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4.12

MARISSA MAYER TAKES ON THE WORLD

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SERVICES
ARE WHERE
IT'S AT—
AND SHE'S
THE BOSS

DEFLECTING
ASTEROIDS

THE RELAY
REBORN

TOP 10
TECH
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COVER STORY

26 GOOGLE'S CHIC GEEK

Marissa Mayer, head of Google's fast-growing local and location technologies, encapsulates the company's personality—and vice versa.

By Tekla S. Perry



COVER: GABRIELA HASBUN; THIS PAGE: TOP: MCLAREN; AUTOMOTIVE; BOTTOM: GABRIELA HASBUN

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Long relegated to the annals of computing history, the electromechanical relay has gotten a microscopic makeover, one that could pave the way to a future of ultralow-power chips. *By Tsu-Jae King Liu, Dejan Marković, Vladimir Stojanović & Elad Alon*

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Though electric drive is now a fixture in our annual list of technically interesting automotive developments, this year the internal combustion engine is striking back. *By Lawrence Ulrich*

50 DEFLECTING ASTEROIDS

In any given decade, the chances are slim that a mountain-size rock will collide with Earth, but if one ever does, it will ruin your whole day. Now is the time to prepare countermeasures based on solar sails, a technology that can also find application in the exploration of space. *By Gregory L. Matloff*



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This is the year we plant our flag firmly in the smartphone and tablet realms. First up: an app for our award-winning weekly podcast series, "Techwise Conversations," hosted by Senior Associate Editor Steven Cherry. It's available now from the Amazon app store and from Apple via the Wizzard Media app. For details, go to <http://spectrum.ieee.org/twcapp>.



THEINSTITUTE.IEEE.ORG AVAILABLE 9 APRIL



KEEPING LAPTOPS ALIVE IN HAITI
When a primary school in Lascahobas, Haiti, received 400 laptops from the nation's ministry of education, one important factor was overlooked: how to keep the batteries charged. With funding from the IEEE Foundation, a group that included IEEE Member Laura Hosman and her students built a solar-powered charging station for the school.

HISTORY CENTER GETS BUSY PUBLISHING

As part of its mission to bring the history of technology to a wider audience, the IEEE History Center has been busy with a number of initiatives. The center recently published *Bell Labs Memoirs: Voices of Innovation* and *The U.S. Federal Government and Innovation: A Brief History*, among other publications.

IEEE TECHNOLOGY NAVIGATOR ADDS NEW FEATURES

The online tool for browsing through IEEE's vast collection of technical resources now has a more user-friendly interface, making it easier to find information and adding more ways to find the content you're seeking.

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Managing Safety and Security Compliance in Energy and Utilities Industry

A New System-Level Design Methodology for FPGA-Based Smart Grid Power Electronics

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