

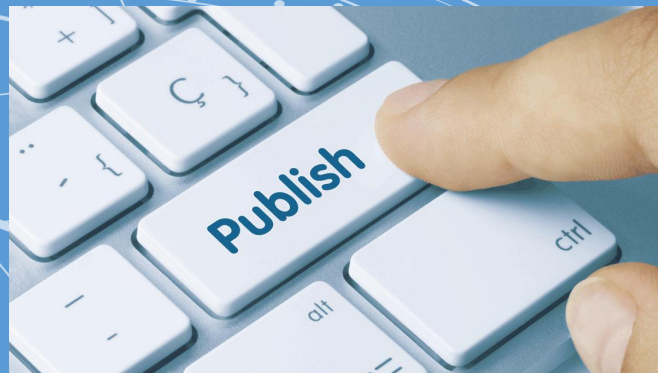
IEEE：支持知识资源建设 深化学科服务与专利创新



iGroup公司
IEEE数据库培训师
马向伟
2019.5.16

主题

- ▶ InnovationQ Plus: 支持高校专利申请与技术转移
- ▶ IEEE Xplore API: 深化学科分析和服務



InnovationQ Plus: 支持高校专利申请与技术转移

IEEE

- ▶ the Institute of Electrical and Electronics Engineers
- ▶ 电气电子工程师学会
- ▶ IEEE 作为非营利性组织，全球最大的技术行业学会，成员遍布160多个国家地区，会员超过43万人。宗旨是“推动人类技术创新”。
- ▶ IEEE Xplore Digital Library目前涵盖了全球1/3以上电气电子工程和计算机领域的科技文献
 - 400多万篇全文文献
 - 全球学术机构、政企用户
 - IEEE的期刊、会议和标准涵盖了最先进的科学技术研究





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- 为 IP 专业人员定制的专利语义检索平台
- 技术披露文件
- 分析报告
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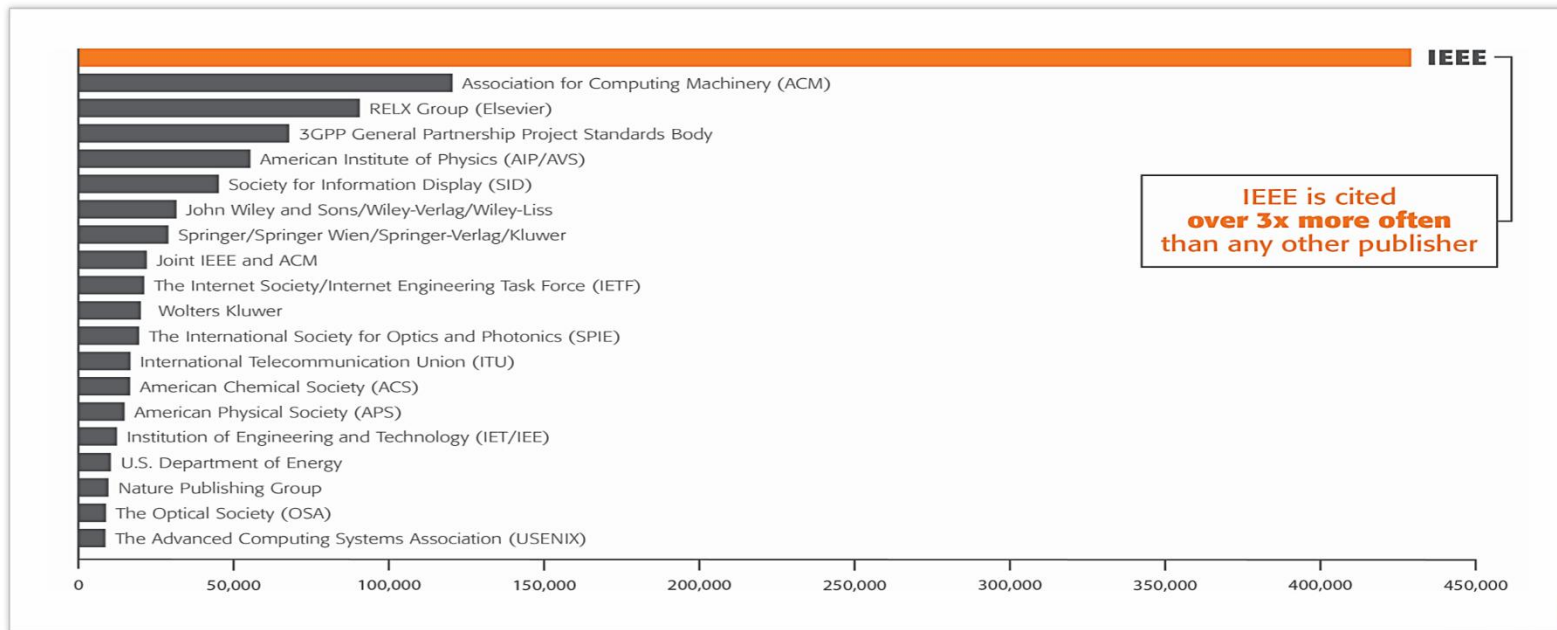


- 由 IEEE 和 IP.com 合作推出的创新专利发现与分析平台
- 可以语义检索 IEEE 全文文献及全球综合专利数据库。内容包括：
 - 拥有全球1亿600万专利和专利申请文献 (即将覆盖100多个机构)
 - IP.com 现有技术数据库 (全球最大最早的技术披露数据库)
 - 来自高校的可转让技术
 - 400多万 IEEE/ 期刊、会议、标准和预览文献
 - 超过23万份来自英国工程技术学会 (IET) 的期刊、会议论文, 以及其他非专利文献包括美国电影电视工程师学会 (SMPTE)、PubMed、IETF、IBM 技术披露文献
- 为公司、知识产权律师事务所、专利局和学术技术转让机构的IP 专业人员而开发

来自美国专利局的数据：IEEE文献如何驱动技术专利创新

IEEE Research Powers New Patents

- ▶ 研究表明IEEE出版物对专利申请过程至关重要：在专利中 IEEE 文献被引用量是任何其他一家出版社的三倍多。



IEEE 研究驱动专利创新



来源: 1790 Analytics LLC 2017年数据

根据出版社文献被专利引用量统计排名，IEEE仍居第一

- IEEE 文献被专利引用总量统计是其他任何一家出版社的三倍多
- 从1997年开始 IEEE 文献被专利引用量已经提高了838%
- 科技文献在专利中的重要性与日俱增

1790 Analytics LLC 对来自顶尖专利公司的科学参考资料进行了深入分析。



创新功能

检索功能更强大

我们的搜索引擎有两个突出功能——能够挖掘最相关概念的专利语义检索，以及更精准的布尔逻辑字段检索。

分析可视化报告

通过海量内置和自定义可视化报告，可以显示竞争情报、地理趋势和实时变化的市场格局。灵活提取和解读数据来解决业务问题。轻松检索出全面分析报告和PPT格式报告，包括标准普尔全球市场情报公司关系数据（S&P Global Market Intelligence Company Relationships Data）分析获得的企业树（corporate tree）。

使用语义专利地图可视化概念

可视化表示从关键文档内容中提取的概念和意义。轻松识别空白，并根据指定机构快速高亮显示文档。

还有更多功能可以简化您的工作流程

筛选（Filters）功能、协作工具、保存和导出结果。



InnovationQ Plus 能辅助整个技术转移流程

检索和识别现有技术

确定可专利性

全面掌握专利侵权清查/自由实施

更好地建构权利要求及专利申请

了解行业动态并发现机会

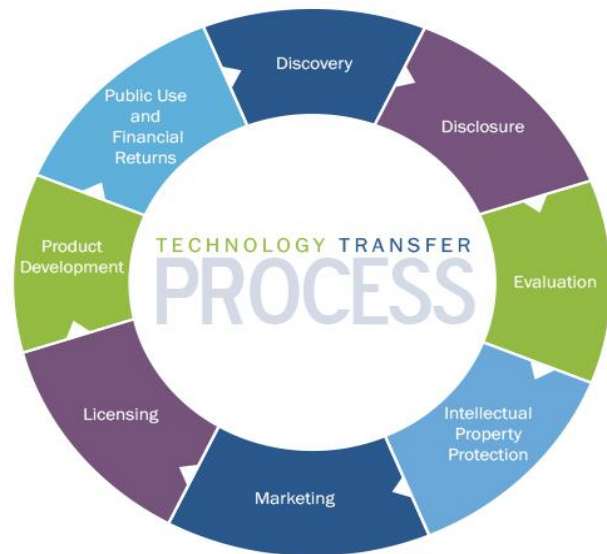
评估竞争中的定位和威胁

发现伙伴关系/许可机会

分析 IP 在市场中的定位

优化研发流程

更好的专利检索工具可以让您在整个创新过程中做出更明智、更具成本效益的决定。



Example of Technology Transfer Process from fredhutch.org

Source: Association of University Technology Managers (AUTM) www.autm.net



科研机构人员潜在的侵权风险

- ▶ “Academic researchers have regularly ignored patents on key technologies as a strategy to maneuver around patent thickets and freedom-to-operate issues, but they may be more at risk than they realize.”
- ▶ “An earlier report to the National Academy of Sciences suggests ...**regular infringement of patents by university researchers**, which is neither a sustainable nor a desirable solution.”

- Amy Yancey & C Neal Stewart Jr. **Are university researchers at risk for patent infringement?**
Nature Biotechnology 25, 1225 - 1228 (2007)

语义检索帮助研究人员尽早测试创新想法的新颖性和可专利性

Autonomous Driving System based on Deep Q Learning

3 Author(s) Takafumi Okuyama ; Tad Gonsalves ; Jaychand Upadhyay [View All Authors](#)

974
Full
Text Views



Abstract

Document Sections

- I. Introduction
- II. Deep Q Learning
- III. Cnn Overview
- IV. Experimetal Results
- V. Conclusion

Authors

Figures

References

Keywords

Metrics

Abstract:

This paper deals with the simulation results of an autonomous car learning to drive in a simplified environment containing only lane markings and static obstacles. Learning is performed using the Deep Q Network. For a given input image of the street captured by the car front camera, the Deep Q Network computes the Q values (rewards) corresponding to the actions available to the autonomous driving car. These actions are discrete angles through which the car can steer for a fixed speed. The autonomous driving system in the car enforces the action that has the highest reward. Our simulation results show high accuracy in learning to drive by observing the lanes and bypassing obstacles.

Published in: 2018 International Conference on Intelligent Autonomous Systems (ICoAS)

Date of Conference: 1-3 March 2018

INSPEC Accession Number: 18166877

Date Added to IEEE *Xplore*: 18 October 2018

DOI: 10.1109/ICoAS.2018.8494053

► ISBN Information:

Publisher: IEEE

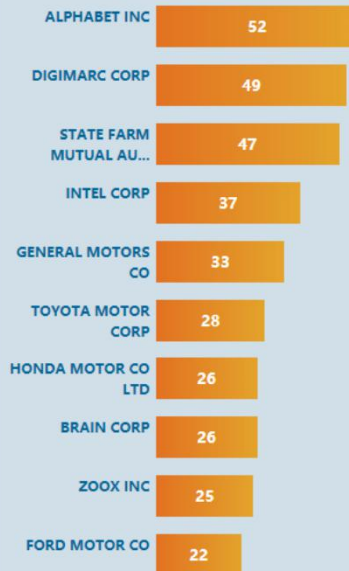
Conference Location: Singapore, Singapore

I. Introduction

The application of Artificial Intelligence (AI) and Machine Learning (ML) techniques to the development of autonomous driving systems is currently a hotbed of research. In Japan, the government has set aside enormous funds to make autonomous driving technology a reality for the 2020 Olympics, because it is considered safe and efficient mode of transportation.



Top organizations patenting in technologies mentioned in this article



Counts of US patents that are semantically relevant to this article's full text.

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IEEE

语义检索

The screenshot displays a patent search interface. At the top, a search bar contains the query "Autonomous Driving System based on Deep Q Learning". Below the search bar, the interface shows search filters and options, including "Discover", "Pats & Apps", and "Autonomous Driving System based on Deep Q Learning ... + 0 mods | 0 filters". The search results are displayed in a list format, with the first three results visible. Each result includes a title, a brief description, current assignees, and application information.

What are you looking for?

PATENTS & APPLICATI...

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Discover | Pats & Apps | Autonomous Driving System based on Deep Q Learning ... + 0 mods | 0 filters

Visuals | Query | Results | 0 Selected | Sort: Relevance | Cut-off: None | De-dup: Simple Family

1 - 50 | About 4.1M results

- 1. Fusion framework and batch alignment of navigation information for autonomous navigation**
 The present disclosure relates to systems and methods for navigating vehicles. In one implementation, at least one processing device may receive a first output from a first data source and a second output from a second data source; identify a representation of a target object in the first output;...
CURRENT ASSIGNEES: MOBILEYE VISION TECH LTD
WO2018229552A2 | WIPO APPLICATIONS | 20-DEC-2018
- 2. Navigation based on occlusion zones**
 Systems and methods enable detection of occlusion zones while navigating a host vehicle. In one implementation, a navigation system for a host vehicle includes at least one processing device. The at least one processing device is programmed to receive, from a camera, a plurality of images...
CURRENT ASSIGNEES: MOBILEYE VISION TECH LTD
WO2018132608A2 | WIPO APPLICATIONS | 19-JUL-2018
- 3. On-demand artificial intelligence and roadway stewardship system**
 The present disclosure relates to artificial intelligence based systems and method for determination of traffic violations. The present disclosure provides systems and methods that use deep convolutional neural networks and machine vision based algorithms to perform a task of detection and...
CURRENT ASSIGNEES: RATTI JAYANT
US20180211117 | US APPLICATIONS | 26-JUL-2018

深度语义分析与概念提取

Boolean Search:

Autonomous vehicle

Semantic Search:

Autonomous vehicle

Car

Automobile

Driver

Truck

Robot

GPS

Transport

Satellite

Navigation

Network

Locomotive

Fuel

Transport

Route

Passenger

Brake

Engine

Accelerator

Van

Pilot

Self driving

Wheels

Tram

Train

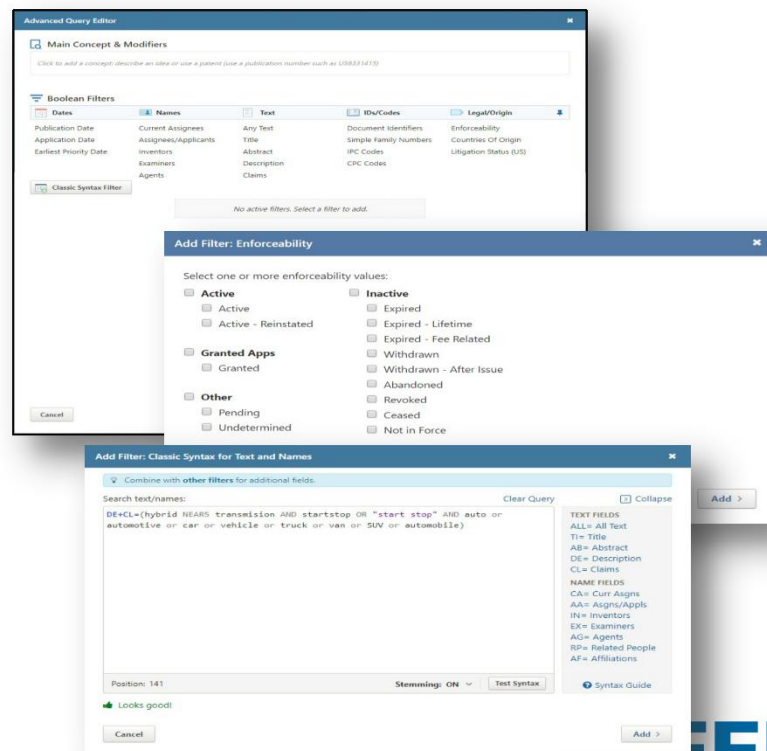
Bus

Taxi

核心功能：同时支持语义检索和布尔逻辑检索

智能语义检索采用自然语言检索，无需构造检索式，直接输入关键信息甚至一篇全文即可开始检索，基于关键概念提取技术挖掘深层隐藏信息

关键词检索提供传统布尔逻辑以及强大的检索式构造功能，可单独检索或与智能语义检索结合使用



核心功能：标准普尔企业关系数据

根据 S&P Global Market Intelligence Company 企业关系数据获取最全面的 Corporate Tree

- 超过14.5万个公司名称匹配成功
- 除了大型上市公司外还包括小型私营企业
- 可以查看公司详细信息和财务数据
- 更准确地创建完整的公司专利 portfolios，了解兼并、收购和成立子公司历史

The image displays three overlapping screenshots of the S&P Global Market Intelligence Corporate Tree Browser interface. The top-left screenshot shows a search for 'Apple' resulting in 11 ultimate parent and child companies. The top-right screenshot shows a detailed view of 'Apple Inc.' with fields for HEADQUARTERS, TYPE, STATUS, and INDUSTRY. The bottom screenshot shows a 'Company Info' window for 'Apple Inc.' with tabs for Overview, Financials, and Description, displaying details like TYPE (Public Company), STATUS (Operating), INDUSTRY (Technology Hardware, Storage and Peripherals), HEADQUARTERS (1 Infinite Loop, Cupertino, California, 95014, United States), and FOUNDED (1977).

Search for companies with patents

Google

Search

Data provided by:

S&P Global
Market Intelligence **Alphabet Inc.**
a.k.a. GOOGLE INC

INFO

HEADQUARTERSMountain View, California,
United States**TYPE**

Public Company

STATUS

Operating

INDUSTRY

Interactive Media and Services

86 children available

 Child Companies with Patents **Adometry, Inc.**
Texas, United States | Private Company | Operating Subsidiary | Software **Adscape Media, Inc.**
California, United States | Private Company | Acquired | Media **Agawi Inc.**
California, United States | Private Company | Operating Subsidiary | Software **Anvato Inc.**

Cancel

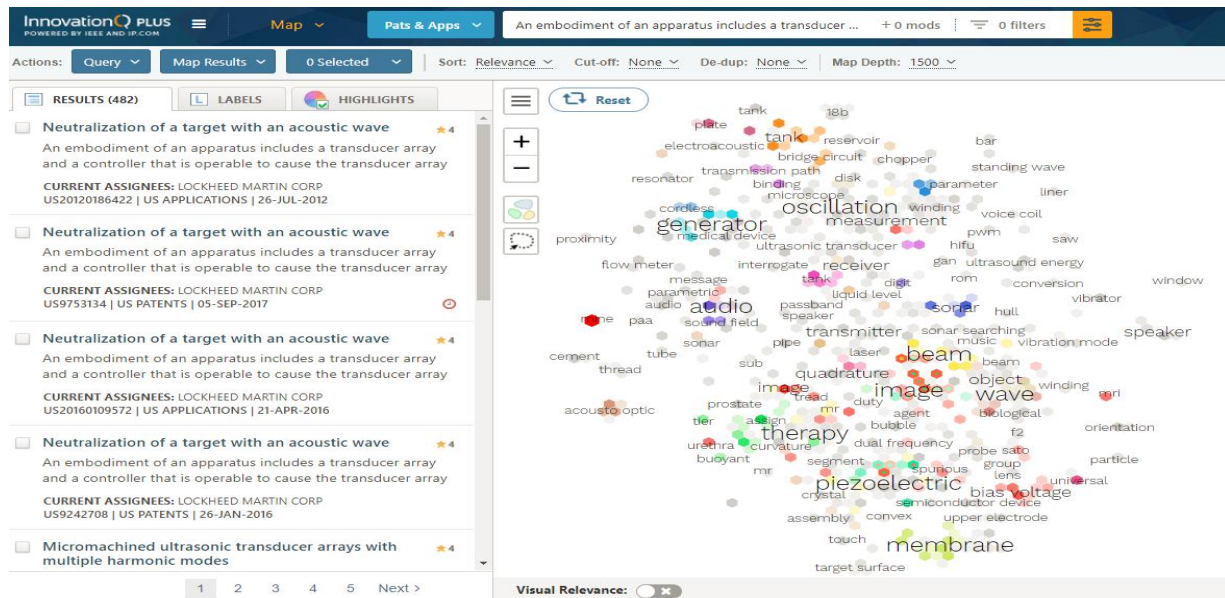
公司关系、拆分并购信息一目了然

< Back

87 Selected ^

核心功能：语义专利地图

- 查看各种文档：专利、非专利或者两者
- 基于概念相关性的语义聚类算法
- 覆盖概念、受让人和其他数据以显示之间的关系
- 识别潜在的投资机会，发现许可机会，并了解竞争者关注的地方



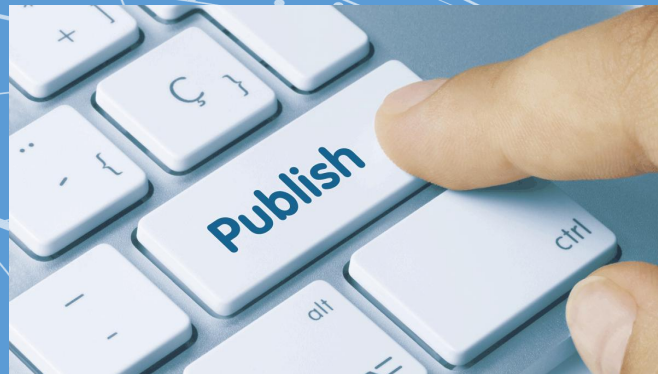
营销可许可/转化技术

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- 授权专利, 专利申请和未申请专利技术都可以上传至平台, 并提供一段公开可检索的描述摘要
- 当用户检索“ Licensable Technologies ” 时, 在全文范围进行检索, 结果显示可公开的描述摘要





IEEE Xplore API: 深化学科分析和服務

API对促进未来科研意义举足轻重

- “数据密集型研究的激增推动了数据挖掘新方式的出现” (*The STM Report*)
- 数据量的激增，需要新的文本呈现方式和数据挖掘方式 (*The Changing State of Researcher Workflow, Outsell*)
- 2010年只有少数几个出版社有API，现在却超过800多个，其中包括Elsevier和Springer开发的API
- 未来几年，机器学习和可移动方式将成为API的发展的重要方向 (*The State of APIs, SmartBear Software*)

学术客户API需求举例

“作为博士生，我的论文是关于机器学习研究.....我想找到过去20年中关于机器学习、神经网络以及相关领域的研究。使用Scopus或Web of Science检索，它们都没有没有收录会议论文。而使用IEEE检索“计算和人工智能”领域下的71个子主题，如果要检索40,000个结果的话，*Xplore*一次只展示200个结果，那么我将不得不浏览200页的结果。IEEE *Xplore*有API吗？这样我可以更快地完成这项研究。”

“我们是IEL用户最近为师生购买了Pure信息研究系统，如果把IEEE *Xplore*平台的元数据导入到该系统。IEEE有可供我们使用的API吗？费用是多少？”



2018年初发布：全新IEEE Xplore API平台

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IEEE Xplore® API Portal

Flexible access to the IEEE Xplore® Digital Library

Using the API

IEEE Xplore®
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Get an API key
Learn more...

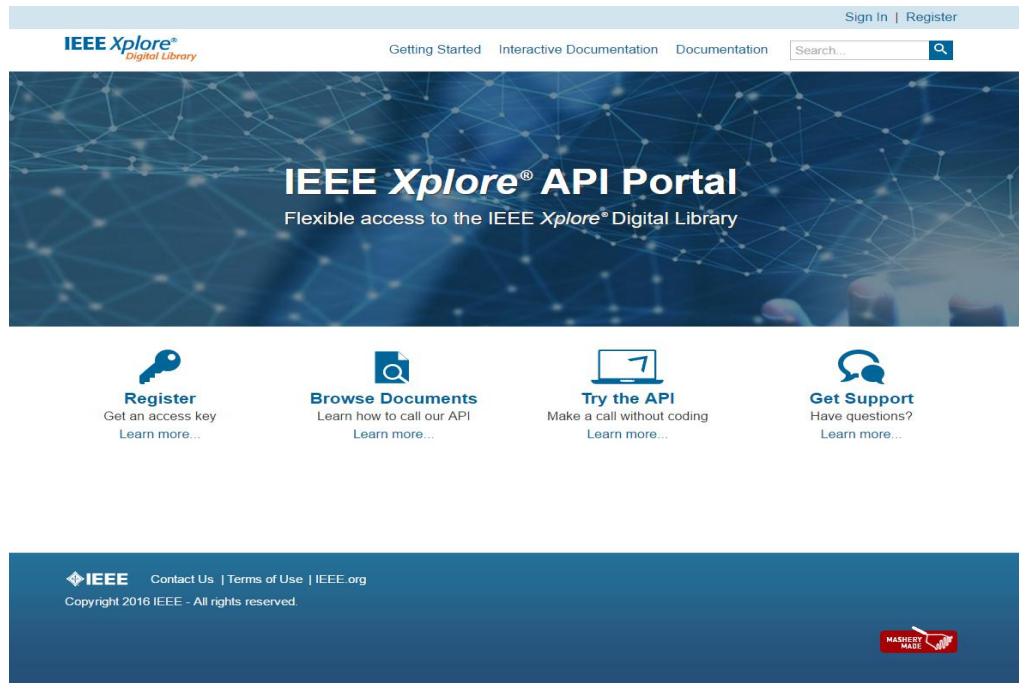
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欢迎各大师生试用 IEEE Xplore API 平台

- 进入网站：
<https://developer.ieee.org>
- 点击 “Getting Started”
并注册用户账号
- 系统产生API key后发送确认
邮件
- 在使用API之前确保key已经
被IEEE激活
- 浏览API文档





Thank you !

谢谢！

希望和各位老师在各方面进行深度合作！

**任何问题请随时联系 li.q@ieee.org
或 iel@igroup.com.cn**

