

Laudatio

on
the Doctor Honoris Causa
academic title awarding
to

Prof. Dr. Leopold Schmetterer



Stimate Domnule Profesor
Doctor Leopold SCHMETTERER,
stimată Doamnă Președintă a Senatului
Universității POLITEHNICA din București,
Domnule Rector, Domnilor Prorectori,
distinși membri ai Senatului,
distinși invitați,
doamnelor și domnilor,

Am onoarea și deosebita plăcere de a vă
prezenta, la această ocazie festivă,
câteva aspecte ale vieții și activității
distinsului Profesor Universitar Doctor
Leopold SCHMETTERER, Profesor și
Director Științific la SERI (Scientific Eye
Research Institute).

Most esteemed Professor
Doctor Leopold SCHMETTERER,
esteemed Madame President of the
Senate of University POLITEHNICA of
Bucharest, esteemed Rector,
esteemed Vice-Rectors, esteemed
Members of the Senate, distinguished
guests, ladies and gentlemen,

I have the honour and the great
pleasure to present at this ceremony
some aspects of the life and career of
the distinguished Professor Doctor
Leopold SCHMETTERER, Professor and
Scientific President at SERI (Singapore
Eye Research Institute).

S-a născut în 21 iunie 1964, în Viena (Austria). În 1986 a obținut diploma de fizician, la Universitatea Tehnică din Viena, iar în 1989, titlul de Doctor în domeniul Fizică Medicală la aceeași universitatea din Austria. De asemenea, în 1989 a obținut și diploma de medic, la Universitatea de Medicină din Viena.

Este, în prezent, Profesor Extraordinar la Centrul de Fizică Medicală și Inginerie Biomedicală, precum și la Departamentul de Farmacologie Clinică a Universității de Medicină din Viena.

Domnia sa este o personalitate inovatoare, lider în domeniul sănătății la nivel global, profesor și medic practicant. Profesor Doctor Leopold SCHMETTERER a publicat o carte de referință, **Ocular Blood Flow** (Springer Heidelberg, 2012), și este autorul a mai mult de 300 de lucrări și capitole de carte. Importanța lucrărilor științifice publicate este confirmată de

He was born on June 21st, 1964, in Vienna (Austria). He obtained in 1986 the diploma of Physicist at Technical University in Vienna, and in 1989, the PhD title in the field of Medical Physics at the same university in Austria. Moreover, in 1989 he also obtained the Medicine diploma at Medical University of Vienna.

He is currently Extraordinary Professor at the Centre of Medical Physics and Biomedical Engineering, as well as at the Department of Clinical Pharmacology of Medical University of Vienna.

He is an innovative personality, a leader in the field of health at global level, Professor and practicing Doctor. Professor Doctor Leopold SCHMETTERER published a reference book, **Ocular Blood Flow** (Springer Heidelberg, 2012), and he is the author of more than 300 papers and book chapters. The relevance of the published scientific papers is

un număr impresionant de citări (14461) și un indice Hirsch de 68. Din 1998, a condus un număr de peste 20 de doctorate, atât în Austria, cât și în colaborare cu alte universități din lume.

A obținut peste 50 de grant-uri, a fost invitat la mai mult de 200 de conferințe internaționale, iar la mai mult de 15 conferințe a susținut prelegeri plenare.

A fost membru în European Medical Council (EMRC) între 2010-2012. În perioada 2010-2014, a fost membru al board-ului Fundației Austriece pentru Știință. A ocupat poziții profesionale în board-ul editorial al Progress of Retinal and Eye Research, Scientific Reports, Acta Ophthalmologica, Current Eye Research, Ophthalmic Research, Journal of Ocular Pharmacology and Therapeutics, Asia-Pacific Journal of Ophthalmology, Spektrum der Augenheilkunde, Russian Journal of Ophthalmology.

confirmed by an impressive number of citations (more than 14461) and a Hirsch index of 68. Since 1998, he supervised over 20 PhD theses, both in Austria and in collaboration with other universities in the world.

He obtained more than 50 grants, he was invited to more than 200 international conferences, and at more than 15 conferences he gave plenary lectures.

He was Member of the European Medical Council (EMRC) within the period 2010-2012. Between 2010-2014, he was Member of the Board of Austrian Science Fund. He was Member of the Editorial Board of Retinal and Eye Research, Scientific Reports, Acta Ophthalmologica, Current Eye Research, Ophthalmic Research, Journal of Ocular Pharmacology and Therapeutics, Asia-Pacific Journal of Ophthalmology, Spektrum der Augenheilkunde, Russian Journal of Ophthalmology.

Preocupările sale profesionale și științifice se bucură de recunoașterea internațională.

- 1995: Novel approach to measure pulsatile ocular blood flow based on laser interferometry
- 2002-present: Characterisation of neurovascular coupling in the retina and its abnormalities in ocular disease
- 2003-2016: Major contributions to our understanding of blood flow autoregulation in humans
- 2003: First paper on Doppler OCT using Fourier domain OCT
- 2008-present: Novel insights into the biomechanics of ocular tissues
- 2008-2014: Development of bi-directional Doppler OCT resulting in measurement of total retinal blood flow
- 2012-present: Development of ultrahigh resolution OCT allowing for measurement of tear film thickness and lipid layer thickness
- 2015-present: First publication of

His professional and scientific concerns enjoys international recognition.

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measurements of retinal oxygen extraction in humans and characterisation of its abnormalities in ocular disease.

Principalii colaboratori industriali:

Croma Pharma, Laboratoires Thea, Bayer, Novartis, Allergan, Alcon, Santen, Dompe, Topcon, Nidek, Zeiss, Imedos, Imagine Eyes, Cylite.

Principalii colaboratori din mediul universitar:

Gerhard Garhöfer, Division of Ophthalmic Pharmacology, Department of Clinical Pharmacology, Medical University of Vienna, Austria;

Michael Wolzt, Division of Cardiovascular Pharmacology, Department of Clinical Pharmacology, Medical University of Vienna, Austria;

Rene Werkmeister, Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Austria;

Rainer Leitgeb, Center for Medical Physics and Biomedical Engineering,

measurements of retinal oxygen extraction in humans and characterisation of its abnormalities in ocular disease.

Main industrial collaborators:

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Main academic collaborators:

Gerhard Garhöfer, Division of Ophthalmic Pharmacology, Department of Clinical Pharmacology, Medical University of Vienna, Austria;

Michael Wolzt, Division of Cardiovascular Pharmacology, Department of Clinical Pharmacology, Medical University of Vienna, Austria;

Rene Werkmeister, Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Austria;

Rainer Leitgeb, Center for Medical Physics and Biomedical Engineering,

Medical University of Vienna, Austria;
Georg Fischer, Center for Medical
Statistics, Informatics, and Intelligent
Systems, Medical University of Vienna,
Austria;

Mathias Bolz, Department of
Ophthalmology, Kepler University of
Graz, Austria;

Gerald Seidel, Department of
Ophthalmology, Medical University of
Graz, Austria;

Clemens Vass, Department of
Ophthalmology, Medical University of
Vienna, Austria;

Ursula Schmidt-Erfurth,
Department of Ophthalmology,
Medical University of Vienna, Austria;

Lin Wang and **Claude Burgoyne**,
Devers Eye Institute, Portland, USA;

Eric A Newman, Department of
Neuroscience, University of Minnesota,
USA;

Anthony Nanlin Kuo, Duke
Ophthalmology, Durham, NC, USA;

Alina Popa-Cherecheanu,
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Ophthalmology, Durham, NC, USA

Alina Popa-Cherecheanu,
Department of Ophthalmology,

Bucharest, Romania;

Toke Bek, Department of
Ophthalmology, Aarhus, Denmark.

În semn de recunoaștere a meritelor
sale profesionale, a serviciilor și
contribuțiilor valoroase aduse la
creșterea prestigiului structurilor
științifice, domnul Profesor Doctor
Leopold SCHMETTERER a primit
numeroase premii internaționale:

- Iunie 1998: Austrian Höchst Award;
- Mai 2002: First price International
MSD Award;
- Aprilie 2011: Visionary of the
Quarter, European Vision Insititue;
- Mai 2014: ARVO Silver Fellow;
- Iunie 2014: International Bach
Lecture, Leipzig;
- August 2015: Hans Goldmann
Medal;
- Iunie 2016: Honorary Degree Carol
Davila University Bucharest;
- Octombrie 2017: Acta/EVER Gold
Medal and Lecture.

Bucharest, Romania;

Toke Bek, Department of
Ophthalmology, Aarhus, Denmark.

As a sign of recognition of its
professional merits, services and
valuable contributions to increasing
the prestige of scientific structures,
Professor Doctor Leopold
SCHMETTERER received many
international awards:

- June 1998: Austrian Höchst Award;
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- April 2011: Visionary of the Quarter,
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- June 2016: Honorary Degree Carol
Davila University Bucharest;
- October 2017: Acta/EVER Gold
Medal and Lecture.

În decembrie 2018, domnul Profesor Doctor Leopold SCHMETTERER a venit special din Singapore în România, pentru a susține conferința „*Biomedical engineering versus big data; the fight for the future of ophthalmic imaging*”, la facultatea de Inginerie Medicală din Universitatea POLITEHNICA din București, susținând astfel importanța ingineriei medicale ca profesie și direcții de cercetare actuale și viitoare, puse în slujba problemelor grave de sănătate la nivel mondial.

De asemenea, Profesor Doctor Leopold SCHMETTERER a propus colaborări interesante, cum ar fi schimburile ERASMUS de cadre didactice și studenți cu Universitatea Tehnică din Viena, realizarea de teze de doctorat în cotutelă și sprijin în toate activitățile de cercetare desfășurate în facultatea de Inginerie Medicală. Nu în ultimul rând, trebuie amintite discuțiile extrem de pragmatice legate de modul

In December 2018, Professor Doctor Leopold SCHMETTERER is especially coming from Singapore to Romania to support the conference “*Biomedical engineering versus big data; the fight for the future of ophthalmic imaging*” at Faculty of Medical Engineering at University POLITEHNICA of Bucharest, thus supporting the importance of Medical Engineering as profession and current and future research directions in the service of serious health problems in the world.

Moreover, Professor Doctor Leopold SCHMETTERER proposed interesting collaborations, such as ERASMUS exchanges of teaching staff and students with Technical University in Vienna, conducting PhD theses and support in all research activities carried out in the Faculty of Medical Engineering. Last but not least, the extremely pragmatic discussions about the faculty development, the structure

de dezvoltare al facultății, structura planurilor de învățământ și obiectivele activității de cercetare, discuții generate, evident, de vasta experiență la nivel european și mondial a domniei sale.

Senatul Universității POLITEHNICA din București apreciază realizările științifice ale Profesorului Doctor Leopold SCHMETTERER, întreaga sa activitate academică și de cercetare, precum și interesul și sprijinul acordat facultății de Inginerie Medicală și a cercetătorilor din cadrul Universității POLITEHNICA din București în domenii de vârf ale cercetării pe plan internațional și a hotărât acordarea Domniei sale a titlului de *DOCTOR HONORIS CAUSA* al Universității POLITEHNICA din București.

of the educational curricula and the objectives of the research activity, obviously generated by the vast experience at European and world level, must be mentioned.

The Senate of University POLITEHNICA of Bucharest values the prestigious scientific achievements of Professor Doctor Leopold SCHMETTERER, for its entire academic and research activity, as well as his continuous interest manifested to promote the Faculty of Medical Engineering and researchers from University POLITEHNICA of Bucharest in international leading research domains, and decided to confer the title of Doctor Honoris Causa of University POLITEHNICA of Bucharest.