



Welcome to Vol. 9 No. 5 of Design Science News, the e-bulletin of the Buckminster Fuller Institute

Design Science News brings you news from around the world related to humanity's option for success and comprehensive design science. It also features updates from BFI and periodic special offers for our members.

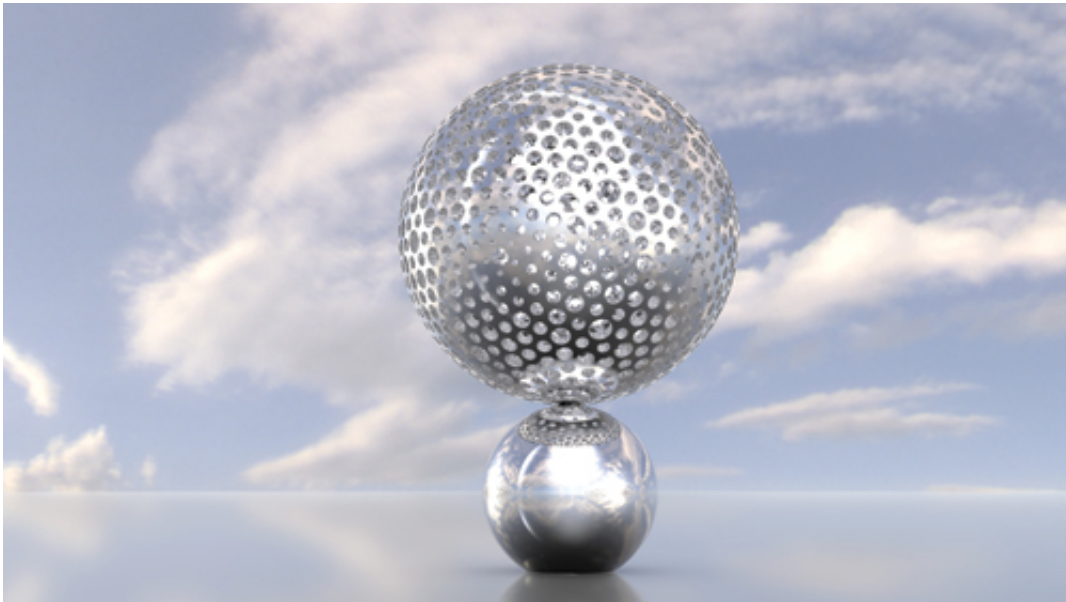
Join us for a week of Buckminster Fuller events in June!

THE BUCKMINSTER FULLER CHALLENGE

The Buckminster Fuller Institute, The Center for Architecture, and Metropolis Magazine invite you to attend a week of gallery openings, panel sessions, film screenings, and celebrations taking place June 23rd through June 28th in New York City. If you're planning to join us, make sure you RSVP soon as most events are first come first served and space is limited (see the event listing for details on how to RSVP).

To view the list of events, please visit: bfi.org

Buckminster Fuller Challenge prize sculpture announced

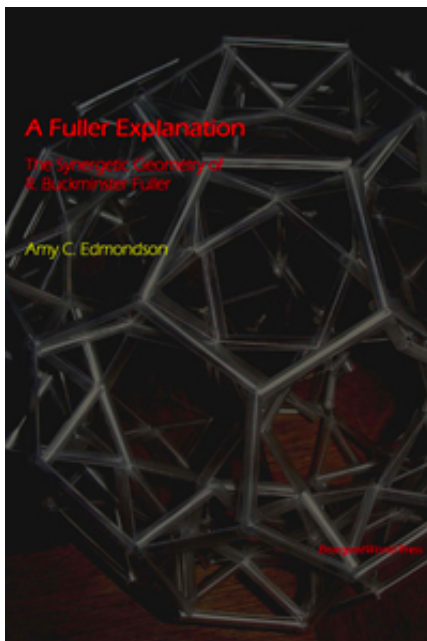


The Buckminster Fuller Institute is pleased to present the Buckminster Fuller Challenge Prize sculpture, [OmniOculi](#), created by artist Tom Shannon. The OmniOculi will be presented to Dr. John Todd, winner of the 2008 Buckminster Fuller Challenge, along with a check for \$100,000 at a press conference and conferring ceremony, taking place at the Center for Architecture, 536 La Guardia Place, New York City, Monday, June 23rd, 2008 at 2pm.

“The OmniOculi brilliantly embodies the spirit of The Buckminster Fuller Challenge and I anticipate it will become the icon by which our prize program is identified,” said Elizabeth Thompson, Executive Director of the Buckminster Fuller Institute. “Artist Tom Shannon, with geodesic expertise provided by Fuller colleague Joseph Clinton, has somehow captured the dazzling beauty and geometric complexity at the heart of nature’s design, as well it’s infinite, universal and ever-changing interconnectedness. It is just amazing.”

To download Tom Shannon's full statement about the piece [click here \[pdf\]](#)

**NEW IN OUR ONLINE STORE: A Fuller
Explanation: The Synergetic Geometry of R.
Buckminster Fuller by Amy C. Edmondson**



This new edition revives an indispensable classic, originally described as “the long-awaited and outstanding new book that explains Buckminster Fuller’s Synergetics. The author, who worked closely with Fuller the last three years of his life, realized that the 1400 pages of dense prose in Fuller’s Synergetics can be explained in clear terms.”

“As Fuller’s personal engineer, Edmondson gained an intimate understanding of synergetics and its potential for making humans a success on Earth. Her clear narrative translates the Synergetics books into familiar language. Read alone the book is the clearest available introduction to energetic-synergetic geometry.” - J. Baldwin. [Order your copy today!](#)

TRENDS & PERSPECTIVES

Scientific breakthrough decomposes plastic bag in three months!



This month heralds a world-changing scientific breakthrough as a teenage prodigy has developed a new way to decompose plastic bags in just three months! A 16 year old named Daniel Burd conducted his experiment as a science fair project, and ended up with a revolutionary solution to the plastic plague that has laid waste to ecosystems around the world. By isolating the microorganisms that break down plastic, Burd's research has yielded an industrially scalable way to cinch closed the material's millennium-spanning life-cycle.

Plastic bags, once icons of customer convenience, cost more than 1.6 billion barrels of oil per year and leave the environment to foot the bill. The statistics are scary - each year the world produces 500 billion bags, and Earth Resource Foundation states that "all the plastic that has been made is still around in smaller and smaller pieces." Meanwhile the UN Environment Program estimates that there are 46,000 pieces of plastic litter in every square mile of ocean, and a swirling vortex of trash twice the size of Texas has spawned in the North Pacific.

We've seen plenty of progressive legislation that targets the production and distribution of plastic bags in Ireland, Israel, San Francisco, and China. Daniel Burd's breakthrough provides a method to deal with the billions of bags already in existence and wreaking havoc on wildlife, soils and oceans. (Source: [Inhabitat](http://www.inhabitat.com))

<http://www.inhabitat.com/2008/05/28/breakthrough-decomposes-plastic-bags-in-three-months/>

At MIT, low-tech inventions with a high impact



Amy Smith is not an easy person to track down. Even during the school year, this inventor and instructor at the Massachusetts Institute of Technology hops over to remote African towns and Latin American villages. When she is on campus, the best bet for finding Ms. Smith is in her basement laboratory - a cluttered workshop with a long whiteboard, exotic souvenirs, and basic tools - known as D-Lab.

Unlike most of MIT, Smith's workshop is far from cutting-edge. There are no next-gen computers, no vials of polysyllabic chemicals, no fancy equipment. The space is decidedly low-tech - and that's the point. D-Lab students pinpoint practical problems in the developing countries and then brainstorm and build solutions. Because the people they are trying to help are below the poverty line, the class's inventions must be simple, effective, and most important, inexpensive.

"What people need is usually completely different from what we imagine sitting here in America," says Jodie Wu, a mechanical engineering junior, whose group went on a school-sponsored trip to Tanzania over winter break. The idea for her current project - a mobile, pedal-powered corn sheller - came from a conversation with a Tanzanian bike mechanic.

The D in D-Lab stands for three things - development, design, and dissemination - and each is the theme of a different semester-long class. The first class travels to developing countries and identifies issues that the lab can tackle during the next term. For example, in heavily deforested countries, the students found an alternative to firewood.

The design class - often filled with different kids - takes on the practical engineering. Here they planned and built a charcoal-briquette maker, a metal press that can make clean-burning fuel out of agricultural waste. "It could be corn cobs in Tibet and sugar-cane waste in Haiti," says Derek Brine, a teaching assistant.

The third phase takes the students' work and deploys it across the globe.

“These classes are the ones I wish I could have taken during my time here [as a student],” says Smith, herself an MIT-trained mechanical engineer.

D-Lab forces students to set aside their high-tech training. “Though it appears like a step backward in terms of technology, you are moving forward because you learn to do more with less,” says Ms. Wu. (Source: [Christian Science Monitor](http://www.csmonitor.com/2008/0508/p16s01-stgn.html))

<http://www.csmonitor.com/2008/0508/p16s01-stgn.html>

Simple accessories could turn mobile phones into useful medical devices



image via [Core77](#)

Robi Maamari stares intently at the screen of his mobile phone. The student is not squinting to tap out yet another daft text message, but looking carefully for the faint blue dots that are the tell-tale diagnostic signature of malaria.

Mr Maamari is a member of a research team led by Dan Fletcher, a professor of bioengineering at the University of California, Berkeley, which has developed a cheap attachment to turn the digital camera on many of today's mobile phones into a microscope. Called a CellScope, it can show individual white and red blood cells, which means that with the correct stain it can be used to identify the parasite that causes malaria. Moreover, by transmitting an image directly over the mobile network, the CellScope could greatly help with the remote diagnosis and monitoring of many illnesses.

The project, which began as a challenge by Dr Fletcher to his undergraduate students to turn their mobile phones into microscopes, gained momentum when they came up with some practical designs. Although the first prototype covered a tabletop, the latest uses commercially available lenses fitted inside a tube that snaps directly onto the phone. One end has a clip for holding a sample slide, and different levels of magnification are possible. The team thinks the attachments, if mass-produced, could be made smaller and tougher, and sell for less than \$100.

The diagnosis of malaria was the first test because it demands a high-quality image. In recent weeks the team has successfully identified its first samples. Eventually CellScope promises to extend the clinician's range. Someone with a small amount of training would be able to take and stain blood samples, and then capture and transmit images to an expert who could carry out the diagnosis.

The images also help create digital records, which would make it easier to monitor and verify the success of a drug trial or the introduction of mosquito nets in a remote area, for instance.

Not surprisingly, interest in the project is growing. Microsoft has donated some camera phones equipped with satellite-navigation devices and Nokia has been in touch. Even the research arm of America's defence department has expressed an interest. Once a final prototype is ready, it may be tested by doctors in the Philippines and Colombia. (Source: [The Economist](http://www.economist.com/science/displaystory.cfm?story_id=11367989))

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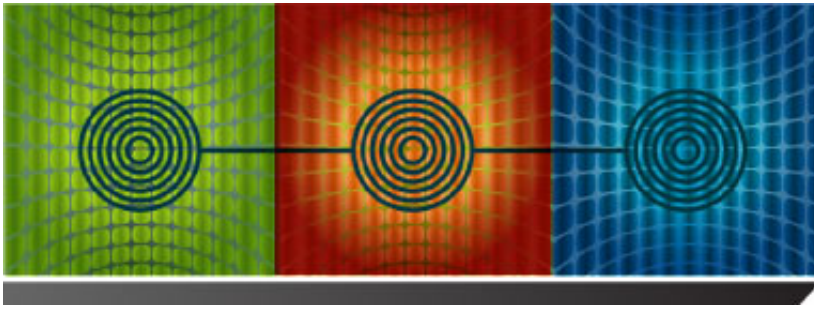
RESOURCES

Bucky on MySpace!



Bucky is alive and well in the world of MySpace with more than 4,000 virtual friends! Check out his homepage [here](#)

Center for Collective Intelligence



While people have talked about collective intelligence for decades, new communication technologies - especially the Internet - now allow huge numbers of people all over the planet to work together in new ways. The recent successes of systems like Google and Wikipedia suggest that the time is now ripe for many more such systems, and the goal of the MIT Center for Collective Intelligence is to understand how to take advantage of these possibilities.

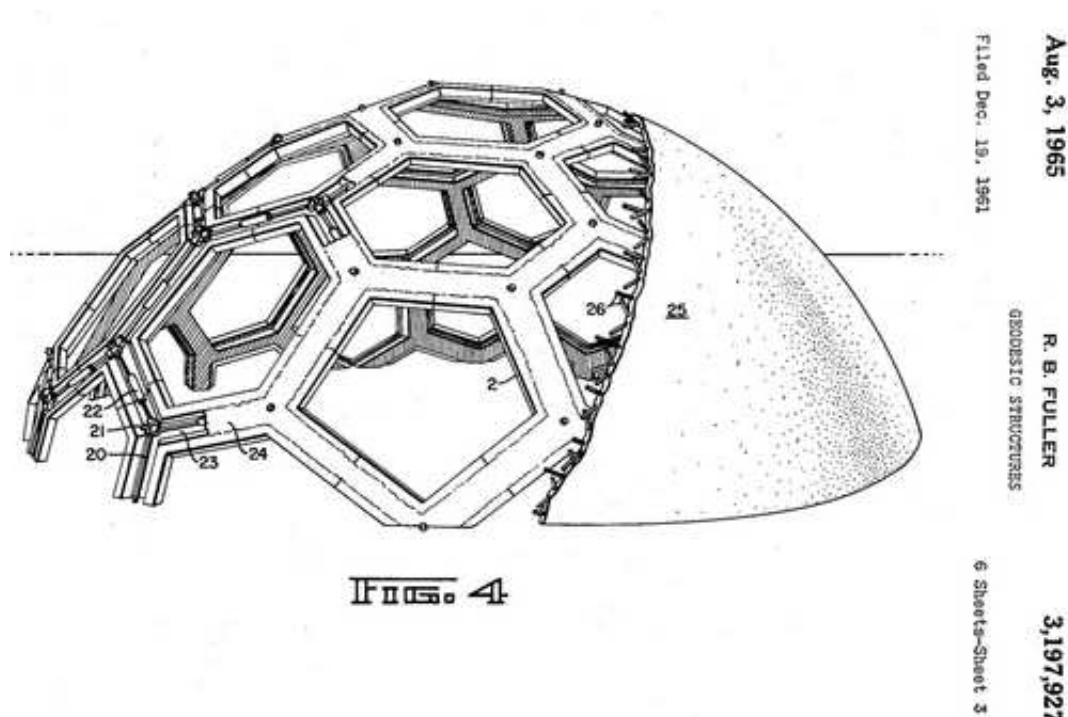
Our basic research question is: How can people and computers be connected so that - collectively - they act more intelligently than any individuals, groups, or computers have ever done before?

The Center for Collective Intelligence brings together faculty from across MIT to conduct research on how new communications technologies are changing the way people work together.

[Center for Collective Intelligence](http://centerforcollectiveintelligence.org)

EVENTS

Synergetics Collaborative's Sixth Annual Summer Workshop



July 11-14, 2008 in Oswego, NY

The Synergetics Collaborative's Sixth Annual Summer Workshop in Oswego will focus on "Geodesic Structures: Build a Dome for Bucky's Birthday." Included among a distinguished group of individuals that will guide the workshop are:

- Thomas Zung, partner of Buckminster Fuller, Sadao and Zung Architects; Board member, Synergetics Collaborative
- Blair F. Wolfram, President of Dome Inc.
- John Belt, Department of Technology SUNY Oswego; Vice President & President-Elect, Synergetics Collaborative
- Joseph D. Clinton, President of Clinton International Design Consultants; President, Synergetics Collaborative

Topics to be covered in the workshop:

- History of geodesic structures.
- History of Fuller, Sadao and Zung Architectural Projects.
- Introduction to light and commercial geodesic structures.
- Definitions and geometry of geodesic topology.
- Form finding and analysis design tools as applied to geodesic structures.
- Commercial construction methods and techniques

The workshop will consist of an interweaving of presentations, open discussions, photo displays, patents and architectural detail parts exhibit, and participants' displays for a Comprehensive Anticipatory Design Science Solution for an ecologically friendly shelter. Monday, 14 July 2008, the last day of the workshop, will be devoted to building a dome(s) to celebrate R. Buckminster Fuller's birthday.

For more details, visit the [Synergetics Collaborative website](#)

Sustainable planet film festival

Sustainable Planet Film Festival Fundraiser / Cocktail Party

DONATION : \$ 50 (tax deductible)
(includes your access to the film festival, on July 19th)
add \$ 10 for a membership to the Chelsea Art Museum

TUESDAY, JUNE 10th, 2008
7.00 – 9.00 pm

556 West 22nd street (at 11th av.) ([Map](#))

Come and Celebrate the "Sustainable Stewards of 2008"

Pamela Peeters, Eco Entrepreneur will introduce her new book - [Urban Ecology](#)

The [Sustainable Planet Film Festival](#) is produced by Pamela Peeters Productions.
For media inquiry and press release, visit pamelapeeters.com



CHELSEA ART MUSEUM
HOME OF THE MIOTTE FOUNDATION

For more information about the film festival [visit the website](#))

<http://www.sustainable-planet.net/>

Have you come across interesting Design Science news articles, resources, or events?

We invite you to forward them so we can consider them for inclusion in future e-bulletins. Send them to: [designsciencenews \(at\) bfi.org](mailto:designsciencenews@bfi.org)

If we use your suggestion for future e-bulletins and you would like to be credited by name, please indicate it in your e-mail.

Thank You!

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