2019年第15期总182期

# 农业与资源环境信息工程专题

## 本期导读

### 前沿资讯

1. 使用地学数据确保土地使用权
2. 未来的农业是计算机化的
3. 美国农业部报告首次为美国农民保护措施提供综合数据

### 科技报告

1. 关于人工智能，机器人和“自主”系统的报告
2. 解锁区块链在农业领域的潜力

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2019年4月15日

## 前沿资讯

### 1．Using geodata to secure land tenure（使用地学数据确保土地使用权）

**简介：**Cadasta基金的使命是使用包括地理空间技术在内的创新技术服务，推动贫穷社区对全球土地和资源的使用权利。卫星图像和数据层有助于社区土地可视化和确定边界点，并将地理空间信息与土地及在其中的家庭和社区的初级调查数据关联系起来。Cadasta基金利用地理空间技术帮助社区相关管理然预案做出更好的决策，推进他们的土地使用权，并保障土地和其他自然资源自上而下的可持续获取。

**来源：**地理空间世界（印度）

**发布日期:**2019-04-07

**全文链接:**http://agri.ckcest.cn/file1/M00/06/69/CsgkOFytjpGADE4ZAAgQcrxtTwA397.pdf

### 2．The future of agriculture is computerized（未来的农业是计算机化的）

**简介：**What goes into making plants taste good? For scientists in MIT's Media Lab, it takes a combination of botany, machine-learning algorithms, and some good old-fashioned chemistry. Using all of the above, researchers in the Media Lab's Open Agriculture Initiative report that they have created basil plants that are likely more delicious than any you have ever tasted. No genetic modification is involved: The researchers used computer algorithms to determine the optimal growing conditions to maximize the concentration of flavorful molecules known as volatile compounds.

**来源：**EurekAlert

**发布日期:**2019-04-03

**全文链接:**https://www.eurekalert.org/pub_releases/2019-04/miot-tfo040119.php

### 3．USDA Report is First to Provide Consolidated Data on Conservation Practices by U.S. Farmers（美国农业部报告首次为美国农民保护措施提供综合数据）

**简介：**In a new report, USDA is offering consolidated data on ten years' worth of GHG-reducing conservation practices in the United States. Agricultural Conservation on Working Lands: Trends from 2004 to Present (PDF, 7.6 MB) combines USDA survey data to track adoption of practices including precision agriculture technologies, nitrogen management, no-till and mulch-till, and cover crop adoption, all of which reduce GHG emissions and/or store carbon in the soil. The report focuses on conservation practices for three major crops: corn, soy, and wheat, and reports trends by region and farm size. The report notes that these practices result in additional benefits, such as reduced production costs, increased yields, and improved soil and water quality.

**来源：**美国农业部（USDA）

**发布日期:**2019-03-12

全文链接:https://www.usda.gov/media/blog/2019/03/12/usda-report-first-provide-consolidated-data-conservation-practices-us-farmers

## 科技报告

### 1．Statement on artificial intelligence, robotics and 'autonomous' systems（关于人工智能，机器人和“自主”系统的报告）

简介：Advances in AI, robotics and so-called ‘autonomous’ technologies have ushered in a range of increasingly urgent and complex moral questions. Current efforts to find answers to the ethical, societal and legal challenges that they pose and to orient them for the common good represent a patchwork of disparate initiatives. This underlines the need for a collective, wide-ranging and inclusive process of reflection and dialogue, a dialogue that focuses on the values around which we want to organise society and on the role that technologies should play in it. This statement calls for the launch of a process that would pave the way towards a common, internationally recognised ethical and legal framework for the design, production, use and governance of artificial intelligence, robotics, and ‘autonomous’ systems. The statement also proposes a set of fundamental ethical principles, based on the values laid down in the EU Treaties and the EU Charter of Fundamental Rights, that can guide its development.

来源：欧盟

发布日期:2019-04-08

全文链接:http://agri.ckcest.cn/file1/M00/06/69/CsgkOFytjOKAYopOAAu1oG4zboY318.pdf

### 2．Unlocking the Potential of Blockchain for Agriculture（解锁区块链在农业领域的潜力）

简介：Blockchain networks can be completely open for everyone to join with a full permit to read and write on the blockchain (called a public, permissionlessblockchain). In many cases, it makes sense to at least include authentication of members (public, permissoned) or even to keep the network exclusive for a limited number of members (private blockchain, i.e. cooperating companies or government organisations). This is usually necessary if sensitive or private data will be saved on the network.

来源：全球农业与营养开放数据网（GODAN）

发布日期:2019-01

全文链接:http://agri.ckcest.cn/file1/M00/06/69/CsgkOFytkI-AMx29ACi6SJIGlgQ520.pdf