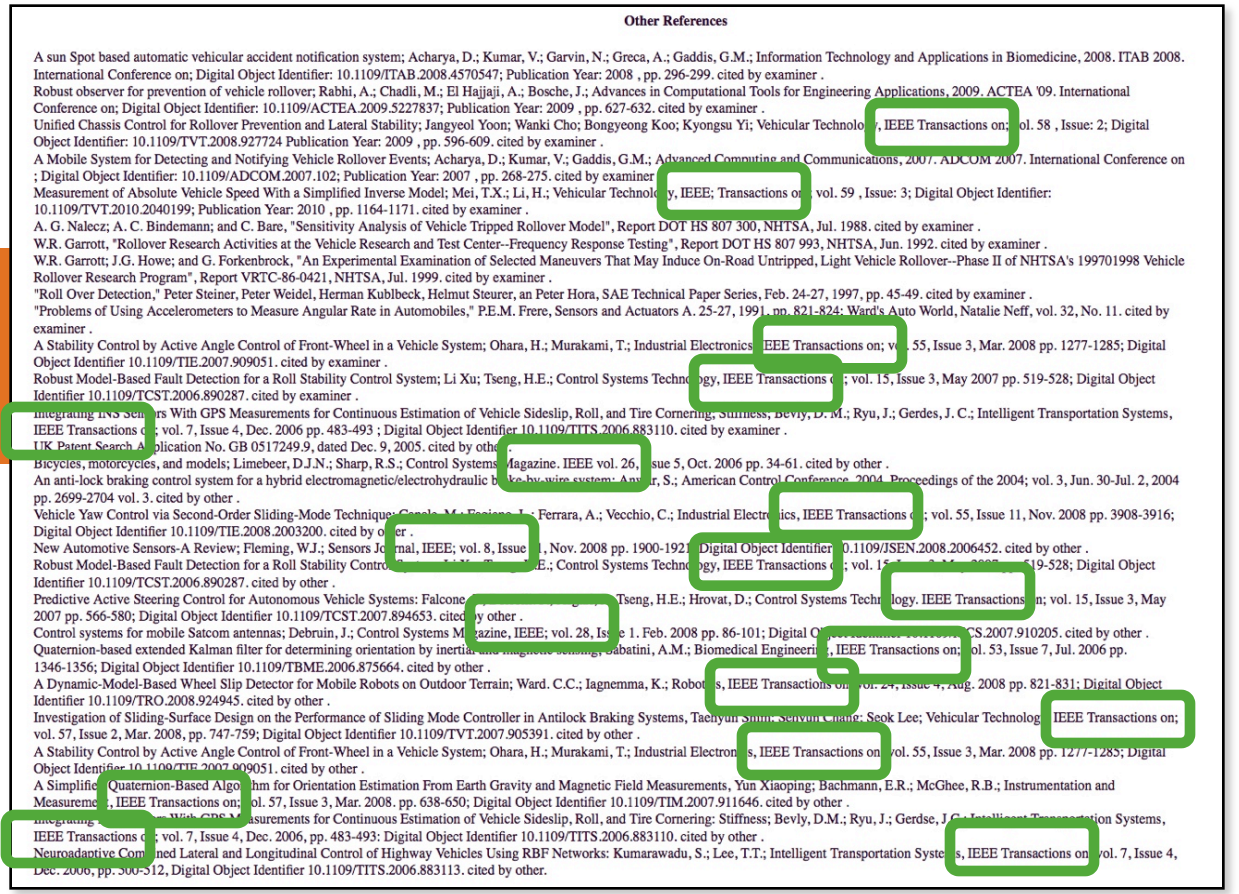
Example of patent citing IEEE research

This patent has 18 references to IEEE



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Source: USPTO.gov

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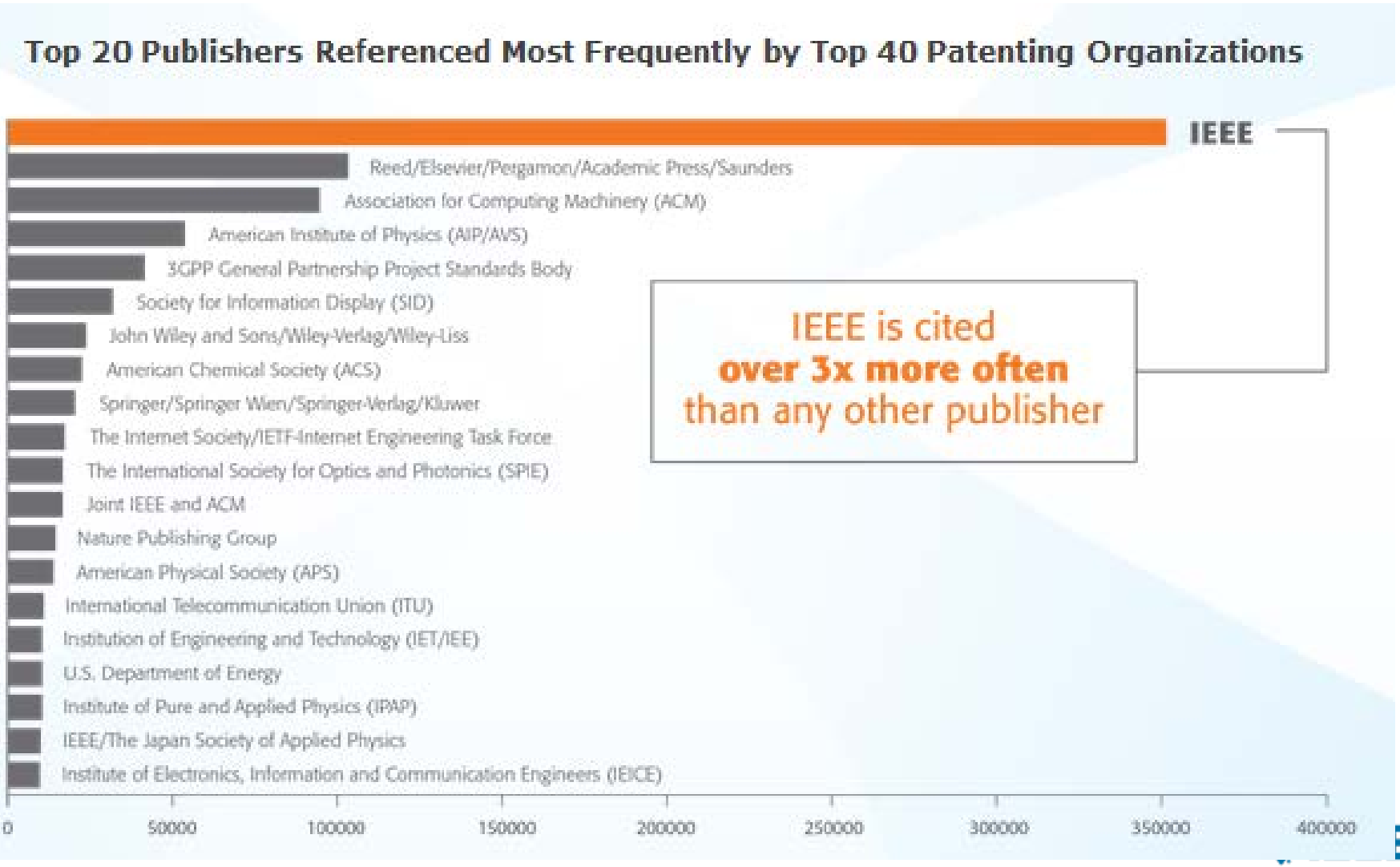
IEEE research powers new patents



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WHY SHOULD UNIVERSITIES CARE ABOUT PATENT DEVELOPMENT?

TECHNOLOGY TRANSFER IS A UNIVERSITY REVENUE SOURCE……

Also known as Technology Commercialization, Technology Development

Source: Association of University Technology Managers AUTM, a nonprofit organization dedicated to bringing research to life by supporting and enhancing the global academic technology transfer profession through education, professional development, partnering and advocacy. . www.autm.net

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Technology Transfer

- Technology transfer is the process of transferring scientific findings from one organization to another for the purpose of further development and commercialization.
- The process typically includes:
  - Identifying new technologies
  - Protecting technologies through patents and copyrights
  - Forming development and commercialization strategies such as marketing and licensing to existing private sector companies or creating new startup companies based on the technology

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Tech Transfer at Universities

- Academic and research institutions engage in technology transfer for a variety of reasons, such as:
  - Recognition for discoveries made at the institution
  - Compliance with federal regulations
  - Attraction and retention of talented faculty
  - Local economic development
  - Attraction of corporate research support
  - Licensing revenue to support further research and education

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Positive Economic Impact of Tech Transfer

- University licensing increased U.S. gross industry output by $836 billion between 1996 and 2010
- These technologies support an estimated 3 million jobs in the economy
- Tech transfer helped to create 671 new companies and 591 new products in 2011 alone
- Direct correlation between amount of federal dollars invested in research and the innovations that research creates

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In the beginning.....

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Basic Research

Inventions and Discoveries

Google

Goal: Maximizing an Invention

- The Bayh-Dole Act (1990) fundamentally changed the system of technology transfer by enabling universities to retain title to inventions and take the lead in patenting and licensing groundbreaking discoveries.

- Any net licensing revenues to universities go back into more research and/or education, as well as patenting costs

- Initial technological development usually happens locally
  - 2011 AUTM survey found that 73% of startups formed that year were in the location where the research was conducted

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What is the library's role?

- Engage end users – even when they say they don't need help. But how?

Example of Tech Transfer Process from fredhutch.org

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“Embedding” in the community

- Understanding faculty and student needs crucial
  - What are their needs? We probably won’t find out by staying in the library building
- Recommend “Embedding”
  - Takes librarians out of their offices and places them in the locations on campus that allow close coordination with faculty and students

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Embedding at Drexel University, Penn, USA

Jay Bhatt
Liason Librarian

We credit Jay with term “embedding”

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DREXEL UNIVERSITY College of Engineering

Did you know that Drexel librarians are an incredible resource for information?

Jay Bhatt, Liaison Librarian of Engineering can assist you with:

- EndNote and Refworks assistance
- Faculty Portfolios
- Patent searching
- Locating standards
- Thesis related
- Effective sources, articles & literature review
- Additional web resources
- Advice
- FAQs
- And much more!

Where can you find Jay?

Tuesdays 3:30pm-5:30pm	**School of Biomedical Engineering Science and Health Systems Lounge**
Wednesdays 12pm-2pm Fridays 10am-12pm	**CoE, Lebow Engineering Center Speitel Conference Room 231**
	** Except on May 7th & June 13th*
Thursdays 1:30pm-3:30pm	**Materials Science and Engineering Lounge**

You can schedule an informal consultation with Jay or just visit him during his office hours!

To contact Jay, visit: http://www.library.drexel.edu/bio-pages/jay-bhatt

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Embedding in the virtual

Week 2 - Topic selection and abstract writing

Enabled: Adaptive Release

Week 3 & 4 - Technical & Business Writing

Enabled: Adaptive Release

Week 5 - Intro to literature search at Drexel Libraries

Enabled: Adaptive Release

Jay Bhatt is responsible for building library collections in engineering subject areas, outreach to faculty and students, and teaching information and research skills to faculty and students in Engineering, Biomedical Engineering, and related subject areas. He provides individual and small group consultations to students, instructional sessions to specific classes, online research support in both face to face and distance learning programs, and workshops for specialized research areas.

In this lesson, you will find:

- An Introduction
- Lecture Objectives
- Required Reading
- Library Research Assignment One

Week 6 - Literature search specifics and procedures, patents and plagiarism

Enabled: Adaptive Release

The Round Table: From Drexel Unive

Does your university have an IEEE Student Chapter?

- A group within Drexel's IEEE stu
  who meet once a month to discuss ideas presented in research papers.
- The group also organizes special seminars on topics of interest to students.
- Before the start of any meeting, interactions with students might result in awareness about key electronic resources.
- One such consultation resulted in students learning as how to search, find and obtain engineering standards

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Types of questions answered

- Using EndNote to format research paper using the required reference style
- Finding articles on truss bridges using electronic databases
- Instruction on how to request articles not found in full text through a database
- Helping to find ebooks on Project Management for a faculty member
- Teaching students how to locate resources on writing effective business plans
- Evaluating citations & web resources for a spinal injury project
- Patent searching for energy storage related projects

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IP Protection in the News

on http://www.thetimes.co.uk.

JOIN NOW

Academics accused of failing to protect wonder material

Graphene was discovered by two Russian scientists at Manchester University
IVAN ALVARADO

Graphene, the "miracle material" 200 times stronger than steel, has been left "totally unprotected" by the university that discovered it, MPs have been warned.

The Sunday Times, 24 April 2016

- Graphene, the "miracle material" 200 times stronger than steel, has been left "totally unprotected" by the university that discovered it…".
- Manchester University is accused of being "at best naive, at worst grossly negligent" over its efforts to protect the intellectual property rights of graphene.
- Manchester University said "Our decision not to file a patent in 2004 followed a thorough patent and literature examination exercise"

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InnovationQ PLUS

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Unique Value to Patent Professionals

IEEE full text publications + IP.com global patent database = Unique value

InnovationQ Plus indexes IEEE full text publications alongside one of the largest global patent literature databases in the industry. Content includes:

- Over 3 million documents from IEEE journals, conference and standards – cited in patents 3x more than other publishers
- Global database of 70+ million patents and applications
  - JPO, USPTO, EPO, WIPO, Canada, Germany, UK, China, Australia, India
- IP.com's proprietary Prior Art Database
- Invention disclosures of licensable technology from universities
- Other non-patent literature including Pub Med and IETF

All now easily discoverable via one integrated solution – the InnovationQ Plus powerful new innovation discovery and analytics platform

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InnovationQ Plus Semantic Search

Proprietary search engine developed by experts in machine learning increases researcher and analyst productivity, efficiency, and effectiveness

- Easy to use: anyone can find valuable content that is typically buried deep within complex patent and technical documents
- Uniquely tuned for IP
- More accurate document retrieval than a simple keyword search (concepts not keywords)
- Reduces learning curve and saves time--no need to use complex Boolean queries to deliver comprehensive results
- Use words or phrases, a paragraph, or pages of content to discover highly relevant results and insights

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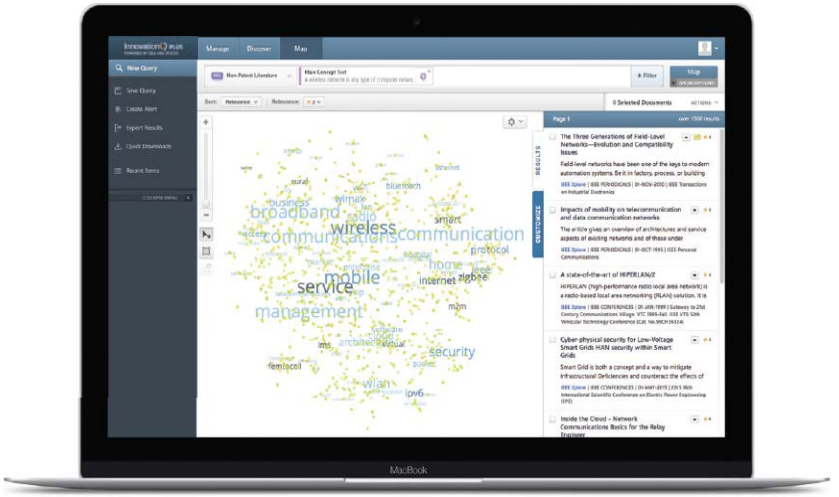
Powerful Analytics

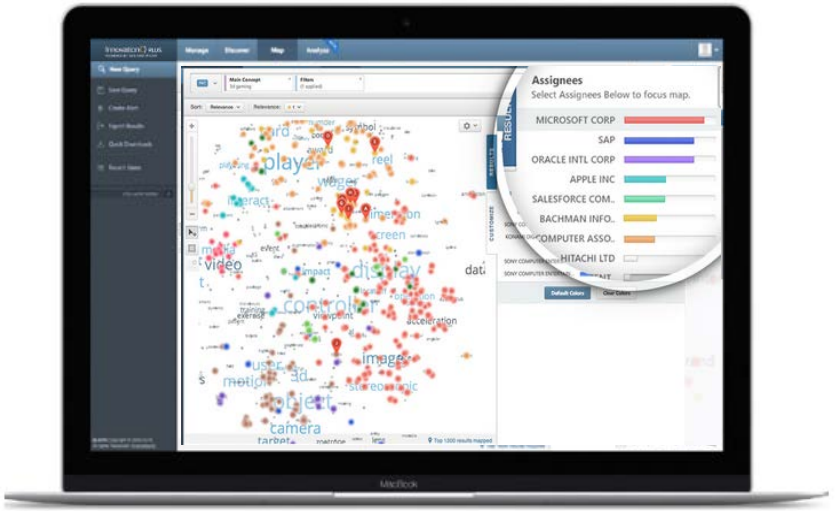
- **Semantic search platform**

  Developed by experts in machine learning, the patented search engine allows anyone to find valuable content that is buried deep in complex patent and technical documents, allowing researchers and analysts to efficiently and effectively complete more of the prior art process, increasing productivity.



- **Visualize concepts with MapIt**

  MapIt provides users with a visual representation of critical documents based on concepts and meaning extracted from their content. Easily identify whitespace and quickly highlight documents by specified assignees.



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Why InnovationQ Plus?

- The powerful, yet user-friendly tool makes it accessible to any professional.
  - Contemporary interface that is ease to use.

- IEEE publications are critical to the patent process; IEEE literature is cited in patents three times more than any other publisher.

- InnovationQ Plus indexes the full text of IEEE publications alongside a comprehensive global patent literature database.

- Low cost:
  - Seat 1: $5,000 USD
  - Seat 2: $3,000 USD
  - Seat 3 and up: $3,000 USD each
  - Institutional pricing also available

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Thank you

Judy H. Brady
IEEE Area Manager, Europe, Japan, Latin America
j.brady@ieee.org

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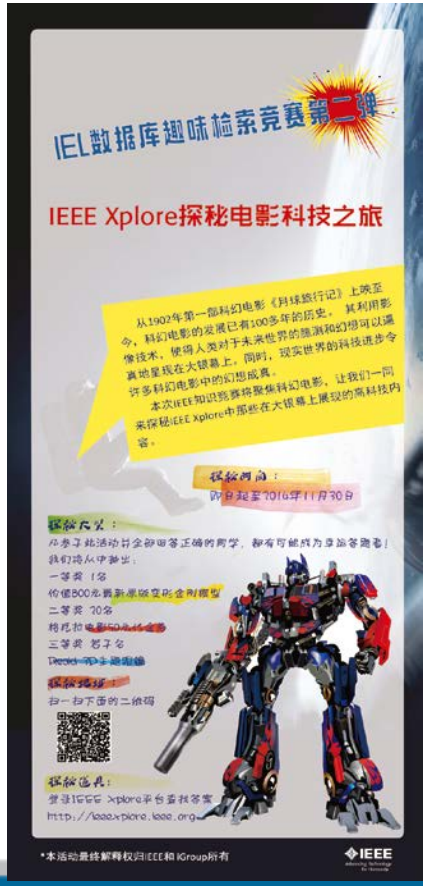
Fun to Search IEEE Xplore Competition

- Two competitions- over 1500 participations in China
- Tips for successful implementation
  - Content: “FUN!”. All questions are extracted from interesting articles of IEEE Spectrum and related magazines
  - Promotion:
    - Emails with follow-up phone calls
    - Campus promotion via IEEE student branches
    - Online promotion via IEEE social media and website
    - Online and offline promotional materials



Get IEEE Member/Volunteer/Student Branch involved in the Xplore event: Academic Seminars with multiple unit collaboration: IEEE Fellow/Editor presentation; IEEE Xplore training; Membership promotion; IEEE Xplore booth, social networking events etc

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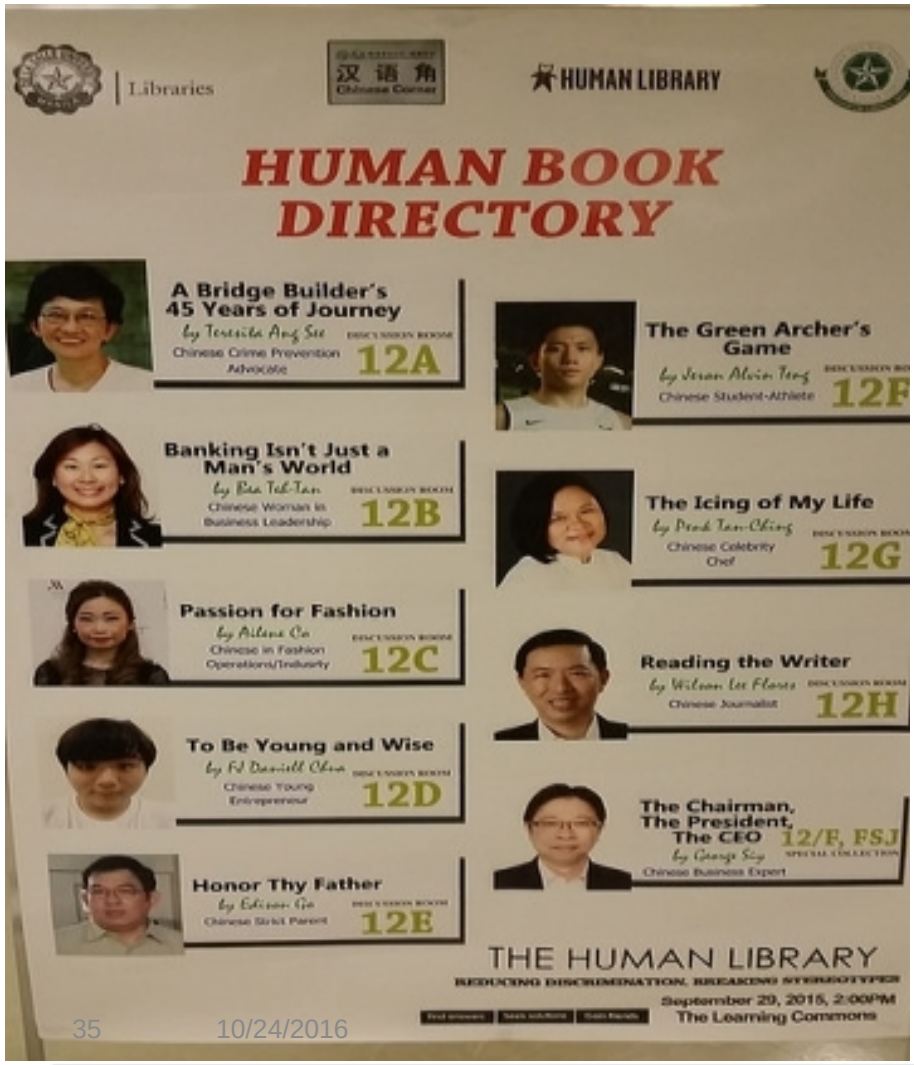
“The Human Library”



- Leveraging the knowledge at your institution
- Students can talk to experts directly in casual setting

De La Salle University, Manila

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Celebrating University Authors

- Connecting with authors and engage in conversation before and after the event.

Celebrating Drexel Authors

Join Drexel University Libraries and the Office of the Provost to celebrate Drexel's book authors and editors at this annual celebration. President Fry will kick off the celebration, joining the Dean of Libraries and Provost to recognize authors who published in the 2014 calendar year.

This event is open to all members of the campus community and authors are invited to bring guests. RSVPs are requested, but not required.

If you are Drexel faculty or staff who authored or edited a book published in 2014, please contact Jenny James Lee at jaj92@drexel.edu or 215.571.4095 with your publication information.

A display of 2013 publications is currently available in Main Building in the display case outside of the Provost's Office.

Date:	Wednesday, March 11, 2015
Time:	4:00pm - 6:00pm
Location:	Gerri C. LeBow Hall, Room 220
Campus:	University City Campus

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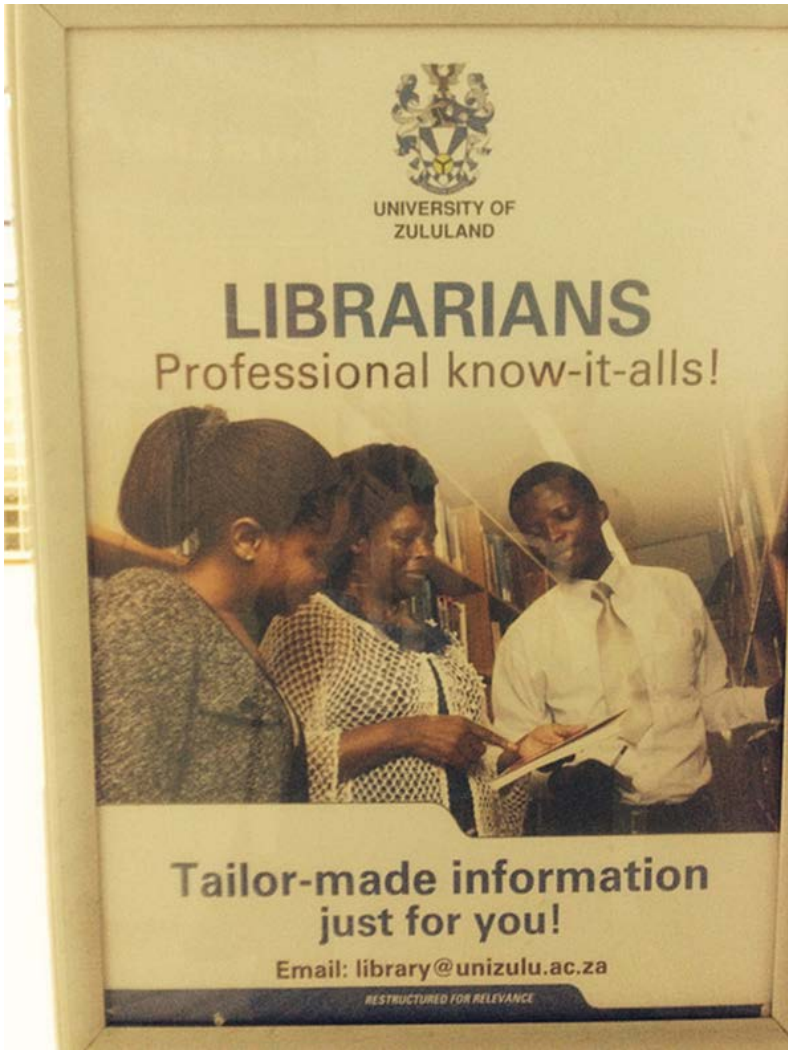
Librarian models?? Yes!



University of Zululand

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Create your own library marketing campaigns!

University of Philippines