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INFN
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del 09/11/2021
VERBALE

BANDO 22965/2021 QUESTITI ORALE 1

1. Cosa si intende per tabella pivot in un foglio di calcolo?
2. Quali sono le funzioni di una CPU di un calcolatore?
3. Come vengono gestiti utenti e gruppi in un sistema operativo Mac Os X?
4. Quali sono le caratteristiche di un network di rete configurato con topologia a stella?
5. Quali sono le tipiche caratteristiche di un servizio di cloud computing dedicato all'archiviazione dati?
6. Read and translate the following text from the article: *This digital-hygiene routine will protect your scholarship* published on Nature magazine.

As part of my digital-hygiene routine, I search my own name and affiliation in an online search engine to make sure I'm not on editorial boards of predatory journals or conference committees I've never heard of. I check whether I have received unconsented acknowledgement, a form of authorship abuse, which 'credits' your support and contribution to a paper without your knowledge and suggests the work represents your views. If anything turns up, you can contact the publisher or the corresponding author of the study, copying in your own university administrators or research-integrity officers.

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BANDO 22965/2021 QUESTITI ORALE 2

1. Cosa si intende per riferimento incrociato in un documento Word?
2. Quali sono le caratteristiche della RAM in un calcolatore?
3. Come vengono gestiti utenti e gruppi in un sistema operativo Windows?
4. Quali sono le caratteristiche di un network di rete configurato con topologia ad anello?
5. Quali sono le tipiche caratteristiche di un servizio di cloud computing dedicato al calcolo e all'elaborazione dati?
6. Read and translate the following text from the article: *This digital-hygiene routine will protect your scholarship published on Nature magazine.*

Another part is consulting your researcher profile on bibliographic databases, including Dimensions and Google Scholar. Better still, subscribe to alerts and contact Dimensions, Scopus or Web of Science if your work is attributed to another scientist with your name, or vice versa. Use citation alerts to correct misrepresentations of your results.

This monitoring will help you find opportunities, too. Liaise with researchers you've worked with. Telling your co-authors about who has cited your work (and why) can strengthen ties and revitalize idle collaborations.

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VERBALE

BANDO 22965/2021
QUESTITI ORALE 3

1. In MS Word, come si associa una didascalia ad un'immagine o ad una tabella?
2. Quali sono i vantaggi di un disco a stato solido (SSD) rispetto ad un disco rigido (HDD) magnetico?
3. Come vengono gestiti utenti e gruppi in un sistema operativo Linux?
4. Quali sono le caratteristiche di un network di rete configurato con topologia bus?
5. Quali sono le tipiche caratteristiche di un servizio di cloud computing SaaS (Software as a Service) quale Dropbox?
6. Read and translate the following text from the article: *Machine learning enables global solar-panel detection* published on Nature magazine.

Many governments do not maintain a central database listing the size and locations of their country's photovoltaic systems — installations of solar cells that generate electricity. Remote-sensing approaches using machine-learning techniques have the potential to collect these data by detecting such facilities in satellite images. Writing in *Nature*, Knutwagen *et al.*¹ show how machine learning can be used to mine imagery of the entire globe to produce an inventory of commercial-, industrial- and utility-scale solar installations. The authors locate more than 68,000 such facilities, many of which were not on record.

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QUESTITI ORALE 4

1. In MS Excel, come si inserisce una funzione in una tabella e si usano, per le funzioni che lo permettono (ad esempio SUMIF, IFERROR, MAXIFS, ...), condizioni di selezione su uno o più insiemi di celle?
2. Cosa si intende per BIOS in un calcolatore e quali sono le principali caratteristiche e funzioni?
3. Come viene configurata un'intefaccia di rete, wifi o ethernet, in un sistema operativo Windows?
4. Quali sono i principali protocolli utilizzati in un server di posta elettronica e quali le loro caratteristiche (funzioni, porte, ...)?
5. Quali sono le tipiche caratteristiche di un servizio di cloud computing?
6. Read and translate the following text from the article: *Machine learning enables global solar-panel detection* published on Nature magazine.

Solar panels come in various sizes and can be placed on the ground, on top of structures or even on water. They can therefore be used as a distributed energy resource — that is, at relatively small scales, close to where electricity is needed. This also makes it difficult to keep track of photovoltaic installations. However, researchers, government agencies, grid operators and other stakeholders need detailed information about these distributed resources if they are to plan land use, monitor the adoption of photovoltaic technology and integrate it into the power grid. Policymakers also need to consider the equity of solar energy: are some people more able to take advantage of its benefits than others²?

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QUESTITI ORALE 5

VERBALE

1. In MS Word, come si inserisce un indice di paragrafi, figure e tabelle?
2. Cosa si intende per porta ethernet di un calcolatore e quali sono le sue caratteristiche e funzioni?
3. Come viene configurata una coda di stampa in un sistema operativo Windows o Mac OS X o Linux?
4. Quali sono le caratteristiche e i protocolli utilizzati tipicamente in un directory service (ad esempio MS Active Directory, Apple Open Directory, OpenLDAP, IBM Tivoli, ...)?
5. Quali sono le tipiche caratteristiche di un servizio di cloud computing SaaS (Software as a Service) quale GMail?
6. Read and translate the following text from the article: *Machine learning enables global solar-panel detection* published on Nature magazine.

Machine-learning approaches for identifying photovoltaic installations in high-resolution aerial and satellite imagery have grown at an impressive speed. The method was first proposed^{4–6} in 2016 — for example, as a way of finding residential installations in an area of 135 square kilometres across Fresno, California⁴. Only two years later, machine learning was used to scan satellite images of the entire continental United States for solar arrays⁷, providing the first complete picture of residential installations in that country. Around the same time, utility-scale photovoltaic installations were also mapped for Japan^{8,9} and China⁹. Kruitwagen *et al.* now report another leap for the technique, with their analysis of 72.1 million square kilometres of Earth's surface to detect commercial-, industrial- and utility-scale photovoltaic installations around the world.

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