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Making Every Bit Count

2016 IEEE Medal of Honor recipient **G. David Forney Jr.** on math, modems, and Maxwell's demon **P. 44**

I Want to Hold Your Hand

NEW PROSTHETICS HAVE THE RIGHT TOUCH P. 28

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On the cover and above **Photographs for *IEEE Spectrum* by Mike McGregor**

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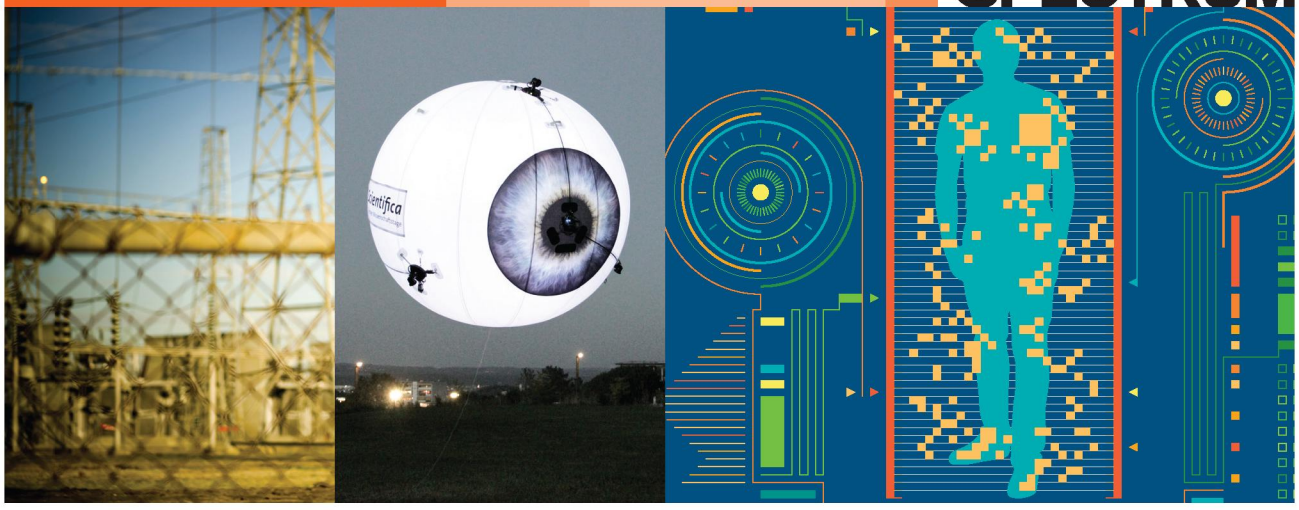

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New Biomedical Blog
The Human OS reports on the wearable sensors, big-data analytics, and implanted devices that are making health care smarter. Find out about the future of medicine: http://spectrum.ieee.org/blog/the-human-os

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- **CONNECTED CATTLE** Dairy farmers are now attaching wearable fitness trackers to their cows. One device tracks cows' movements, location, and health to help improve dairy production and reduce labor costs. Another could make breeding cows more efficient.

- **PRINTABLE FOOD** An IEEE member cofounded the startup that developed Foodini, a 3-D printer that makes pizza, cookies, and other edible treats.

- **HISTORY OF THE MICROWAVE OVEN** The first such appliance was developed in 1946, after an engineer discovered that microwave communication equipment could be used to heat food. By the mid-1970s the ovens were selling in the millions.

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