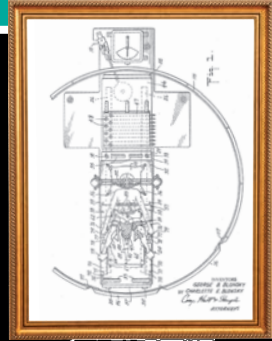


IgBILL



Ig[®] Nobel Prize Ceremony

2013

THIS YEAR'S THEME: FORCE

Twitter: #IgNobel

About the Ig Nobel Prizes

Ig Nobel Prizes are awarded for achievements that first make people LAUGH, and then make them THINK. The Igs are intended to spur public curiosity and interest in science and other fields of endeavor. Ten prizes are awarded each year. Winners travel to the ceremony at their own expense.

The Ig Nobel Prize winners are, despite possible appearances to the contrary, real. Their achievements are well documented.

What to expect tonight: Imagine every ceremony you have ever had to endure. Loop them all together, at high speed, upside down. Add ten Ig Nobel Prize winners. That's the Ig Nobel Prize ceremony.



Paper airplanes are a tradition at the Ig Nobel Prize Ceremony. Modern flight regulations apply. Listen for the Special Announcement just before the start of the ceremony.

There will be two (2) designated paper airplane deluge periods. Prior to each, please ready your aircraft – but do not yet launch them.

See page 5 for more details.

The Twenty-Third 1st Annual Ig[®] Nobel Prize Ceremony

Thursday, September 12, 2013, 6:00 pm
Sanders Theatre, Harvard University

Reluctantly inflicted on you by
the international science humor magazine

Annals of Improbable Research
(AIR)

and co-sponsored by

The Harvard-Radcliffe Science Fiction Association
The Harvard-Radcliffe Society of Physics Students

The theme of this year's ceremony is **Force**

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are each reg. U.S. Pat. and Tm. Off.



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of the Ig Nobel Prize Ceremony Since 1996

Harvard-Radcliffe Society of Physics Students

Theoretically Proud Experimental Co-Sponsors
of the Ig Nobel Prize Ceremony Since 2000

NPR Broadcast

On the day after Thanksgiving, listen to the traditional Ig Nobel Broadcast on National Public Radio (NPR)'s *Science Friday* with Ira Flatow. Many of the previous year's Ig broadcasts are at www.ScienceFriday.com. You can see video highlights of several past ceremonies at www.improbable.com.

SCHEDULE OF EVENTS

Pointless Preamble

- Pre-ceremony Lobby AccordioConcert (5:00, in the lobby)
- Pre-ceremony concert (5:40, in the theatre)
- Ceremony begins (**6:00, in the theatre**)
- Paper Airplane Deluge #1
- Entrance of the New Winners
- Introduction of the Nobel Laureates and other Ignitaries
- The Traditional Ig Nobel “Welcome, Welcome” Speech

Everything Else**

- **Awarding of the 2013 Ig Nobel Prizes*** (weather permitting)
- *The Blonsky Device: A Mini-Opera in 4 Acts**
- The 24/7 Lectures
- Introduction of Past Winners*
- Paper Airplane Deluge #2
- The Win-a-Date-With-a-Nobel-Laureate Contest
- Other Things*
- The Traditional Ig Nobel “Goodbye, Goodbye” Speech
- Disappearance of the Audience

* scattered throughout the evening
** but maybe in some different order

Paper Airplanes

In the interests of safety and recycling, there will be two (2) special paper-aeronautic moments tonight: one at the ceremony's beginning, the other at the midpoint.

Please hold your paper airplanes in readiness. Then fly them only – and profusely, to the point of deluge – during those two special moments. Please AIM FOR SAFETY!

An authority figure will make it very clear when each of those moments arrives.



Roy Glauber, Ig Nobel paper airplane sweeper, and Nobel Laureate.

Pre-Ceremony: **mini-Concerts**

(One in the lobby, then another in the theatre)

Before the ceremony, watch for two special mini-concerts. At 5:00, in the lobby, the **Boston Squeezebox Ensemble** will play an AccordionConcert, insinuating strangely familiar tunes into your consciousness.

At 5:40, in the theatre, electric-harp dynamo **Deborah Henson-Conant**, founder & curator of the Burnt Food Museum, will perform “Show of Force,” a **forcefully musical spectacle**.

This Year’s Theme

The theme of this year’s ceremony is **FORCE**. The theme applies to various goings-on, though not necessarily (and not necessarily not) to any of the particular achievements being honored with an Ig Nobel Prize.

Live Webcast

Tonight we will be joined from afar, in spirit and electro-mechanically, by teeming hordes watching via the Internet. The Ig Nobel Prize Ceremony has been webcast annually beginning in 1996, when webcasting was a thing barely dreamt of, and heroically accomplished. Very special thanks to **The Harvard Extension School** and to **CS-50** for helping make this year’s webcast happen. Video highlights of many past ceremonies are online at www.improbable.com.

Celebrity Bacteria

The theme of the 2010 ceremony was Bacteria. Several trillion celebrity bacteria were seated in or on the audience. Many of them are still here. See if you can spot them.

The Ig Informal Lectures!

SATURDAY afternoon, Sept 14, 2013, 1:00 pm

MIT Building 26, Room 100
77 Mass. Ave., Cambridge

FREE!
(But seating is limited,
so get there early)

A Saturday Treat...

At tonight’s Ig Nobel Prize Ceremony, each winner is allowed just ONE MINUTE to deliver an acceptance speech. But of course you’ll want to hear more juicy details, and ask them questions, and so...

You are invited to come enjoy a lazy, lively half-afternoon of brief (FIVE MINUTES each, plus questions & answers), high-spirited talks by **the 2013 Ig Nobel Prize winners** — **and stories about George and Charlotte Blonsky, told by their nearest living relatives**.



Produced by the
Annals of Improbable Research

in cooperation with

The MIT Press Bookstore
(mitpress.mit.edu/bookstore)

“The Blonsky Device”

World Premiere mini-opera in four (4) acts

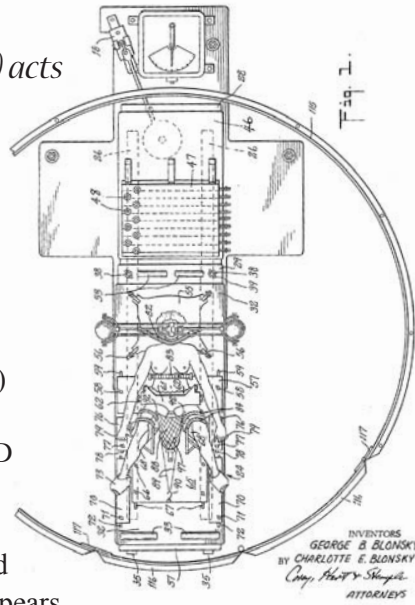
The Blonsky Device is a mini-opera in four acts scattered throughout the ceremony.

The story: The story is inspired by the life and work of **George and Charlotte Blonsky**, the married couple who were granted a patent (US #3216423) in 1965 for an “APPARATUS FOR FACILITATING THE BIRTH OF A CHILD BY CENTRIFUGAL FORCE” — the about-to-be-mother is strapped onto a circular table, and the table is then rotated at high speed. The image you see here appears in the patent.

The Blonskys: In 1999 the Blonskys were posthumously awarded an Ig Nobel Prize in the field of managed health care. Their niece **Gale Sturtevant**, and her husband **Don**, attended that year’s Ig Nobel ceremony, where they accepted the prize on behalf of George and Charlotte Blonsky. The Sturtevants will be on stage, tonight, for the premiere of this opera.

(On Saturday afternoon, at the Ig Informal Lectures at MIT, Gale and Don Sturtevant will speak briefly about the Blonskys. This is especially fitting because George Blonsky was a proud graduate of MIT, where he studied mining engineering, graduating in 1925. George subsequently enjoyed a long career, spread across many countries, as a mining engineer. He and Charlotte eventually settled in New York City, where occurred the great idea. In later life, The Blonskys moved to San Jose, California, where they lived with the Sturtevants.)

The biomechanics of childbirth: The evening will include a special one-minute lecture, “The Biomechanical Forces Involved in Human Childbirth,” by **Daniel Lieberman** (Harvard Professor of Biological Sciences). In, 2009, he and two colleagues were awarded an Ig Nobel Prize for physics, for explaining why pregnant women don’t tip over.



The Words: **Marc Abahams** wrote the story and lyrics (this is his eighteenth Ig Nobel opera libretto). The Blonsky patent really did arise from an event similar to what happens the first act of the opera. The Blonskys were in fact childless; the opera’s thrilling finale is a bit fanciful.

The Music: The tunes were composed, in advance, with music by **Charles Gounod** (Act 1), **Ludwig van Beethoven** (Acts 2 and 3), and **Gioachino Rossini** (Act 4).

Tonight’s performance: **Henry Akona** arranged, orchestrated, and is directing *The Blonsky Device*.

The singers: *The Blonsky Device* stars **Maria Ferrante** (soprano) as Charlotte Blonsky, **Martin Kelly** (tenor) as George Blonsky, **Philip Lima** (baritone) as The Zookeeper, and **Miles Rind** (bass) as The Patent Examiner. The **Nobel Laureates** will perform in supporting roles.

The orchestra: The singers are backed by an all-star biomedical orchestra, “The Forces of Nature,” composed of Harvard and MIT physicians and researchers:

Accordion: **Thomas Michel** (Harvard Medical School [HMS] Professor of Medicine)

Violin: **Ted Sharpe** (computational biologist at the Broad Institute)

Cello: **David Fisher** (HMS Professor and Chair of Dermatology)

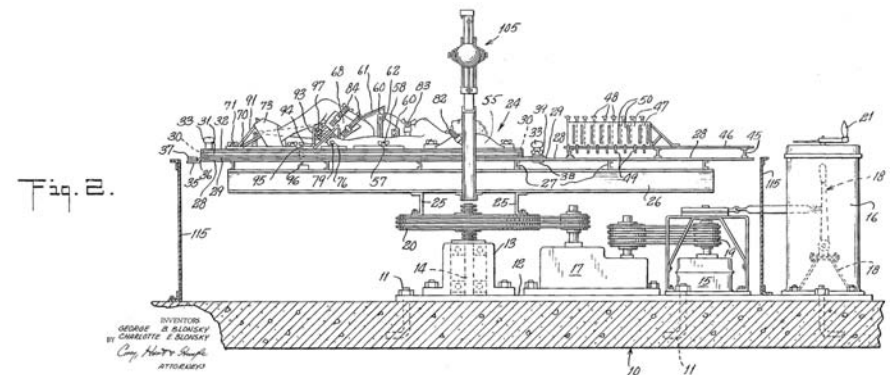
Flute: **Elizabeth Henske** (HMS Professor of Medicine)

Bassoon: **Ben Steinhorn** (HMS MD-PhD student)

Clarinet: **Abby Schiff** (HMS MD-PhD student)

Trombone: **Chris Ramirez** (Harvard College undergrad)

Percussion: **David Gootenberg** (HMS MD-PhD student)



Authority-Like Figures

As always, IgBill had incomplete information at press time. You may not be able to tell the players even with this scorecard.

(NOTE: ** indicates name is misspelled)

Producer/Director: Marc Abrahams
Co-Producer and Stage Manager: David Kessler
Ig Nobel Facilitator: Katherine Griffin
Opera Arranger/Orchestrator/Stage Director: Henry Akona
Assistant Stage Manager: Linda Brennan
Opera Costumer: Catherine Quick Spingler
Assistant Opera Director: Chelsea Long
Opera Rehearsal Pianist: Patrick Yacono
Director of Improbable Engineering: Quentin Smith
Writers: Marc Abrahams, Alice Shirrell Kaswell, and friends
Ig House Band: Nicholas Carstou and the Ig Leaves
Boston Squeezebox Ensemble Maestro: Thomas Michel
Lurking Presences: Roger Kautz, Robin Abrahams, Anna Phillips, Stanley Eigen
Lighting & Technology: Holly Gettings, Hunter Heinlen
Props and Scenery: Eric Workman
House Sound: David Nickerson, Bay State Sound
Sound Recording: Miles Smith, Frank “Barefoot” Cunningham
Slide Show: Lauren Maurer, Richard Baguley, Geri Sullivan
Prize & Props Creation: Eric Workman
Provisionary Logisticians: Gus Rancatore, Corky White, Vaughn Tan
HRSFA Coordinator: Nameless Person
HRSFS Coordinators: Amy Chen and Farzan Vafa
Grand Panjandrum of the Delegations: Louise Sacco

Videography: Seven Generations Video, Bruce Petschek, Shaun Clarke, Don Schechter, Cody Signore, Trevor Chamberlain

Lead Diplomats: Susan Kany, Dany Adams

Corps d’Esprit Diplomatique: Gus Rancatore, Corky White, Joe Maguire, Jennie Gutbezahl, Judith Fagin, John Armstrong, Jason Kleinerman et al.

Enforcer: Jaclyn Friedman

Green Room Oracles: Maria Eliseeva, Heidi Clark

Press Wranglers: Tom Ulrich, Carol Morton et al.

Photographers: Alexey Eliseev, David Holzman, Mike Benveniste

Ig Informal Lectures (Saturday) Coordinator: John Jenkins

Ig Nobel Webmaster: Julia Lunetta

Artwork & Logos: Geri Sullivan, Lois Malone

IgBill Design and Layout: Geri Sullivan

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People

Master of Ceremonies

Marc Abrahams, editor, *Annals of Improbable Research (AIR)*

Nobel Laureates

most of the following:

Dudley Herschbach (Chemistry 1986)

Sheldon Glashow (Physics, 1979)

Roy Glauber (Physics, 2005)

Eric Maskin (Economics, 2007)

Jerome Friedman (Physics, 1990)

and perhaps some others

Welcome Welcome Speaker: Jean Berko Gleason

24/7 Lecturers: Beatrice Golomb, Dudley Herschbach, Melissa Franklin, et al.

Opera Soloists: Maria Ferrante, Martin Kelly, Philip Lima, Miles Rind

Opera Orchestra: Thomas Michel, Ted Sharpe, David Fisher, Elizabeth Henske, Ben Steinhorn, Abby Schiff, Chris Ramirez, David Gootenberg

Opera Narrator: Karen Hopkin

Opera Non-Soloists: The Nobel Laureates

Pre-Ceremony Lobby AccordioConcert: Boston Squeezebox Ensemble

Pre-Ceremony On-Stage Concert: Deborah Henson-Conant

Mike Monkey: Edgar W. Herwick III

Parade and Opera Announcer: Karen Hopkin

Human Spotlights: Jim Bredt, Katrina Rosenberg

Human Curtain Rods: Emily Coombs, Maria Eliseeva

Human Aerodrome: Eric Workman

Referee: Mr. John Barrett

V-Chip Monitor: Noted Attorney William J. Maloney

Attorney William J. Maloney: Himself

Majordomo: Gary Dryfoos

Minordomos: Julia Lunetta, Peaco Todd, Ben Biggs, Sylvia Rosenberg, Eliza Kosoy, Alex Nemirosky, Chris Deter

Onstage Lurking Presence: Anna Phillips

Performing Chemists: Joost Bonsen, Daniel Rosenberg, et al.

Performing Props Master: Eric Workman

Miss Sweetie Poo: Sharada Sundaram-Senders

Official Sweepers: Roy Glauber, Julia Eliseeva

Hecklers: You, the audience

Goodbye Goodbye Speaker: Jean Berko Gleason

Special Thanks to...

Sid and Selma Abrahams, Jackie Baum, Bob Bartosch, Tina Bowen, The British Science Association, Brown/Rudnick, Thad Choelentiarana, Mark Dionne, Tatiana Divens, Eric Engel, Jesse Eppers, Melissa Franklin and the Harvard Physics Department, Martin Gardner, Holly Gettings, Jason Govostes, Jeff Hermes, Holleb & Coff, Tom Lehrer, Maggie Lettvin, Tom Levenson, Jerry Lotto, Ilya Luvish, Lois Malone, Milo, Kees Moeliker, Regular Noetzli,** The Flying Petscheks, Ruth Polleys, Harriet Provine, Gus and Mimi Rancatore and Toscanini's Ice Cream, The Flying Rosenbergs, Jonathan Salz, Sanders Theatre, Jim Stoll, Geri Sullivan, Al Teich, Ray Traietti, Joe Wrinn and Howard Zaharoff.

Very special thanks also to the late Alan Symonds, who for more than a decade helped us solve our technical problems, and the late Bob Dushman, who gallantly defended the Ig against a marauder.

** Name misspelled.



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Dedham, or Brookline or click
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The 24/7 Lectures

Each 24/7 Lecture will be delivered by one of the world's great thinkers.
Each lecture has two parts:

**A complete technical description
in 24 SECONDS**

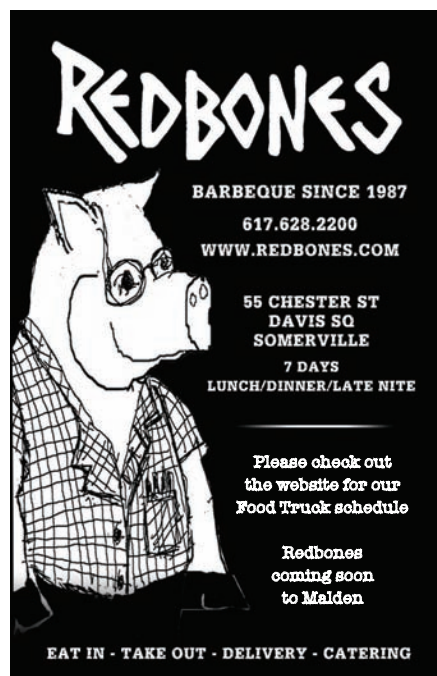
**A clear, accurate summary
that anyone can understand
in SEVEN WORDS**

The time limit and word limit will be strictly enforced by
Mr. John Barrett, the Ig Nobel Referee.

This year's 24/7 lecturers:

- **Beatrice Golomb** (Professor of Medicine, UCSD)
TOPIC: CHOCOLATE
- **Dudley Herschbach**
(Nobel Laureate, Chemistry):
TOPIC: TORQUE
- **Melissa Franklin** (Professor
of Physics, Harvard).
Topic: FORCE

...and perhaps one or two others.



Andre Geim receiving his Ig Nobel Prize in 2000. Several of the people in this photo will participate in the 2013 Ig Nobel Prize ceremony.

Geim's Twin Honors

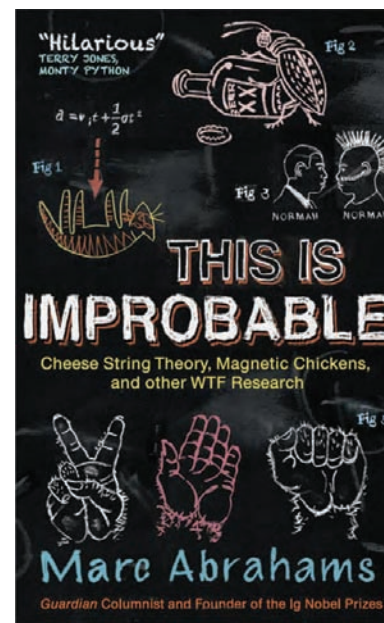
Six days after the 2010 ceremony came the news: Andre Geim was chosen to receive a 2010 Nobel Prize in physics, for his discoveries about graphene (the two-dimensional form of carbon). Ten years earlier Geim and Michael Berry were awarded the 2000 Ig Nobel Prize in physics, for using magnets to levitate a frog.

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aloud forcefully!**

The book,
This is Improbable
by Marc Abrahams

"Marc Abrahams is a perfectly calibrated filtration system into which all of science is poured and out of which comes pure, giddy goofball delight. This book is a delicious, addictive treat."

—Mary Roach, author of
Stiff and Packing for Mars



23 Improbable Years

IG® NOBEL PRIZE CEREMONY	YEAR	THEME
First Annual	1991	
2nd First Annual	1992	
3rd First Annual	1993	
4th First Annual	1994	The Elements
5th First Annual	1995	DNA
6th First Annual	1996	Biodiversity
7th First Annual	1997	The Big Bang
8th First Annual	1998	Duct Tape
9th First Annual	1999	Heredity
10th First Annual	2000	Intelligence
11th First Annual	2001	Complexity
12th First Annual	2002	Jargon
13th First Annual	2003	Nano
14th First Annual	2004	Diet
15th First Annual	2005	Infinity
16th First Annual	2006	Inertia
17th First Annual	2007	Chicken
18th First Annual	2008	Redundancy
19th First Annual	2009	Risk
20th First Annual	2010	Bacteria
21st First Annual	2011	Chemistry
22nd First Annual	2013	The Universe
23rd First Annual	2011	Force

A list of the new Ig Nobel Prize winners will be posted at
WWW.IMPROBABLE.COM

Last Year's (2012) Ig Nobel Prize Winners

PSYCHOLOGY PRIZE: Anita Eerland and Rolf Zwaan [THE NETHERLANDS] and Tulio Guadalupe [PERU, RUSSIA, and THE NETHERLANDS] for their study “Leaning to the Left Makes the Eiffel Tower Seem Smaller”

PEACE PRIZE: The SKN Company [RUSSIA], for converting old Russian ammunition into new diamonds.

ACOUSTICS PRIZE: Kazutaka Kurihara and Koji Tsukada [JAPAN] for creating the SpeechJammer — a machine that disrupts a person’s speech, by making them hear their own spoken words at a very slight delay.

NEUROSCIENCE PRIZE: Craig Bennett, Abigail Baird, Michael Miller, and George Wolford [USA], for demonstrating that brain researchers, by using complicated instruments and simple statistics, can see meaningful brain activity anywhere — even in a dead salmon.

CHEMISTRY PRIZE: Johan Pettersson [SWEDEN and RWANDA] for solving the puzzle of why, in certain houses in the town of Anderslöv, Sweden, people’s hair turned green.

LITERATURE PRIZE: The US Government General Accountability Office, for issuing a report about reports about reports that recommends the preparation of a report about the report about reports about reports.

PHYSICS PRIZE: Joseph Keller [USA], and Raymond Goldstein [USA and UK], Patrick Warren, and Robin Ball [UK], for calculating the balance of forces that shape and move the hair in a human ponytail.

FLUID DYNAMICS PRIZE: Rouslan Krechetnikov [USA, RUSSIA, CANADA] and Hans Mayer [USA] for studying the dynamics of liquid-sloshing, to learn what happens when a person walks while carrying a cup of coffee.

ANATOMY PRIZE: Frans de Waal [THE NETHERLANDS and USA] and Jennifer Pokorny [USA] for discovering that chimpanzees can identify other chimpanzees individually from seeing photographs of their rear ends.

MEDICINE PRIZE: Emmanuel Ben-Soussan and Michel Antonietti [FRANCE] for advising doctors who perform colonoscopies how to minimize the chance that their patients will explode.

For a complete list of all Ig Nobel Prize winners (1991-now)
see the Improbable Research web site
WWW.IMPROBABLE.COM

SANDERS THEATRE INFORMATION

Sanders Theatre is managed by Memorial Hall/Lowell Hall Complex at Harvard University
45 Quincy Street, Room 027, Cambridge, MA 02138
T 617.496.4595 | F 617.495.2420 | memhall@fas.harvard.edu

For history of the building, visit www.fas.harvard.edu/memhall

RESTROOMS are located on the lower level.

LATECOMERS will be seated at the discretion of management.

PHOTOGRAPHY AND RECORDING of any kind is not permitted in Sanders Theatre.
Equipment may be confiscated.

Lost and Found Call 617.496.4595 or visit Memorial Hall 027.
Harvard University is not responsible for lost or stolen property.

PARKING

There is no parking at Sanders Theatre.

Free parking for most events is available at Broadway Garage, corner of Broadway and Felton Street, from one hour pre-performance to one hour post. Parking for some student events will be at 52 Oxford Street Garage.

Access for Patrons with Disabilities

Accessible seating can be arranged through the Box Office. Sanders Theatre is equipped with Assistive Listening Devices, available 30 minutes prior to events.

Accessible parking for events: There is no parking at Sanders Theatre itself. Patrons may be dropped off in the circle on the Kirkland Street side of Sanders Theatre near the accessible entrance. We encourage patrons to park at either the Broadway Garage or 52 Oxford Street Lot. The Broadway Garage is fully accessible and there are curb cuts at all crosswalks between the garage and the Sanders Theatre.

If necessary, a limited number of accessible parking spaces may be available in nearby location by advance arrangement. It is extremely difficult to honor requests received less than 5 business days prior to an event. Please plan ahead.

To arrange for an Accessible Parking Space in a nearby parking lot, contact:

1. Harvard University Parking Office at 495-3772 AND/OR
2. University Disability Services at 495-1859, Mon-Fri 9am-5pm
or email: disabilityservices@harvard.edu

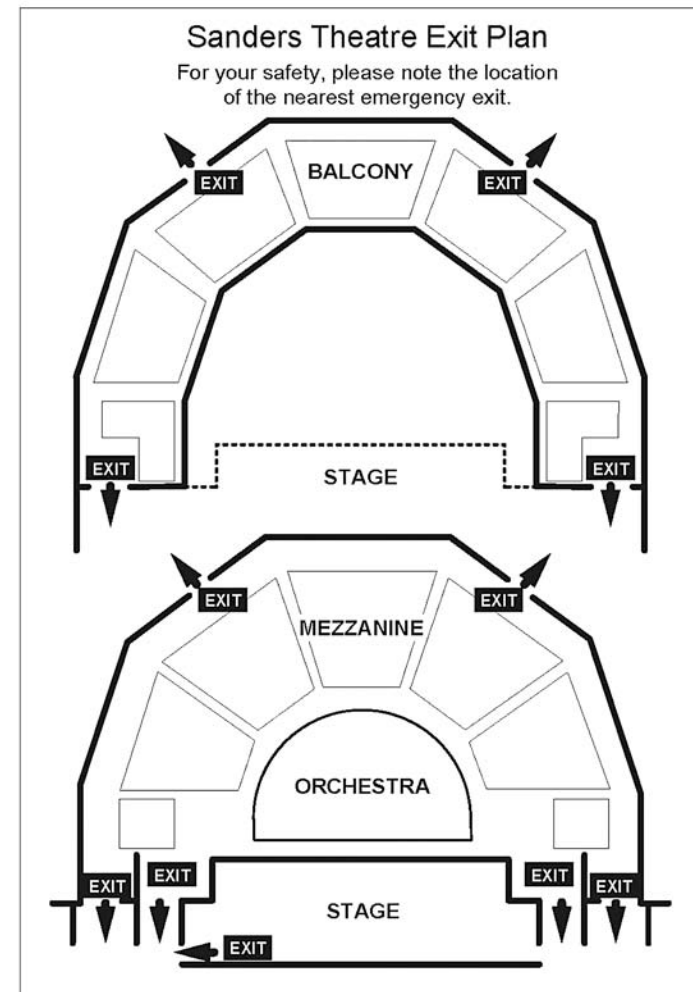
THE HARVARD BOX OFFICE

Advance Sales: Holyoke Center Arcade, Harvard Square
1350 Massachusetts Ave. 617.496.2222; TTY: 617.495.1642

Calendar of events, online sales and current hours: www.boxoffice.harvard.edu

Pre-Performance Sales: Sanders Theatre

On performance days: Opens at noon for matinees and 5pm for evening performances.
Closes 30 minutes after curtain.



Upcoming Ig/ Improbable Events!

For upcoming Ig Nobel / Improbable Research events (including the annual Improbable Research session at the Annual Meeting of the American Association for the Advancement of Science; the annual U.K Ig Nobel tours of the Uk and Scandinavia; ESOF in Copenhagen etc., see:

www.improbable.com

E-books are in the AIR (and vice versa)



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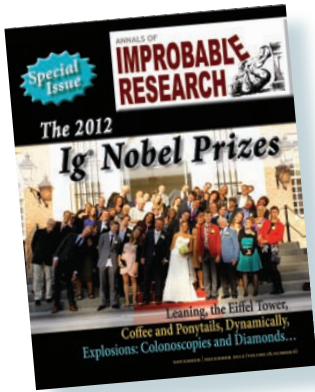
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Mel says: "It's swell."



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