LIGHT SYMPOSIUM WISMAR

04-08 November 2008

Wednesday, 5 November 2008, 10:30-11:15

OPENING WELCOME

Wednesday, 5 November 2008, 11:15-11:35

Statement: Main Sponsor WE-EF

Wednesday, 5 November 2008, 11:35-12:30

Learning from the Past from Scheerbart to Ito: a short examination of the integration of electric light and architecture between 1900 and the present day

Mark MAJOR
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SPEAKER'S PROFILE

Mark Major BA (Hons) Dip Arch, RIBA, PLDA, IALD, FRSA Principal

Mark Major was born in 1961 and was educated in the UK and overseas. He trained and practised as an architect prior to focusing on the unique relationship between light and architecture.

He first met Jonathan Speirs at Lighting Design Partnership before opening his own practice in 1989. In 1993 he formed a working association with Jonathan Speirs and Associates which developed into Speirs and Major Associates. He is the Director responsible for running the day to day activities of the London studio.

Mark has worked on a diverse range of international projects from architectural lighting to urban master-planning and light art and has been honoured with a number of national and international lighting awards including the Lighting Designer of the Year 2007. He has also worked on two RIBA Stirling Prize winning projects; Magna Science Adventure Centre and 30 St Mary Axe.

He has an active interest in architectural and lighting education; he is the co-creator of an educational project "Made of Light – the Art of Light and Architecture", has previously taught at the School of Architecture University of Brighton and also lectured extensively in the UK, Europe, Scandinavia, U.S. and Australia.

He is a corporate member of the Royal Institute of British Architects, the Professional Lighting Designers Association, the International Association of Lighting Designers and a Fellow of the Royal Society of Arts. Mark also worked as a member of the ARB assessment panel between 2002 and 2004 and was the Chairman of the UK branch of the International Association of Lighting Designers from 2000 to 2001. Mark is married with two children and lives in London.

ABSTRACT

A talk by Mark Major RIBA PLDA IALD

In 1914 the poet Paul Scheerbart published 'Glasarchitektur' (Glass Architecture). It was 'a vision of a culture elevated through the use of glass'. His philosophy not only expounded the virtues of glass as an ideal material for construction but also dealt with the integration of both natural and electric light into the design of built form in new and exciting ways.

Scheebart's work in turn had a profound effect on the young Berlin architect Bruno Taut and subsequently on members of 'Die Gläserne Kette' (Glass Chain) who exchanged the utopian thoughts and ideas that became the backbone of German Expressionism. Such architects included Hans Scharoun and the highly influential Walter Gropius.

In pre-dating Le Corbusier's radical architectural vision 'Vers une architecture' (1923) by nearly two decades what Scheerbart started, and Taut and his colleagues perpetuated, may be seen as one of the, oft forgotten, influences that helped shape the architecture of the twentieth century. Architects such as Eric Mendelsohn, Hans Poelzig, Mies Van der Rohe and later Philip Johnson responded to such ideas not only through their use of materials but also in their attitude towards light. Even today conscious and unconscious echoes of Scheerbart's vision are seen in the work of contemporary architects such as Norman Foster, Helmut Jahn, Jean Nouvel and Toyo Ito.

In introducing such ideas Scheerbart made a vital move in realising the benefits of newly emerging electric lighting technologies and how they would have the power to define space, shape and mass and thus become 'as one' with built form. Out of such ideas arose a tradition of illuminated architecture that informs the work of architects and professional lighting designers today.

Wednesday, 05 November 2008, 14:00-14:30

Light To The Brain – Balm To The Soul

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SPEAKER'S PROFILE

Pauline Allen - Neurodevelopmentalist

Principal of The Sound Learning Centre, London, UK

For over a decade, Pauline Allen has pioneered the use of innovative programmes to treat learning and sensory difficulties. With a background as a dyslexia teacher and neurodevelopmentalist, she has extensive training and experience in the areas of light, sound and neuro-developmental therapy.

Word of mouth recommendation has meant that clients travel from all over the world for her therapies at The Sound Learning Centre in North London.

She regularly gives presentations at home and abroad and has developed a number of training programmes for parents and Health and Educational professionals.

ABSTRACT

The positive contribution of light and sound therapy to enhance emotional well-being and performance.

During the last fourteen years we have treated over two thousand clients with light and sound therapy. I will share our experience of working with children and adults with learning, sensory, developmental and emotional difficulties, and how light and sound therapy has transformed lives.

Typical presenting conditions we see include Dyslexia, Dyspraxia, Attention Deficit Disorder, Hyperactivity, Autistic Spectrum Disorder and Seasonal Affective Disorder, but we also see very high functioning children and adults who wish to enhance their performance to the maximum. Our unique formula of interventions centres around activation of the senses in order to retrain the sensory processing in the brain and establish new, more effective patterns of interaction and transform emotional well-being.

Through a series of case studies and clinical tests I will show how the senses interact, and how light therapy can influence hearing and how sound therapy can influence vision. To complement these case studies I will present anecdotal evidence from our clients and explain why I believe these therapies have the beneficial effects we see daily.

It is my sincere wish to increase the awareness of how light influences ability, behaviour and performance in all people and how light and sound can be used therapeutically to transform lives.

Wednesday, 05 November 2008, 14:30-15:00

Tools for Contemporary Lighting Design

Peter ANDRES

Peter Andres Beratende Ingenieure für Lichtplanung, Tarpen 40, Valvo Park 1, 22419 Hamburg
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SPEAKER'S PROFILE

In the beginning there was "a teacher who handled light well". At the HTL Technical College in Innsbruck, Professor Hugo Watzlawek arouses Peter Andres" enthusiasm for a methodical approach to dealing with light. He introduces him to Christian Bartenbach.

Today Peter Andres says: "Light has an immediate effect. The goal is for people to have a sense of wellbeing. Can I concentrate at the office, do I like shopping in the mall, do I stay calm in a hectic airport, can I relax in a lounge: If I always end up in an appropriate mood, the planning has been successful. Experience is important for that, but the willingness to be open to new technical solutions is even more crucial."

EMPLOYMENT

1983 - 1985 Interferenz Lichtsysteme GmbH

1977 - 1983 Lichtplanung Christian Bartenbach

EDUCATION

- 1979 Awarded the Austrian professional title "engineer"
- Final certificate 1976 with "Matura" (general university entrance level)
- technical college HTL in Innsbruck, 5 years
- secondary modern school in Jenbach, 4 years
- primary school in Jenbach, 4 years

BORN

October 20th 1956 in Tyrol

TEACHING POSTS

since 2006
- Honorary Professor at the PBSA, Peter Behrens
- School of Architecture, University of Applied Sciences, Düsseldorf

2003 - 2006
- Acting Professor of Light Planning

1994 - 2002
- Teaching Assignment for Light Planning at the University of Applied Sciences Hamburg, Faculty of Architecture

GUEST LECTURES
- Harvard University, Boston
- Lighting Academy Bartenbach, Tirol
- Technical University, Berlin
- College of Architecture, Eckernförde
- Technical College of Design, Kiel
- College of Architecture Dessau (Bauhaus)

JUROR FUNCTIONS
- Member Jury VELUX-Architektenwettbewerb 2006
- Chairman Jury VELUX-Attic-Award 2005

MEMBERSHIPS:
- Speaker of the Lichtbeirat der Freien und Hansestadt Hamburg
- Society of Lighting Technology LiTG
- Society of Architects and Engineers AIV
- Association of Consultant Engineers VBI
- Hamburg Chamber of Construction Engineers

EXHIBITIONS
- 2007 Design Festival Hamburg
- 2005 designdays Hamburg
- 2002 4Light aus Hamburg
- 1999 Licht+Arbeit Cologne Berlin

AWARDS

2003: hamburgerdesignerpreis 2003 (with ON-Industriedesign)

2002: Winner of the European Design Competition "Lights of the future" (with ON-Industriedesign)

1994: 1st prize "Balthasar-Neumann-Preis" for the project Hamburg Airport - Terminal 4

Wednesday, 05 November 2008, 15:00-15:30

The Cultural Dimensions of Lighting Design

Enrique PEINIGER, Jean SUNDIN
Office for Visual Interaction, Inc. (OVI), 207 West 25th Street, 505, New York, NY 10001 USA
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SPEAKER'S PROFILE

Enrique Peiniger, Dipl. -Ing., M. A., IESNA, PLDA

Enrique Peiniger is a founder and principal of Office for Visual Interaction, Inc. Trained in architectural engineering, Mr. Peiniger sees his work in lighting as a technical extension of the architectural language. Over the years, he has cultivated an in-depth knowledge of luminaire manufacturing and technology, giving him a high degree of precision in designing lighting that conforms to narrow technical requirements. His attunement to issues of construction sequencing and lighting maintenance enables him to embed an engineering logic into his designs, whether by rationalizing layouts or minimizing the types of lamps used on a building. When the right fixtures for a project do not exist, he often convinces lighting manufacturers to create them by adopting improved fabrication processes and detailing.

Highly active in professional organizations, Mr. Peiniger is a member of the Illuminating Engineering Society of North America, Professional Lighting Designers' Association, American Institute of Architects, American Association of Museums, and the U.S. Green Building Council. He was recently nominated as treasurer and director of international development for the Professional Lighting Designers' Association. Through his recognized abilities in professional circles, Mr. Peiniger was appointed as a lighting expert by UNESCO to contribute to the master planning of the Kuwait National Museum.

Mr. Peiniger has led lighting design workshops and lectured widely at professional lighting congresses and design schools around the globe. He has taught courses at the Technical University of Berlin and the Parsons School of Design in New York, where he and Ms. Sundin were recently appointed distinguished faculty members.

Jean Sundin, IESNA, IALD, PLDA

Jean Sundin is a founder and principal of Office for Visual Interaction, Inc. Ms. Sundin's detailed knowledge and expertise in the field of lighting has been developed over more than 20 years of work in the field. Originally trained in interior design, Ms. Sundin has a comprehensive understanding of how lighting can transform spaces, and the experience to make these effects a reality. Ms. Sundin's creativity is paired with strong abilities to communicate and develop ideas in dialogue with client groups, tailored to each project's cultural context and design language. Ensuring a smooth transition from design concept to reality, Ms. Sundin pioneered OVI's cost-tracking procedure, which fends against inflated costs and protects the project's design integrity.

As a professional member of the Professional Lighting Designers' Association, Ms. Sundin co-authored the organization's 'Guidelines for Specification Integrity,' used by lighting designers worldwide. She is a former board member of the Illuminating Engineering Society of North America, a professional Member of the International Association of Lighting Designers, and is on the steering committee of the Lighting Industry Resource Council. A member of the U.S. Green Building Council, Ms. Sundin recently served as a panelist on an expert forum on energy efficient lighting.

Ms. Sundin has lectured worldwide on the firm's work, as well as on specification integrity and cost-tracking methods. She has taught lighting courses for the Illuminating Engineering Society in Washington, DC, and is a distinguished faculty member at Parsons School of Design in New York City.

ABSTRACT

The New York City-based Office for Visual Interaction has a broad international practice, which strives to tailor lighting design to each project's cultural context. Principals Enrique Peiniger and Jean Sundin will present their firm's recent work, demonstrating how cutting-edge lighting design can support a project's overall cultural expression, by picking up on cues from its architectural language, local history, and urban context. They will discuss OVI's innovative approach to projects including Renzo Piano's New York Times Building, Enric Miralle's Scottish Parliament Building and grounds, and a prototype LED streetlight for New York City. They will also discuss how they turned technical challenges into aesthetic assets in illuminating the United States Air Force Memorial, a lighting achievement that garnered this year's prestigious GE Edison Award and an IES Award of Distinction.

Wednesday, 05 November 2008, 16:00-16:30

The Role of Light in the Multidimensional Model of the Organism

Marco BISCHOF

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International Institute of Biophysics (Neuss) & Europa-Universität Viadrina (Frankfurt / Oder)

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SPEAKER'S PROFILE

Marco Bischof (born in 1947, Swiss citizen) is an independent scientist, science writer, and consultant for the frontiers of science. He is director of "Future Science & Medicine", Berlin, Germany, a research, documentation and consulting agency for frontier areas of science consulting clients from science, industry, the administration and the press.

He has obtained his matura certificate from the State College for Adults, Zurich, with distinction 1981), and has studied cultural & medical anthropology and the history of religions at the University of Zürich, Switzerland (1981-85).

He is a lecturer at the Institute for Interdisciplinary Health Sciences, Europa- Universität Viadrina, (Frankfurt an der Oder) and member of the board of the International Institute of Biophysics, Neuss (Germany), of which he has been Managing Director from 1994 to 1995. In 1992 he was visiting scholar at the Center for Frontier Sciences of Temple University in Philadelphia, USA. 1996- 1998 he has served as a scientific consultant to the „Patient Information for Complementary Medicine", Berlin.

He serves a member of the editorial board of the Russian journal „Consciousness and Physical Reality" (St.Petersburg, Russia), and of the Scientific Advisory Board of the Monterey Institute for the Study of Alternative Healing Arts (Carmel, California, USA). From 2000- 2002 he has been a lecturer and member of the Working Group for Agrarian Culture and Social Ecology at the Humboldt University in Berlin, Chair of Agrarian Culture and Social Ecology, Institute of the Economic and Social Sciences of Agriculture, Faculty of Agri- and Horticulture. He has lectured at various German universities, such as Technical University, Berlin, Technical University, Dresden, and Fachhochschule Magdeburg.

SELECTED PUBLICATIONS

„Biophotonen - das Licht in unseren Zellen" (Zweitausendeins, Frankfurt 1995; 14th ed. 2008), –"Tachyonen, Orgonenergie, Skalarwellen – feinstoffliche Felder zwischen Mythos und Wissenschaft" (AT Verlag, Aarau 2002), and many scientific and popular contributions to collective works and journals, e.g. "Introduction to Integrative Biophysics", in F.A. Popp and L.V.Beloussov (eds.): Integrative Biophysics - Biophotonics. Kluwer Academic Publishers, Dordrecht 2003, pp. 1-115.

ABSTRACT

In the „Multidimensional Model of the Organism" (Bischof 2002, 2003) - where the human organism is thought of consisting of the "objective anatomy" of the physical body, the electromagnetic field body, and the non-electromagnetic field body, and of the "subjective anatomy" of the subjective field bodies and the self - each of the levels has its special relationship to light and interaction with light. The physical body is very sensitive to light, and light has various well documented effects on human physiology and psychology. It also produces its own light (ultraweak bioluminescence or biophotons, see Bischof 1995) which is circulated and transformed in the body in various ways, probably has its special functions in the organism, and forms part of the electromagnetic field body. In addition, human beings have always had the subjective experience of nonphysical "inner light" in mystic and religious visions. Thus, man is a generator and transformer of light on different levels of existence.

Wednesday, 05 November 2008, 16:30-17:00

Save Energy - Not Light

Matthias WAMBSGANß
ip5 ingenieurpartnerschaft, Bahnhofplatz 10, D-76137 Karlsruhe, Germany
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SPEAKER'S PROFILE

PROFESSIONAL EDUCATION

September 1984 - April 1986: Apprenticeship as Welder, Schlosserei Schatz, Ludwigshafen, Title earned: Geselle

October 1989 - July 1995: University of Karlsruhe, study of Architecture,

Title earned: Diplom- Ingenieur

PROFESSIONAL PRACTICE

August 1995 - May 2004: University of Karlsruhe, Institute for Building Physics and Building Technology:

research in optimizing energy for of f ice buildings, Title: Assistant Professor (C1)

August 1999 - today: ip5 partnership of engineers, Founding partner

May 2002 - today: member of the advisory board symposium " innovative lighting technologies in buildings"

January 2005 - today: Chairman of the german lighting society (LiTG) section Baden.

January 2007 - today: University of Applied Sciences Rosenheim, Professor for Lighting Design, Lighting Technology and integrated Building Services

SELECTES PROJECTS

Function Museum Ritter, Waldenbuch,

2004 - 2006, concept for daylighting- and artificial lighting Office Building Landesbank

Baden-Württemberg (LBBW), Karlsruhe, 2004-2006, Project leader (concept)

KfW Bankengruppe, renewal of main building, Frankfurt am Main, 2005, concept and controlling

Daylight and artificial lighting simulations in circa 20 further projects with various demands

ABSTRACT

"Energy costs are rising dramatically and new codes are developed in several countries to save energy. The term of sustainability takes place an enormous part of current architectural discussions. The focus of this presentation is given to the requirement "Save energy – not light". From a physiological point of view most of us are not exposed to enough light in their day-to-day life - regardless of the quality of the light source. The fraction of artificial lighting in the overall primary energy demand will be illustrated by an example of an office building.

Furthermore, several options for saving energy - in particular by using daylight and selective glazing - will be pointed out.

Wednesday, 05 November 2008, 17:00-17:30

The Challenge of Application / Light & Health Principles

Phil GABRIEL
Gabriel Mackinnon, 109 Murray Street, Ottawa Ontario K1N 5M5 Canada
E-Mail: phil{at}gabrielmackinnon.com.

SPEAKER'S PROFILE

Philip Gabriel, educated as an architect and interior designer, has practiced lighting design for over 40 years in New York City, Ohio and Canada.

His firm, Gabriel Mackinnon provides professional consultant services as specialists in architectural lighting and has completed projects including urban centres, offices, schools, museums, restaurants, hotels, churches and historic restorations. Mr. Gabriel is a Fellow and Past President of both the International Association of Lighting Designers and the Ottawa Section of the Illuminating Engineering Society. He is also a member of the Professional Lighting Designers Association and the IALD Education Trust.

Recent lighting projects by Gabriel Mackinnon include: Canada's Parliament Hill, National Gallery and Supreme Court; the Montreal, Vancouver and Ottawa Airports; Hilton and Fairmount Hotels; and major shopping malls in 10 Canadian cities. Please see website, www.gabrielmackinnon.com for more information.

The firm has received awards from the International Association of Lighting Designers, the Illuminating Engineering Society, Canadian Architect and the Canadian Historical Association.

ABSTRACT

A survey of the areas of Light and Health research with examples of attempts to put the knowledge to work in practical and aesthetically satisfying solutions.

Step-by-step simple explanation of each area of the current research, followed by the challenge of developing a metric to measure the results in each case area. Areas of research to be examined:

- Circadian rhythms
- Daylight exposure
- SAD – alleviation of seasonal depression –
- Effect of light in curing or relieving disease
- Electric light color and intensity
- Aging eye
- Health facilities

The presentation will include a survey of architectural lighting designers for application examples and of lighting design schools for current update on relative projects.

The Challenge - How can we find ways measure an environment to show the affect on our state of health? And then, how can we apply this knowledge to create functional, efficient and attractive places for healthy human interaction?

Wednesday, 05 November 2008, 17:30-18:00

Psycho-Biological Effects of Monochromatic Light

Karl RYBERG

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E-Mail: karl{at}monocrom.se

SPEAKER'S PROFILE

A short presentation of myself as a colour psychologist

My father was a talented artist, painter and sculptor. And thus my colour training started already in childhood – art and craft, painting and design were all natural elements of my early personal growth.

Later on I took university degrees both as an architect and as a psychologist. My work and research eventually came to focus on how human beings are affected by light and colour. I have studied light therapy with Ronald Beesley at the College of Psychotherapeutics in England and laser biology with Professor Tiina Karu at the Russian Academy of Sciences in Moscow. Therapy with blind patients made me study and practise the invisible art of perfumery.

In Stockholm I run a professional light institute where visitors and students are instructed in colour therapy. During 25 years patients have visited the laboratory to receive treatments with coloured light. For this purpose I constructed powerful holographic light projectors with laser like properties. My Monocrom light domes have been exported to England, Norway, Denmark, Switzerland, Austria, Germany, France, Spain, Australia, USA, South Africa, Malaysia and the Maldives.

I also give training lectures in colour psychology at schools, hospitals, industries and business companies. I have given colour seminars in Norway, Denmark, Finland, England, Ireland, Germany, Switzerland, Russia, USA and Australia. Plus numerous appearances in Swedish radio, television, newspapers and magazines.

I have collected an extensive research library at the Monocrom institute and written three books on light therapy and colour design – published in Swedish, German, Dutch and Estonian editions.

I speak Danish, English, French, German and Spanish quite fluently plus a fragmented understanding of Russian, Italian, Arabic and Chinese.

My current hobby is training as a classical ballet dancer. Water colour painting is one of my favourite pastimes. I also play the violin and flute reasonably well.

ABSTRACT

The human brain seems to feed on colour information as part of its navigation and survival. Our daytime rhythms and space orientations are largely guided by coloured light. Blood pressure, muscular tension and nerve activity are almost instantly affected by colour changes. Light and in particular coloured light is a most powerful visual and therapeutic medium.

Modern society is increasingly dependent on artificial illumination for industrial and private use. The photobiological impact is enormous and the question is how to balance it wisely. The modern lighting designer automatically enters the field of optical medicine and psychology.

Most light sources are polychromatic with a broad overlap of different spectral colours. This is good for general illumination but often gives unclear optical information to the body cells.

For psycho-biological usage monochromatic light has some great advantages. Perceptually it matches the splendour of peacock's feathers and beetle's wings and rainbow beams. Technically it is strictly one coloured – a key property it shares with laser light. The exactness of monochromatic information has very pronounced therapeutic qualities with large possibilities for modern colour communication.

Thursday, 6 November 2008, 08:30-09:30

The Past, Present and Future of Light in Medicine

Alexander WUNSCH
Physician, Bergheimer Straße 116, 69115 Heidelberg, Germany, www.alexanderwunsch.de
E-mail: wunschart{at}mac.com

SPEAKER'S PROFILE

Alexander Wunsch is an expert in vibrational medicine and holistic photobiology. In his private medical practice in Heidelberg, Germany, he uses Dinshah Ghadiali´s Spectro- Chrome method in combination with electromagnetic fields, body sound application and Cranio-Sacral bodywork. He does scientific research in the field of light effects on cellular levels and has developed a number of devices for vibrational medicine, chromotherapy and electromagnetic/photonic environmental analysis. Alexander Wunsch is a member of LiTG and president of the International Light Association.

ABSTRACT

Light has always played an important role in healthcare and medicine. Not only sunlight, but also artificial light has widely been used and still is in use for healing purposes and therapy. Since it is still impossible to mimic sunlight by technical means, all artificial light is lacking some parts of the full spectrum. This can be useful, e.g. for chromotherapy, but also dangerous.

Concentrating on certain action spectra for hormone production can lead to health hazards or other unwelcome body reactions, what is clearly shown by history. Lighting engineers as well as lighting designers must be aware of the vast potential of the energy form they are dealing with - in order not only to create healthy environments but also to avoid adverse effects on humans. In times of increasing technical feasibility it is even more important to readjust the definitions of what high quality artificial lighting under a holistic medical viewpoint really is. The technology to achieve high quality in environmental lighting is already available, the next step will be to use it to a much greater extent.

Users and investors also have to become aware of the importance of high quality lighting instead of high efficiency lighting so that they comprehend why they should better raise their budgets for the best lighting technology and lighting design.

Thursday, 6 November 2008, 09:30-10:45
Sponsor Statements

Thursday, 6 November 2008, 11:00-12:30
Vox Juventa I-III

11:00 - 11:30	**11:30 - 12:00**	**12:00 - 12:30**
Lighting Culture: the Inter-Relation between Human Being, Environment and Light	Lighting Islamic Countries: the Beyondness of Greatness	The History of Artificial Light and the Inherent Socio-Political Aspects in Western Civilization
		
Sylvia SCHAFRANIETZ Sylwia.Schafranietz{at}gmx.de	Diegro M.C. OBISPO cancaobispo{at}yahoo.es	Petros DERMATAS pdermatas{at}hotmail.com

Thursday, 6 November 2008, 14:00-15:30
Vox Juventa IV-VI

14:00 - 14:30	**14:30 - 15:00**	**15:00 - 15:30**
Mayfair and Belgravia; the Future od Lighting in a Historical Urban Environment	Lighting Design for Palliative Care	A Point of View: What Constitutes View
		
Paula RAINHA paula.rainha{at}bdp.com	Ulrike SCHULZ ulli-schulz{at}gmx.de	Elinor COOMBS elinor.coombs{at}bdp.com

Thursday, 6 November 2008, 16:00-16:30

The Pharmacy of Light

Georg BUCHHEIT
23948 Stellshagen, Lindenstraße 1, www.lebendige-augen.de
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SPEAKER'S PROFILE

Georg Buchheit, naturopath and lecturer for naturopathic treatments in different Asian countries, senior teacher for Colorpuncture and Energy Emission Analysis, runs a clinic near Wismar/Germany.

ABSTRACT

We are surrounded by light and colors. The polarity of light and shadow is visible and sensible at any time. Our own body emits and responds to light in many ways. Light affects hormones and moods. Our internal cellular communication is based and depends on the emission of light. Light means energy and information. This information can be made visible with the help of a special camera. The photos taken with this camera (Kirliandevice) give exclusive information about the living being. The analyses of these pictures are used for clinical diagnosis and for individual health counseling. And they are the foundation for a unique therapy - using light and colors for healing. Via the

skin particular acupuncture points and reflex zones are radiated with colored light.

The cells own vibration respond and resonate to the applied harmonizing color frequencies.

In the lecture I will demonstrate how different oscillation frequencies (colored light, halogen light, computer) affect our life in a negative and positive way.

Thursday, 6 November 2008, 16:30-17:00

Applications of Lighting for Visual and Non-Visual Systems

Amardeep DUGAR
Victoria University of Wellington, School of Architecture, 139 Vivian Street, Te Aro, Wellington 6001, NEW ZEALAND
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SPEAKER'S PROFILE

Amardeep M Dugar is a freelance architectural lighting designer and writer; currently pursuing his Ph.D. in architecture and light at the Victoria University of Wellington/New Zealand. He has completed his Bachelor in architecture from IP University, New Delhi/India and Master in architectural lighting from University of Wismar/Germany. He is a member of the research work group sponsored by the Professional Lighting Designers Association based in Europe. He has lectured at several national and international universities and been a guest speaker at several national and international conferences on light and building. In addition he has worked for several international publications and done award-winning projects.

ABSTRACT

The Wikipedia contributors provide a simplified definition of architectural lighting design which focuses on three fundamental aspects for meeting the visual needs of sighted individuals. The first is the aesthetic aspect encompassing the general attractiveness while assessing the right kind of emotions it evokes. Second is the ergonomic aspect encompassing the functional needs for better visibility, impact of daylight and safety issues. Third is the logistic aspect which ensures that light is not wasted by over-illumination, either by illuminating vacant spaces unnecessarily or by providing more light than needed for the aesthetics or the task. Interestingly, the nonvisual effects of light involving human health and wellbeing are increasingly gaining currency, and lighting practices today should work towards incorporating them along with the three fundamental aspects. Recent research has shown, however, that lighting characteristics required to achieve photo-biological regulation, are substantially different than the ones needed for vision (Figueiro 186); and generalisations about "good lighting" will have to be assessed by criteria that can simultaneously meet visual and photo-biological needs (Rea 1). The central thesis of this paper is that a framework can be developed for the non-visual effects of lighting to meet the three fundamental aspects. In doing so it attempts to present existing research results on light and health in a manner that can be easily comprehended by professional lighting designers.

References

Figueiro, Mariana G., Mark S. Rea, Richard G. Stevens, and Anne C. Rea. "Daylight and Productivity - a Possible Link to Circadian Regulation." Light and Human Health: EPRI/LRO 5th International Lighting Research Symposium. Palo Alto, CA, USA: The Lighting Research Office of the Electric Power Research Institute, 2002. 185-93.

Rea, Mark Stanley. "Light - Much More Than Vision." Light and Human Health: EPRI/LRO 5th International Lighting Research Symposium. Palo Alto, CA, USA: The Lighting Research Office of the Electric Power Research Institute, 2002. 1-15. Wikipedia, Contributors. "Architectural Lighting Design". 2008.

Wikipedia, The Free Encyclopaedia. (9 April 2008 14:26 UTC): Wikimedia Foundation, Inc. 19 April 2008 07:33 UTC. <http://en.wikipedia.org/w/index.php?title=Architectural_lighting_design&oldid=204456254>.

Thursday, 6 November 2008, 17:00-17:30

Effects of Light on the Human Retina

Richard FUNK

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SPEAKER'S PROFILE

Richard H.W. Funk was born on April 25, 1953 in Fürth, Bavaria. After studying medicine, MD and military service, he was assistant (postdoc) in the Institute of Anatomy of the University Erlangen-Nürnberg.

Here, he performed his habilitation in 1986 with a topic in the area of experimental ophthalmology. In 1988 he gets a professorship (associate) in the Institute of Anatomy of the University Erlangen-Nürnberg.

From 1994 on he holds the chair of Anatomy in the University of Technology Dresden (TUD). His main topics are in the area of cell biology (ophthalmology, influence of physical factors on cells, biophysics, and age changes).

As dean of science of the medical faculty of the TUD (1999 – 2003) he was (and still is) one of the organisators of the still rapidly growing biomedical facilities in the region of Dresden.

From 2000 – 2006 he was Head of the Anatomical Society and from 2004 till today he his member of the panel "Molecular Biology" in the Deutsche Forschungsgemeinschaft (DFG).

ABSTRACT

Visual perception in the human retina takes place at a wavelength between 400 and 760 nm. During visual transduction, the retina, however, is vulnerable to photochemical damage in the outer layers at the central region of the retina. The action spectrum of this light stress peaks in the short wavelength region, providing the basis for the concept of blue light hazard.

A photochemical damage can occur in the rhodopsin laden outer segments of the photoreceptors (discs) mediated by visual pigments. Thus, the disc membranes are subject to constant oxidative stress. Photoreceptor cells overcome this problem by constantly renewing their membranes, in particular the apical membranes. The aged, distal tip of photoreceptor outer segments is shed every day and taken up by cells of the pigment epithelium by receptor-mediated endocytosis.

Another factor is the oxidative stress which is generated by blue light within the mitochondria. Here, additional radicals are produced by the disturbing the respiratory electron transfer chain. These radicals, especially radical oxygen species (ROS), are then damaging many structures (mostly proteins) and energetic- and information cascades of the cell.

In a secondary reaction, many metabolites of the oxidized discs which are internalized by the retinal pigment epithelium produce radicals like ROS by themselves. The most commonly known mixture of such metabolites is lipofuscin.

All the mentioned damaging factors play a role in the pathogenesis of age-related macular degeneration (AMD). A very interesting chance for prevention and therapy of this retinal neurodegenerative disease may arise from observations of other medical disciplines: it was found that light in the red and near infrared can help to cure wounds, inflammations and favours regeneration processes. The ratio behind this may be a stimulation of the mitochondrial- and thus energetic situation of the cell (see ample literature published by Karu). In addition, the group of Whelan could show a beneficial role of red light in the therapy of retinas damaged by military target lasers.

The implications for choosing the "right" light sources in our environment are also discussed in my presentation.

Friday, 7 November 2008, 08:30-09:30

Made of Light - The Art of Light and Architecture

Mark MAJOR

Mark Major Speirs and Major Associates 11-15 Emerald Street London WC1N 3QL, www.samassociates.com
E-mail mark{at}samassociates.com

SPEAKER'S PROFILE

Mark Major BA (Hons) Dip Arch, RIBA, PLDA, IALD, FRSA Principal

Mark Major was born in 1961 and was educated in the UK and overseas. He trained and practised as an architect prior to focusing on the unique relationship between light and architecture.

He first met Jonathan Speirs at Lighting Design Partnership before opening his own practice in 1989. In 1993 he formed a working association with Jonathan Speirs and Associates which developed into Speirs and Major Associates. He is the Director responsible for running the day to day activities of the London studio.

Mark has worked on a diverse range of international projects from architectural lighting to urban master-planning and light art and has been honoured with a number of national and international lighting awards including the Lighting Designer of the Year 2007. He has also worked on two RIBA Stirling Prize winning projects; Magna Science Adventure Centre and 30 St Mary Axe.

He has an active interest in architectural and lighting education; he is the co-creator of an educational project "Made of Light – the Art of Light and Architecture", has previously taught at the School of Architecture University of Brighton and also lectured extensively in the UK, Europe, Scandinavia, U.S. and Australia.

He is a corporate member of the Royal Institute of British Architects, the Professional Lighting Designers Association, the International Association of Lighting Designers and a Fellow of the Royal Society of Arts. Mark also worked as a member of the ARB assessment panel between 2002 and 2004 and was the Chairman of the UK branch of the International Association of Lighting Designers from 2000 to 2001. Mark is married with two children and lives in London.

ABSTRACT

Our world is made of light. We light to see our way. We light for security. We light as a form of communication. We light to create mood and atmosphere, or to enhance and entertain. Sometimes we light for light's sake.

Natural light is always changing – in its colour and luminance, it's rendering of surface textures and materials, in its subtle interplay of shadows and reflections on form. Throughout the centuries it has shaped our built environment as we have responded to the pattern-book of natural lighting effect. When man makes light, however, new and exciting opportunities arise. Out of the darkness, we create shadows and contrasts, highlights and textures, that illuminate our art and architecture.

Fashions and building technologies have changed, and with them the opportunities provided by light. The relationship between light, space and form now goes beyond simple application to embrace the total integration of natural and man-made light into structure and form. Light is a complex and versatile medium and an essential design tool, producing an infinite quality of experiences and creating a sensitive relationship between the man-made and natural world. The development of a 'culture of light' is therefore not only crucial, but also exciting and challenging.

This lecture explores light in the natural world, theatre, literature, art, film and architecture engaging with key issues such as source, contrast, texture, colour, form, space and magic. It is about visual communication in an age in which technology allows us to achieve new heights of creative expression through architecture that is 'Made of Light'.

Friday, 7 November 2008, 11:00-11:30

Sunlight and Health in the Built Environment

Richard HOBDAY
University of the West of England, Bristol, UK
E-mail: richard.hobday{at}uwe.ac.uk

SPEAKER'S PROFILE

Richard Hobday is an authority on sunlight and health in the built environment. He received his MSc and PhD from the School of Engineering, Cranfield University, where he specialized in energy conservation and solar technology.

He has a number of design guides to his name; and two critically acclaimed books:

The Healing Sun: Sunlight and Health in the 21st Century (2000), which has been translated into seven languages,

and

The Light Revolution: Health Architecture and the Sun (2006). A Chartered Engineer and Energy Institute member, he teaches and lectures internationally.

ABSTRACT

Throughout history humanity as revered the sun as a source of light, life and health. The ancient Egyptians worshipped the sun's healing powers and made good use of them, as did the Greeks and Romans. In 1903, just over one hundred years ago, a sunlight therapist was awarded the Nobel Prize for Medicine. In the years that followed, hospitals and sanatoria were built where patients with tuberculosis, war wounds and rickets could be exposed to the sun under medical supervision. Until about 50 years ago, health experts promoted sunbathing and architects designed for this. Then medical thinking changed and planning for sunlight became less of a priority. In this presentation Dr. Hobday explains how the sun was used as a medicine and discusses some of the latest findings on the health benefits of getting sunlight in and around buildings.

This presentation shows how medical thinking on sunlight has influenced the development of western architecture and town planning. Dr. Hobday discusses diseases caused by sunlight deprivation and explains how the work of Vitruvius, Florence Nightingale, Tony Garnier, and Le Corbusier reflects their knowledge of sunlight therapy. He concludes with a summary of the latest findings on light and health in the built environment; and the implications for designers.

Friday, 7 November 2008, 11:30-12:00

Twilight

Mario RECHSTEINER
art light Gmbh Tages-und Kunstlicht, Beratung und Design, Zürcher Straße 202, CH - 9014 St. Gallen, Switzerland
E-mail: info{at}artlight.ch

SPEAKER'S PROFILE

- Eidg. Elektromonteur, Gewerbeschule St.Gallen
- Weiterbildungen im Bereich Elektrotechnik
- Postgradualstudium Lichttechnik, Lichttechnisches Institut der Technischen Universität Ilmenau (1994)
- 988 – 92 Projektleiter Elektro, Ingenieurbüro Amstein + Walthert AG
- 1992 – 97 Projektleiter Lichttechnik, Ingenieurbüro Amstein + Walthert AG
- Seit 1997 Inhaber / Geschäftsführer, art light GmbH
- Seit 1999 Dozent an Kursen der Schweizer Licht Gesellschaft (Lichtplaner I + II / ÖB)
- 2001 – 2005 Lehrbeauftragter für Lichttechnik an der FH St.Gallen
- Seit 2004 Lehrbeauftragter an der Hochschule Konstanz (HTWG) im Fachbereich Architektur
- Seit 2004 Dozent für Lichttechnik an der Schweizerischen Textilfachschule (STF)
- Kurse Farbdesigner
- Vizepräsident der Schweizer Licht Gesellschaft (SLG)
- Mitglied Lichttechnische Gesellschaft Deutschland (LiTG)
- Director for Standards of Professional Practice (PLDA)
- Vorstandsmitglied Verein internationale Lichttage Winterthur
- 1994 – 1997 Ausbilder RAVEL-Kurse Beleuchtung des Bundesamtes für Konjukturfragen für die deutschsprachige Schweiz
- Referent an verschiedenen nationalen und internationalen Kongressen
- Autor mehrer Fachartikel
- Internationaler Illumination Design Award (IESNA) 1997

Friday, 7 November 2008, 12:00-12:30

Biophotons in Health, in Relation to Life Style

Roeland van WIJK

International Institute of Biology c/o MeLuNa Human Research, Koppelsedijk 1A, 4191 LC The Netherlands

SPEAKER'S PROFILE

Roeland Van Wijk, Ph.D., Associate Professor

- Research Professor at International Institute of Biophysics
- Emeritus Associate Professor Utrecht University
- Relevant positions and employment
- 1965 Research Assistant Biophysical Chemistry Utrecht University, Utrecht, Netherlands
- 1969 Senior Scientist Molecular Biology Utrecht University, Utrecht, Netherlands
- 1971–1972 Visiting Scientist National Jewish Hospital and Research Center, Denver, USA
- 1973–2003 Assistant and Associate Professor Molecular Cell Biology, Utrecht University Utrecht, Netherlands
- 1976 Visiting Scientist Pharmacology, University of Colorado, Denver, USA
- 1982 Visiting Scientist Friedrich Miesche-Institute, Basel, Switzerland
- 1985–1995 Director CAM Research Utrecht University, Utrecht, Netherlands
- 1997–now Associate Professor International Institute of Biophysics, Neuss, Germany
- Relevant other experience and professional memberships:
- President of the International Matrix Society
- President of the Dutch Foundation for Bioenergy and Bioregulation research
- Vice-president of the International Institute of Biophysics
- Editor-in-chief of Dutch Journal on Intergrative Medicine (journal in Dutch)
- Member of Editorial board of Alternative Therapies in Health and Medicine
- Member of Advisory board of Spirituality and Health International
- Board member of Society for Neural Therapy
- Board member of GIRI
- Member International Society for Optical Engineering
- Member European Society for Photobiology
- Member of International Society for the Study of Subtle Energies and Energy Medicine
- Award / Karl und Veronica Carstens Stiftung
- Award / Dutch Homeopathic Society
- Award / Alfred Vogel Foundation
- Scientific Advisor Rheuma & Artrosis Foundation, The Netherlands
- Scientific Advisor of CAM Network, The Netherlands
- Principal Investigator/Program Director (Last, first, middle):
- Author of more than 200 peer reviewed publications in international journals on
  - metabolic regulations at RNA and DNA level
  - growth factors, cell growth and differentiation
  - hyperthermia
  - ultraweak photon emission
  - homeopathy / high dilution research
- Editor of several books

ABSTRACT

The last decade, research has been focused on the development of non-invasive techniques for detection of ultra-weak light in humans. This research is accomplished by a worldwide cooperation of specialized research groups. The 20 research departments in Europe, India, China and USA are organized in the International Institute of Biophysics. The novel technologies and scientific knowledge focus on the role of light in communication processes in living organisms and are directly connected to health and disease. The gap with conventional medicine is bridged by focusing on the role of oxidative stress. Environmental factors play an important role in this type of stress. Human light field recording as an effective marker of this stress may improve our knowledge on life style in disease prevention and therapeutic intervention. The lecture will focus on the developments of this novel field of science and its relation with life style.

Friday, 7 November 2008, 14:00-14:30

Light Makes the Difference

Jan EJHED
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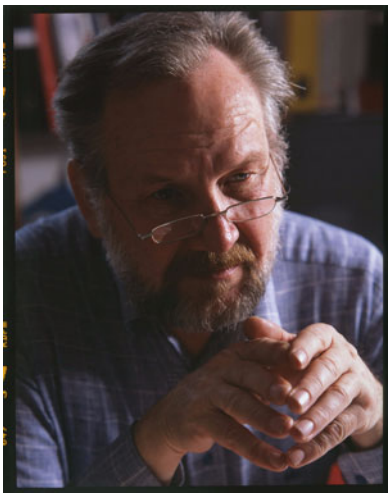


SPEAKER'S PROFILE

- Interior Architect –72, Konstfack, University College of Arts and Crafts, Stockholm
- Architect –81, KTH, Royal Institute of Technology, School of Architecture
- 1977-93, researcher and educator in Architectural Lighting at KTH
- From 1993 – running his own office, Ejhed Architects, Light & Design
- From 1996 – 99, responsible educator: Lighting the City, Konstfack, University College of Arts and Crafts, Stockholm
- From 2000, Head of the Lighting Laboratory, Campus Haninge, Stockholm, Education of Master of Architectural Lighting Design
- From 2002, Guest professor at the School of Design, University of Kalmar, Topic: Light and space.
- Member of ELDA+ since 1994, Director of Education 1998-2005
- President of ELDA+, 2005 - 07, Past President 2007-08
- Member of CIE since 1987, Director CIE, Div 3. since 2007
- Professor School of Design, University of Kalmar 2008.

Jan Ejhed has been working with a number of lighting design projects. Indoor and outdoor lighting design as well as design of luminaires.

Some projects:

The new Modern Museum in Stockholm, Road and town lighting for the city of Rättvik, Lighting for the Mall of Borlänge, the Arlanda Airport, Midlanda Airport, Museum of Sketches, Skärhamn, Lighting for the Government office of the Prime Minister of Sweden. Recent project, new Lighting Masterplan for the Royal Djurgården in Stockholm. Research with the EU project Arthelio, a combination of daylight and the artificial light of sulphur lamps. Jan Ejhed is the responsible Professor and has developed the education of Architectural Lighting Design in Sweden, to an international Master`s program, currently with 35-40 students/year with an average each year of students from more then 20 different countries. Additionally courses are done also for the Building Department students at the University. At the moment there is a staff of 5 persons and many invited guest lecturers from both Sweden and other countries, are taking part in the education. New course for the fall semester 2007 will be the Master class of " Lighting Design in winter landscape and buildings /Icehotel in Jukkasjärvi" From 2008 a Master class of Heritage Buildings will take place in the old part of Stockholm city.

Jan Ejhed is also lecturing at a number of Universities, in Sweden and internationally.

ABSTRACT

Architectural Lighting Design topic is getting more and more international, a profession for the worldwide market with almost the same approach to lighting quality all over the world.

Lighting in our everyday life is related to the rhythm and quality of the natural light. The daylight and climate conditions are the basis for health, well-being and visual perception. However, the rhythm and the character of the natural light vary in different geographic regions. At the equator is a twelve hour day/night rhythm all the year, in comparison with the extreme seasonal lighting differences in the Nordic countries.

Official statistics of Sweden shows that in the wintertime 3-5 percentages of the inhabitants are diagnosed SAD (Seasonal Affective Disorder) 7 percentages feel low and are social inactive and 50 percentages feel tired. Only 40 percentages of the Swedes are in full productivity at the winter period.

The winter lighting effects, the seasonal changes and the circumstances behind the statistic result will be presented and the aspects of general application as guidelines and standards for good lighting quality will be discussed.

Friday, 7 November 2008, 14:30-15:00

The Stasis of the Observer

Carla WILKINS
LichtVision, Welserstraße 10-12, D-10777 Berlin, Germany, www.lichtvision.de
E-mail: wilkins{at}lichtvision.de

SPEAKER'S PROFILE

Currently based in Berlin - a modern gateway between Eastern and Western Europe - Carla Wilkins has over fifteen years professional experience as an Architectural Lighting Designer.

Ms. Wilkins began her career in New York City in 1989 with JFPM before returning to Germany and joining Lichtdesign in Cologne. In 1992 she moved to Berlin to head the office of LichtKunstLicht. In 1997 Ms. Wilkins founded LichtVision GmbH with four partners where she continues working to expand the traditional boundaries of lighting design to encompass all manner of visual media.

Over the years Ms. Wilkins has worked on a vast array of German and international projects including major museums, public memorials, art installations and both commercial and residential architecture. Her work has been widely published and she frequently lectures on lighting design and related topics. Carla Wilkins has a degree (Dipl.-Ing.) in architecture from the Fachhochschule in Trier, Germany and is a member of the European Lighting Designer's Association.

ABSTRACT

As lighting becomes more dynamic the speed of those seeing it is reduced until they become motionless observers in their moving environment. Since the beginning of time patterns of human behavior have been governed by regular cycles such as the time of day and the seasons of the year. Now the relentless motion of virtual reality has altered the visual environment to the point where the inhabitants stop moving and observe. The constant streaming of information from the surroundings provokes one to linger and ponder. The light creates the illusion.

Friday, 7 November 2008, 15:00-15:30

Thinking Light: The Necessity of Scholarship in Lighting Design

Derek PORTER
Derek Porter Studio, 1907 Wyandotte Trafficway, Kansas City, MO 64108, www.derekporterstudio.com

SPEAKER'S PROFILE

Derek Porter is Principal Designer at Derek Porter Studio with 19 years of experience in architectural lighting, space, furniture and exhibition design. Derek leads all design initiatives within the studio, and provides leadership to staff designers. He offers expertise in collaborative design discussion, unique design solutions and details, custom residential application, architectural integration and poetic gestures of luminance/illuminance for all types of projects. Derek graduated in 1989 from the Kansas City Art Institute in Environmental Design. Derek has been lead lighting designer on hundreds of projects including Kansas City Ballet with Moshe Safdie, Nerman Museum of Contemporary Art with Kyu Sung Woo, Flex Systems, Kemper Museum of Contemporary Art, Southern Poverty Law Center's Civil Rights Center, Bartle Hall Convention Center, Las Vegas Convention Center, Main Branch Kansas City Public Library, Sinai Campus and Howe Elementary with the Detroit Public Schools, as well as numerous residential projects nationwide.

As an extension to his lighting design practice, Derek studies light and space through work in photography and sculpture. Derek actively exhibits his work in the Kansas City region, nationally and internationally including exhibits at Plymouth State College in New Hampshire and the Beida University in Beijing, China. Derek's work is held in numerous corporate and private collections including American Century Investments, Shook Hardy Bacon, DST Systems and US Sprint Corporation. This more personal investigation brings opportunity for deeper study and abstract understanding of subtleties found in human perception, atmospheric conditions and cycles in nature.

Derek is Director of the Master of Fine Arts Lighting Design program at Parsons The New School for Design in New York City within the Department of Architecture, Interior Design and Lighting. He is active internationally in the development of forward-thinking interdisciplinary lighting design and education. He has also established creative relationships through work in exhibition design at the University of Kansas, the Kansas City Art Institute, and the Kemper Museum of Contemporary Art. He has taught and been guest lecturer on design and architecture at such institutions as: Tyler School of Art, Kansas City Art Institute, University of Kansas, Johnson County Community College and the University of Missouri at Kansas City. Additionally he has juried and lectured for such organizations as the American Institute of Architects, the International Association of Lighting Designers, Professional Lighting Designer's Association, the Illuminating Engineering Society of North America, and spoken at conferences including Light Fair International in Las Vegas and New York, USA, the IALD Annual Conference in Chicago, Alexandria, USA and Montreal, Canada, Light Congress in Frankfurt, Germany, Lights in Alingsas Conference in Alingsas, Sweden, and the Professional Lighting Design Conference in London, England.

ABSTRACT

Historically speaking, practitioners in architectural lighting design have largely gained notoriety from being highly competent technicians; understanding the use of specific electrical lighting instruments in conjunction with practical applications of illumination problem solving. These initial pioneers not only forged a path for practitioners today but contributed to the autonomous formation of the profession itself. Now that architectural lighting design is largely recognized as a vital component to successful architecture and has reached a critical mass of practitioners globally, it is crucial that the profession establish core values that will define the future of our practice and pedagogical interests in academia.

This presentation will examine the presence of ''scholarship'' in parallel professions; examining philosophical interests of today's practitioners in architecture and structural engineering as well as evolving periods in history that shaped these professions as we know them today. Methods of working that include idea development and research will introduce ways in which critical thinking can be an integral part of the professional practice of architectural lighting design.

Friday, 7 November 2008, 16:00-16:30

Daylight for Health and Efficiency: A New Career for an Old Friend

Ahmet ÇAKIR
ERGONOMIC Institute for Social and Occupational Sciences, Soldauer Platz 3, D-14055 Berlin, Germany,
E-mail: ahmet.cakir{at}ergonomic.de

SPEAKER'S PROFILE

Ahmet Çakir was born in 1943 in Istanbul, Turkey. After moving to Germany in 1963, he studied telecommunication technology at the Technical University of Berlin.

After receiving his doctors degree from the Institute of Lighting Technology at the Technical University, he became a research fellow with the Institute of Ergonomics where he conducted the investigation of VDT utilization in German industries, sponsored by the German Ministry of Labour. The scientific outcome of this study was the main basis for German standards of the series DIN 66 234 (the basic standard for the later ISO 9241-series) and for Safety Regulations for VDT workplaces in office areas.

Since 1980 he has been the scientific manager of the ERGONOMIC Institute for Social and Occupational Sciences in Berlin. During this period, he and his wife Gisela Çakir, have conducted a 15-year study on the health effects of office lighting. The results of this work „Light and Health" was first published 1990. Later editions (1991 English, 1994 and 1998 German) have received wide interest throughout the world. He is Editor-in-Chief of the Journal Behavior and Information Technology. Dr. Çakir is married, with three children, and lives in Berlin.

The main focus of Dr. Çakir's research activities is human reliability and work safety in applications of modern information technology. He has conducted numerous scientific and technical research projects for governmental organizations and private companies. He has published reports on the following topics of his research activities:

- VDT utilization in newspaper offices
- New display technologies
- Ergonomic aspects of text processing
- Occupational diseases of professional vehicle drivers
- Technical and safety-related aspects of work performed by phono-typists
- Control rooms of nuclear power plants, ergonomic aspects of work organization and equipment
- Ergonomic aspects of office communication
- National and International Standards in the field of Work with Display Units and in the field of light and lighting.

ABSTRACT

Daylight, rather a fact than a matter of discussion for many millennia, has lost its dominant role in architecture during the years 1950 till 1965. The artificial lighting of interiors had reached its long promised goal and was considered superior to daylighting in quality. In many countries, office buildings and even schools were built without windows because the new techniques of lighting and air conditioning were believed to perform much better than conventional lighting from windows and skylights and air supply through wall openings. Finding evidence for such claims has never been possible, though, except for buildings in desert like areas and for lighting during the night hours. One can believe it or not: The only evidence for the benefits of artificial air conditioning German industry could present was a study from Taschkent. And in the case of lighting, German law ruled until the year 2003 that daylighting was no lighting at all. For working in a healthy environment and being efficient, the rules for lighting have been defined by a standards committee for artificial lighting. Studies of the ERGONOMIC Institute, Berlin, in German office buildings, published first in 1990, revealed that almost 60 % of the workers considered lighting a health hazard, and, in addition, that in work spaces where artificial lighting dominates the self-reported state of health of workers was far below of those working in areas with daylight dominance. Since this was not only true for „vision-related" symptoms like eye fatigue, but also with other health complaints related to temperatures or noise we assumed that the effects are likely to be caused by influences of lighting on the hormonal system. During the 1990s, a series of studies on the impact of lighting on humans were performed in the USA. They included offices, schools and retail buildings. The outcome in short is, in the words of the authors: „In this project, we established a statistically compelling connection between daylighting and student performance, and between skylighting and retail sales." All in all, daylight was demonstrated to improve human performance, to change the state of health for the better, to help boosting sales in retail shops. In addition, other studies have demonstrated its impact on the energy efficiency of buildings.

Friday, 7 November 2008, 16:30-17:00

Save the Bulb!

Kevan SHAW
Kevan Shaw Lighting Design, 4 Baltic Street, Edinburgh EH6 7BW, Scotland, UK
E-mail: office{at}ksld.com

SPEAKER'S PROFILE

Kevan Shaw has been involved in lighting for over 30 years. In this time he has worked in Stage, TV and Film lighting and 20 years ago established Kevan Shaw Lighting Design as, primarily, an Architectural Lighting Design Consultancy. He is active in lighting education, is chairman of the Society of Light and Lighting's committee revising LG8 and is the Director of Sustainability for the Professional Lighting Designer's Association.

ABSTRACT

A review of the potential impacts of the current EUP proposals for the removal from the market of incandescent light sources.

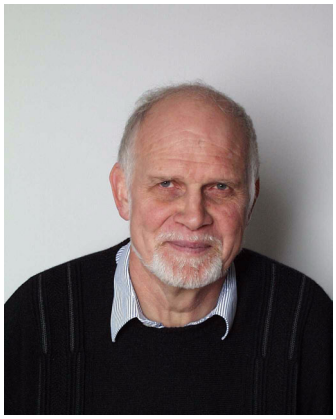
Issues such as increased quantities of Mercury introduced to the environment, the impact of a huge increase of harmonic problems through poor power factor of CFLi lamps and the poor information on the actual power consumption of domestic lighting are being ignored on the assumption that reduced energy use will be delivered.

This paper is the result of considerable research and investigation of the information currently available.

Friday, 7 November 2008, 17:00-17:30

Lighting Designer´s New Responsibility

Heinrich KRAMER
LICHTDESIGN Ingenieurgesellschaft GmbH, Aachener Straße 625, D-50226 Königsdorf/Frechen
E-mail: lichtdesign-koeln{at}netcologne.de



SPEAKER'S PROFILE

Prof. Dr.- Ing. Heinrich Kramer

- born 1941
- after elementary and high school electro-technical studies at the technical university of Aachen
- degree Dr. Ing. at the Ruhr-Universität Bochum
- during studies and post graduate studies scientific research in light technique and collaboration with the lighting industry
- since 1972 head of the marketing and developing department of a lighting company
- several patents about luminaire design
- 1980 foundation of LICHTDESIGN and partner of H. T. von Malotki
- since 1990 general manager of LICHTDESIGN GmbH
- participation in several national and international committees for standardization of light and lighting (DIN, LitG, CIE)
- 1995 - 1999 founding member and president of ELDA
- since 1999 vice president of ELDA, now fellow member of PLDA
- since 1988 lecturers at the architectural faculty of RWTH Aachen
- since 2000 honorar professor at the same faculty

ABSTRACT

Physiologists and psychologists have found out light is controlling our biological rhythm and nearly all functions of our organism.

They state the existing standards and recommendations of light stipulating for health and well-being of people not enough light in daytime and too much during the night. Moreover they evaluate the spectrum of daylight indoor as well as the spectral composition of nearly all today used electrical light sources being not adequate for the health of people.

Due to their research a radiation similar to the sun spectrum starting from the UV-B via the visible up to the IR-B is necessary, because some parts of the spectrum repair the damage of other parts.As the existing standards do not respect these findings and as for certain reasons we cannot expect an adaptation in the near future, the lighting designer has to carry new responsibility. By contract he is committed to the compliance of existing standards not sufficient for health and well-being according to the latest research.

As biological adequate light also depends on building and working codes and last not least on our lifestyle, we cannot expect every client can and will comply with the requirements of biological correct light.

This lecture will show how biological light looks like and what a lighting designer has to consider during the planning of his projects.