

March 2004

IES



# The Lantern

The Newsletter of the Mother Lode Section of IESNA



## PIER Office Study Findings

### Joint meeting with US Green Building Council, Sacramento Committee

You are invited to attend a joint meeting of the Mother Lode Section in partnership with the US Green Building Council, Sacramento Committee.

Lisa Heschong will present the findings of two Public Interest Energy Research (PIER) funded office performance studies. This recently released study looks at how worker performances within office buildings at SMUD was statistically related to subtle variations in indoor environmental conditions.

A Desktop Study examined the performance of 200 office workers on a series of short cognitive and visual

assessment tests taken at each individual's desktop computer.

A Call Center Study looked at the effect of environmental conditions on the performance of 100 workers in a call center.

For both studies, extensive data were collected about the physical environment at each worker's cubicle or workstation, including illumination levels, view, thermal and ventilation conditions.

Please see additional information about Ms. Heschong's on the following page.

<b>Date</b>	<b>ADMISSION</b>	<b>LOCATION</b>
Tuesday, March 16	No charge for this event.	DGS
<b>TIME</b> 4:30 – 6:30 PM	Refreshments will be provided by Johnson Controls	Ziggurat Building (formerly "Money Store") 707 Third Street, 1 <sup>st</sup> Floor Auditorium West Sacramento
<b>RESERVATIONS</b> Not required for this event		

### DRIVING AND PARKING INSTRUCTIONS

DGS is located just across the Tower Bridge from downtown in West Sacramento. Turn right (North) on 3<sup>rd</sup> Street. Located 2 blocks North of Raley Field.

Street parking is available around the Ziggurat at no cost, except on 3<sup>rd</sup> Street (the 60 to 90 minute time limit ends at 5:00 PM). Please do not park in the parking garage, since it closes at 6:00 PM (unless you have a key card). Sacramento RT Bus Route 140 shuttles from downtown to the building, but the last return shuttle leaves at 5:50 PM.

*Please share this Newsletter in your office.*

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**Our March Speaker:** Lisa Heschong, architect, LC, is a principal of the Heschong Mahone Group, Inc., in Sacramento California. Ms. Heschong led the research team that found a correlation between the presence of daylight in classrooms and improved student performance, and has recently completed three additional studies for the PIER program looking at how daylight and window characteristics influence human performance in offices, schools and retail buildings. She is the author of numerous guidelines, manuals, magazine and journal articles, including work with CHPS, the U.S. Department of Energy, and California utilities. Ms. Heschong has a Masters of Architecture from the Massachusetts Institute of Technology.



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### Prez Sez

We had a good turnout for our February meeting at the Hoppy Brewing Company. We had a view of the rainy and chilly weather, yet our meeting room was warm and cozy. The food was excellent. Thank you, CJS Lighting, for graciously providing the first round of drinks.

Mr. Brian Cournoyer treated us to a great presentation on, "The Care and Feeding of an Architect." He presented a very helpful approach to interacting with architects, and how to work with and relate to various personality types. It was obvious that he has a working understanding of this topic. Thank you, Mr. Cournoyer, for your presentation.

Our March meeting is starting a little earlier in the day than we have traditionally met to accommodate our co-hosts, the US Green Building Council, Sacramento committee. It would be good to hear from anyone in our Section who finds this earlier meeting time preferable.

We will be having another combined meeting in April, with the Golden Gate Section. We are planning to tour the Mondavi Performing Arts Center in Davis.

The Mother Lode Section Board of Managers offers continuing support for the rebirth of the Yosemite Section. Until the Yosemite Section is

sustainable, news and other information about that Section will be posted in the monthly Lantern. Please see page three for current information about the new and exciting Yosemite Section.

We just finished hosting the ED-100 course on Monday, March 1. We will be inviting the graduates from that course to be our guest at our May meeting to receive their certificates. I had the privilege of teaching one of the modules, and this was a very bright group of students.

**Gary Flamm**  
Section President  
2003-04

**IIDA**

**Yosemite Section**

There are pictures of recent International Illumination Design Awards (IIDA) award winners in the latest Lightfair brochure. None of the awards came from California. Now is the time to be thinking of getting those submittals in for next years awards. January will come up quickly!

The IIDA program of the IESNA provides a unique opportunity for public recognition of professionalism, ingenuity, and originality in lighting design based upon the individual merit of each entry judged against specific criteria.

Judges are selected from a broad professional spectrum that represents knowledge of lighting and design excellence. The judging system is based entirely on how well the lighting design does or does not meet the program criteria. This program is not a competition. The program is open to any qualified entrant without limitations as to professional affiliations. The Guth, Waterbury, and Cutler awards are parallel programs created to recognize outstanding lighting design.

If you have any question please contact me.

**Frank Frounfelker**  
IIDA Chair  
2003-04  
916-725-1903

We are pleased to announce that continuous efforts in resurrecting the Yosemite Section of the IESNA are nearing completion.

The geographic regions that the Yosemite Section will likely include are the counties of Merced, Mariposa, Madera, Fresno, Kings, Tulare, Kern, and San Luis Obispo. We are initially looking to schedule and conduct our IESNA meetings in the cities of Fresno, Bakersfield, and San Luis Obispo. Our efforts will initially be paralleled with those of the Mother Lode Section in scheduling continuing education seminars and presentations facilitated by guest speakers for specific products and applications. In addition, we will take advantages of regular scheduled meetings for general discussion and introductions to new technologies available from various fixture and lamp manufacturers.

The Yosemite Section will operate as a satellite to and be supported by the Mother Lode Section. Once a strong membership has been established (typically 25 members) and an elected participating Board of Managers is in place, considerations by the IESNA for a fully reinstated Yosemite Section will be evaluated.

We encourage and look forward to participation from, but not limited to, the architectural and engineering communities, the utility and municipal markets, lighting representatives /manufacturers, electrical and lighting distribution channels, and electrical and lighting contractors.

As we move forward, we will be contacting the current IES members within the referenced counties to assist in sharing these efforts with the various people in the lighting community and promote the opportunity in becoming involved with and supporting this initiative

**Jay Marshall**

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**A Little Light Humor**

**A:** One

**Q:** How many psychics does it take to change a light bulb?

## Education

The ED-100 class that the Mother Load Section just hosted was a success. The course, an educational fundamental level lighting course, is meant to address the knowledge and information needs of the people interested in or entering lighting practice. Twelve people attended evening classes at the SMUD lighting classroom to complete the ten-section course.

The following people will be receiving certificates and are invited to be our guests at the May 18<sup>th</sup> Section meeting.

**Larry Bergeron**  
STANTEC

**Oral Campbell**  
Chase Electrical  
Engineering

**Ryan Cartwright**  
Davis Electric

**Larry Clarke**  
AEROJET

**Cheri Davis**  
California Energy  
Commission

**Richard Green**  
SMUD

**Louise Jedkins-Tyler**  
SMUD

**Robi Kaseman**  
Williams + Paddon  
Architect

**Steven Oliver**  
SMUD

**Yee Ping See**  
MWH AMERICAS, INC

**Paul Reed**  
STANTEC

**Wanda Yee**  
SMUD

The following instructors are responsible for the success of the classes. I appreciate and thank them for their participation in making this class a success for the students.

**Jim Barnett**  
SMUD

**Connie Buchan**  
SMUD

**Gary Flamm**  
California Energy  
Commission

**Frank Frounfelker**  
HOLOPHANE

**Chris Nye**  
HOLOPHANE

**Alan Suleiman**  
SMUD

**Thomas Tolen**  
TMT ASSOCIATES

*Mark Crume*  
Education Chair  
2003-04

## Managing Universal Waste in California

The California Department of Toxic Substance Control (DTSC) and Philips Lighting Company put on an informative workshop on California's new Universal Waste Rule in Sacramento on February 24.

Did you know that new regulations went into effect in 2003 to expand California's Universal Waste regulations to include certain products, including fluorescent and HID lamps?

The requirements for people who use, store, transport, recycle, and dispose of universal wastes are found in Chapter 23 of Title 22 of the California code of Regulations. Universal wastes generally may not be disposed of in the regular trash. Most universal wastes must be taken or sent to a recycling facility or a landfill approved for the disposing of hazardous wastes.

All universal wastes are considered hazardous wastes and, without the new rules, they would have to be managed under the same stringent standards as other hazardous wastes.

Following are two resources for additional information on lamp recycling:

[www.lamprecycle.org](http://www.lamprecycle.org)  
Sponsored by NEMA

[www.almr.org](http://www.almr.org)  
Association of Lighting and  
Mercury Recycling

Also, you can contact DTSC for more information about managing universal waste at:

1 (800) 728-6942  
[www.dtsc.ca.gov](http://www.dtsc.ca.gov)

*Did you know...*

From, **"A History of Light and Lighting"**  
 Edition: 2.2 - (1999)  
 Copyright (c) 1990-1999  
 by Bill Williams  
<http://www.mts.net/~william5/history/hol.htm>

Pythagoras - (c 582 - c 500 BC) was a Greek philosopher and mathematician who founded the Pythagorean School that emphasized the study of musical harmony and geometry. He also put forth the 'Particle' theory of light. This assumed that every visible object emits a steady stream of particles that bombard the eye. Pythagoras suggested that "light consists of rays that acting like feelers, travel in straight lines from the eye to the object, and the sensation of sight is obtained when these rays touch the object", much like the sense of touch.

Plato - (c 427 - c 347 BC) was a Greek philosopher and one of the most creative and influential thinkers in Western philosophy. He eventually became a disciple of Socrates. The Platonic School complicated the theory of light, by supposing that vision was produced by rays of light that originate

in the eye and then strike the object being viewed.

Aristotle - (384 - 322 BC) was a Greek philosopher and scientist. He was also a pupil of Plato. He had a different theory of light from the Pythagorean School. Aristotle concluded that light travels in something like waves.

Regarding the relationship between color and sound (music), he wrote: "colors may mutually relate like musical concords for their pleasantest arrangement like those concords mutually proportionate".

"The whole terrestrial region, wrote Aristotle, was composed of four 'bodies': fire, air, water and earth'.

Euclid - (320 - 275 BC), a mathematician studied light and followed the teachings of Plato. He was to greatly influence the development of the field of optics. He described the behavior of light and in his book on optics he anticipates the important ray theory. The first postulated stated: The rays emitted by the eye, travel in a straight line.

The speed of light must be very high, Euclid believed, because you can close your eyes (thus

making the things you are looking at disappear!) and then, when you open them again, even the distant stars appear instantly.

Christian Huygens (1629 - 1695) was a Dutch scientist, who thought that light consisted of waves. His wave theory suggested that light results from the molecular vibration in the luminous material. Further, that vibrations were transmitted through an 'ether' as wavelike movements (like ripples in water). Huygens concluded that the result of these transmissions acted on the retina, stimulating the optic nerves to production vision.

Sir Isaac Newton (1642 - 1727) was an English scientist and mathematician. He was first to formulate the corpuscular theory of light. Newton said that luminous bodies radiate energy in particles or corpuscles, and that these particles are ejected in straight lines. The particles then act on the retina of the eye in a manner to stimulate the optic nerve and produce the sensation of vision in the brain.

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Tony Baker
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Wes Hiratsuka
- CJS Lighting**  
Robert O'Flaherty
- Gale Spencer**  
Gale Spencer
- Interface Engineering, Inc.**  
Stuart Lindsay
- Lighting Systems**  
Keith Roberts
- M. Neils Engineering, Inc.**  
Mike Neils
- Sacramento Municipal Utility District**  
Connie Buchan

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