

# CAS Scholarships for Visiting Professors

The aim of the scholarship programme is to invite world-renowned scientists representing international research institutions who, by delivering lectures on innovative solutions and modern technologies as well as by running seminars with students, PhD students and academics, will strengthen the WUT academic community's intellectual potential.

IN THE AUTUMN SEMESTER OF 2012/2013 THE CENTER FOR ADVANCED STUDIES HOSTED THE FOLLOWING SCIENTISTS:

- Professor Gerald Urban, Department of Microsystems Engineering, University of Freiburg (Germany)
- Professor Kenneth J. Shapiro, Animals & Society Institute (USA)
- Professor Jonathan Smith, Department of Mathematics, Iowa State University (USA)
- Professor Ehrenfried Zschech, Fraunhofer Institute for Nondestructive Testing (Germany).

IN THE SPRING SEMESTER OF 2012/2013 THE WARSAW UNIVERSITY OF TECHNOLOGY WILL BE VISITED BY:

- Professor Colin Sheppard, Italian Institute of Technology (Italy)
- Kim R. Fowler, MSc Eng., Electrical and Computer Engineering, Kansas State University (USA)
- Celia Fonseca Guerra, PhD, Department of Theoretical Chemistry, VU University Amsterdam (the Netherlands)
- Professor Grzegorz Rozenberg, Department of Computer Science of Leiden University (the Netherlands)
- Professor Peter Achermann, Institute of Pharmacology and Toxicology, University of Zurich (Switzerland)
- Professor Shyuichi Izumiya, Department of Mathematics, Faculty of Science, Hokkaido University (Japan)
- Professor Matthias Bickelhaupt, Department of Theoretical Chemistry, VU University Amsterdam. (the Netherlands).

To find more information on scholarships for visiting professors please visit:  
<http://www.csz.pw.edu.pl/index.php/en/stypendia-dla-profesorow-wyzytujacych>  
<http://www.csz.pw.edu.pl/index.php/en/more-about-joomla/32/58-jak-otrzymac-stypendium-wyjazd-doktorantow>

The CAS scholarships for visiting professors are co-financed by the European Union within the European Social Fund.

↓ Professor Kenneth Shapiro, lecture on *The Social Construction of Animals in the Laboratory: The Protean Rodent* | Photo by M. Sypek



# SCIENTIA SUPREMA

The Center for Advanced Studies holds lectures within the Scientia Suprema series several times a year. The lectures, delivered by world-renowned scientists, are aimed at acquainting the audience with outstanding breakthrough achievements in science and technology.

In January 2013 Scientia Suprema was devoted to quantum IT with the following lectures: *Interference, Schrödinger's Cat and Interaction-Free Measurement - How Does it All Relate to*

*the Nobel Prize?* by Professor Wiesław Leoński (University of Zielona Góra) and *At the Threshold of a Quantum Revolution in IT* by Professor Cao Long Van (University of Zielona Góra). Professor Leoński's research concerns quantum optics, non-linear quantum information, entanglement, quantum information theory, cellular automata and others. Professor Cao Long Van focuses on quantum and non-linear optics.

# CAS Advanced Studies Offer

Throughout the academic year the center provides, within the CAS Advanced Studies Offer, a range of interdisciplinary basic and special lectures for WUT academics, MSc and PhD students. It is also addressed to representatives of other academic circles. The offer is to enrich and complement students' knowledge acquired during their majors and to serve as an inspiration for the listeners' scientific development.

BASIC LECTURES /AUTUMN SEMESTER 2012/2013

- Professor Marian Grynberg (UW) - *Semiconductors and their Role in the Information Age\**
- Professor Mirosław Karpierz (WUT) - *Modern Optics and Photonics*
- Professor Jerzy Garbarczyk (WUT) - *Rudiments of the Physics of Solids*
- Professor Piotr Przybyłowicz (WUT) - *Elements of Analytical Mechanics*
- Professor Michał Malinowski (WUT), Professor Rajmund Bacewicz (WUT), Professor Witold Danikiewicz (PAS) - *Spectroscopic Methods\**
- Professor Lucjan Piel (UW) - *Quantum Methods in Chemistry\**

SPECIAL LECTURES / AUTUMN SEMESTER 2012/2013

- Professor Elżbieta Jarzębowska (WUT) - *Nonlinear Control Strategies and Algorithms Design and Application in Technical Tasks*
- Dorota Kobylińska, PhD (UW) - *Psychology of Personality and Personality Development Stimulation\**
- Academics of the Warsaw University of Technology: Piotr Bujak MSc Eng. Arch., Kinga Zinowicz-Cieplik PhD Eng., Professor Andrzej Kulig, Professor Wojciech Zagan, Jan Słyk PhD Eng. Arch., Professor Elżbieta D. Ryńska, Professor Krystyna Guranowska-Gruszecka, Dariusz Gotlib PhD, Dsc Arch. - *Building Information Modelling (BIM)*

See more information:  
<http://www.konwersatorium.pw.edu.pl>

\* Lectures co-financed by the European Union within the European Social Found

# Through the Prism of a Decade - Colloquium Lecture of the Warsaw University of Technology Turns 10

In November 2012 the center celebrated its 10th anniversary of launching the WUT Colloquium Lectures. The celebrations, entitled *Through the Prism of a Decade*, included a lecture on *Poland in Space* by Professor Piotr Wolański (WUT), a mathematics exhibition covering fractals and algebraic surfaces and a presentation of light dispersion by a prism as well as the publishing of a book entitled *Panorama of Contemporary Science*, which is a collection of articles written in connection with the WUT Colloquium Lectures that were delivered in the last ten years.

Within the 10-year history of holding the event, there were 65 lectures on the latest achievements in the sciences and humanities delivered by eminent specialists representing both Polish and international research centres.



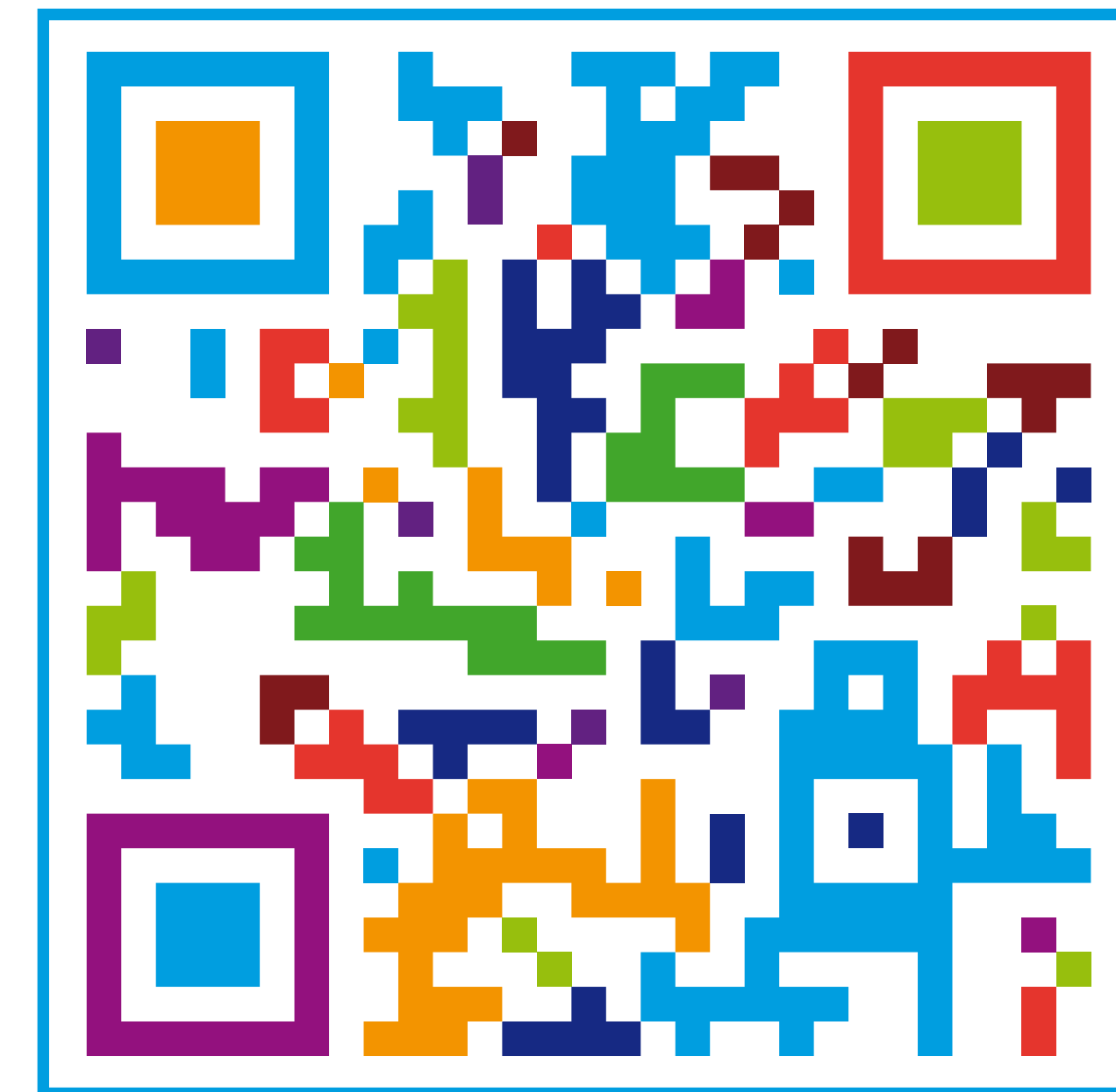
↑ Visiting the exhibition *Infinity* | Photo by M. Sypek

# 4 NEWSLETTER

No. MAY 2013



## Center for Advanced Studies OF WARSAW UNIVERSITY OF TECHNOLOGY



\* read the QR code

### CAS Newsletter

Warsaw University of Technology, Politechnika Square 1, 00-661 Warsaw, Poland  
e-mail: [csz@csz.pw.edu.pl](mailto:csz@csz.pw.edu.pl), telephone no. (00 48 22) 234 60 02

Editor-in-chief/translation: Ewa Stefaniak  
Editorial team: Joanna Jaszurka, Ilona Sadowska, Matgorzata Zielińska, Anna Żubrowska  
Supervision: Professor Stanisław Janeczko  
Graphic design: Diana Gawronkiewicz, Podpunkt  
DTP: Matgorzata Zielińska

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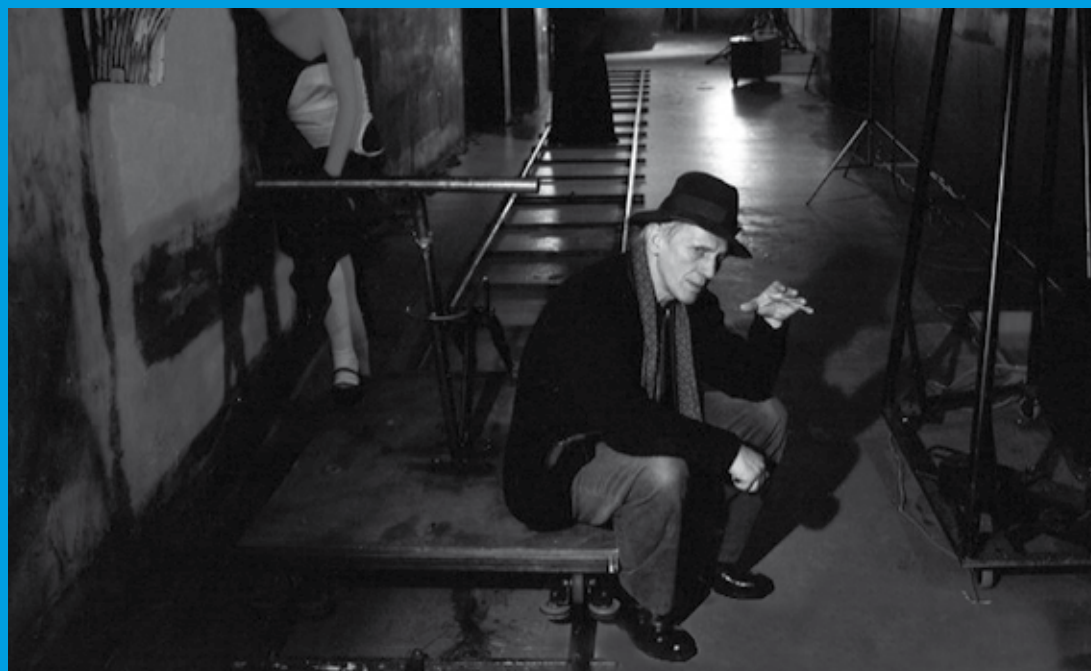
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The newsletter no. 4 covers the seventh issue of the *Profundere Scientiam* CAS bulletin (published in October 2012). See all the issues of *Profundere Scientiam*: [www.csz.pw.edu.pl/index.php/pl/biuletyn](http://www.csz.pw.edu.pl/index.php/pl/biuletyn)



# In a Theatre of Words

based on an interview given by Professor Jan Englert, published in the *Profundere Scientiam* CAS bulletin, issue no. 7



← Professor Jan Englert  
| Photo by  
Wojciech Plewiński

## The Word Almighty?

In the interview Professor Englert takes us to the realm of language and explains what words are for. They serve as a means of conveying information and interpretation. The spoken word is interpreted by the speaker by his or her modulating the voice and may have different meanings, whereas the written word conveys nothing more but facts. The problem is, however, that we interpret less and less. We neglect the power of interpretation, and in the end we inform others passionlessly about both tragic and very exciting matters.

Professor Englert blames the deterioration of language on "that box" – the computer – which is a hotbed of hazards for interpersonal relations. Our language, which constitutes a fundamental cement for human bonds, is becoming impoverished because people's need for eye-to-eye contact has diminished over the last few decades. And we can thank the invention of the Internet for this, for although it has brought much good, it has nevertheless caused more harm. Many Internet users have no desire to maintain genuine person-to-person relations, instead, they are satisfied with what seem like friendships carried out over the wire. Even if we have found in the Internet what we call "friends", these are only superficial friendships, as talking to one another face-to-face is of the essence. In the virtual world it is difficult to play on words, many a time virtual conversations are anonymous and the interlocutors bear no responsibility for their statements. Unable to modify one's voice, we lose a precious feature of language – its sound. Why do we ourselves take away the possibilities to communicate with a flesh-and-blood human? Perhaps it is easier and safer to "click" relations, but it is definitely more boring. The feelings have not changed, but the way we

reveal them has. Although the world has not yet turned into an emotionally hollow land, the signs that this may happen are becoming more and more conspicuous.

## Behind the Curtain

Theatre itself has been losing its primacy of being a transmitter, a bastion of Polish literary language. Theatre is a convention between the actors and the audience. But is it that the less sophisticated the latter becomes, the former has to do so as well? The fact is, Professor Englert bemoans, that contemporary actors have poor diction and very often are not equipped with the ability to interpret. Unlike in the *theatrum mundi*, in which we all play our parts more or less skillfully and bow to the convention between the deceiving and the deceived, the acting profession is not a form of deception, nor is it its role. A gifted actor cannot play feelings, he or she can play about them. And why does he or she do it? To move the audience and have feedback. The core of any actor's work are not the feelings he or she performs but the feelings that he or she gets from the audience. "I – Professor Englert reveals – take a breath and the spectator takes it with me. For a split second the spectator's soul is mine. I may cry, laugh, scream or demonstrate other emotions, but it is important that the viewer feels the emotions with me." As a consequence, the viewer is an active participator of the performance. Theatre is a product that the actors sell. It is a must for them to do their best to sell one that is of the finest quality.

## Striving for Immortality

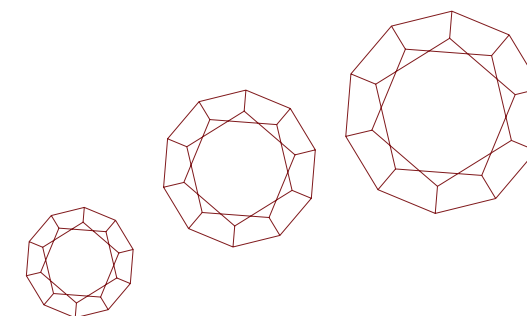
Teaching is Professor Englert's greatest passion – and making students aware of the many tricks and puns

they can do with language. Yet, teaching has become a strenuous activity as the students' ability to think abstractly is degenerating and, again, the Internet takes a large part of the blame – easy and immediate access to information, no effort made to search for it because we click and a piece immediately pops up on the computer screen – all of this does not activate the memory, and consequently we tend to forget things quickly. Thinking is becoming more a matter of megabits rather than neurons.

Professor Englert describes a tutor-pupil relationship as mutual vampirism – the pupil draws knowledge and the latter gets fresh ideas, plus the confirmation that "I'm still needed". The relation is not only about conveying or exchanging thoughts. To be a real master one needs to know how to inspire pupils, one needs to have charisma. In the interviewee's opinion, by demonstrating the knowledge he himself learnt from his masters and additionally marking it with his own personality, Professor Englert becomes a component in a chain of immortality – "I leave a part of myself for the next generations", he says. Teaching is sensual and teachers should master the capacity to move their pupils, to stir their senses and minds. We all have an in-born quest for masters because we all need them. It is like with love – to find it one needs to be ready to start looking for it. The greatest satisfaction for a pupil is when he or she climbs up the ladder rung by rung, with the master sitting on its top, to "steal" that mastery. Nowadays, however, the process of becoming a master, like everything else, has accelerated. "Pupils usually want to overthrow the ladder, remove the master and take his or her place". The pursuit of a career, information or forming social bonds has speeded up over the years and the rush we have been living in is measured by the number of zeroes in our bank accounts and the number of friends on Facebook.

If this is the right way to go, Professor Englert bitterly concludes, then it is time to die.

Professor Jan Englert visited the Warsaw University of Technology in 2004 and was a speaker of a WUT Colloquium Lecture with a talk *A Word on the Meaning of a Word*.



The interview was conducted as a part of celebrating the 10th anniversary of launching the WUT Colloquium Lectures.

**Professor Jan Englert** - film and theatre actor, director, academic at the Aleksander Zelwerowicz Theatre Academy in Warsaw (also its former dean and rector), performed in the Teatr Współczesny, Teatr Polski and Teatr Narodowy in Warsaw, supported and contributed to the restoration of the Collegium Nobilium Theatre. He is currently art director at the Teatr Narodowy (National Theatre) in Warsaw. He was a member of the Cultural Affairs Council to the President of the Republic of Poland (1992-2003).

## Calendar of Events

- OCTOBER 2012**
  - > WUT Colloquium Lecture: *The Social Construction of Animals in the Laboratory: The Protean Rodent* by Professor Kenneth Joel Shapiro, Animals and Society Institute, USA
  - > Research scholarships for postdoctoral scientists – competition, 15 scholarship winners
  - > CAS Autumn Scientific Workshop, Lipnik Park
  - > Training course for PhD students: *Project Management*
  - > Publishing of the 7th issue of *Profundere Scientiam* CAS bulletin
  - > Publishing of the 3rd issue of the CAS Newsletter
  - > Launching of the CAS Advanced Studies Offer for the autumn semester of 2012/2013 – 6 basic and 3 special lectures
- NOVEMBER 2012**
  - > WUT Colloquium Lecture: *Through the Prism of a Decade* - celebrating the 10th anniversary of launching the project: a special lecture entitled *Poland in Space* by Professor Piotr Wolański; *Infinity* - a mathematics exhibition presenting fractals and algebraic surfaces
  - > *Academia Scientiarum Principium* – open lectures on mathematics, addressed to pupils, students and teachers
  - > International research scholarships for PhD students and academics – two competitions, with 15 scholarship winners in each competition
  - > Training course for PhD students: *Intellectual Property*
  - > Publishing of a book entitled *Panorama of Contemporary Science*
- DECEMBER 2012**
  - > The 3rd workshop co-organised by the Polish Children's Fund and the Center For Advanced Studies
  - > Christmas meeting at the CAS office for WUT students and academics
  - > Creating a CAS fragrance – perfume *CAS Infinity*
- JANUARY 2013**
  - > *Scientia Suprema: Interference, Schrödinger's Cat and Interaction-Free Measurement – How Does it All Relate to the Nobel Prize?* by Professor Wiesław Leoński, University of Zielona Góra, and *At the Threshold of a Quantum Revolution in IT* by Professor Cao Long Van, University of Zielona Góra.
  - > WUT Colloquium Lecture: *Electromagnetic wave interaction with various metallic nanomaterials* by Professor Michael Giersig, Free University of Berlin
- FEBRUARY 2013**
  - > Launching of the CAS Advanced Studies Offer for the spring semester of 2012/2013 – 5 basic and 8 special lectures
- MARCH 2013**
  - > *Academia Scientiarum Principium* – open lectures on mathematics and computer science, addressed to pupils, students and teachers

## CAS Publications

The Center for Advanced Studies publishes two series – CAS Lecture Notes and CAS Textbooks.

Recently, the center has augmented its publishing offer with another CAS Lecture Notes item – *Topology Synthesis for Parallel Robotic Mechanisms* by Professor Feng Gao and Jialun Yang, PhD, as well as with a CAS Textbook *Geometric Methods* by Professor Michał Szurek.

Also, a new item within the CAS Lectures Notes series – *On the Mathematical Modeling of Complex Systems* by Professor Jonathan D.H. Smith – is being prepared for publication.

To see all CAS publications please visit: [www.csz.pw.edu.pl](http://www.csz.pw.edu.pl).

