



ANNUAL
REPORT

2016

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WELCOME FROM THE PRESIDENT



In 2016, the Fondation Philippe Wiener - Maurice Anspach distributed once again over €1 million in scientific grants. It is the third year in a row that we exceed this threshold, almost double the amount of five years ago. This testifies to our meaningful and increasing impact in supporting fellow researchers and scholars.

We should look at it not as an expense, but as an investment in education and research at a time it is particularly needed.

Beyond this, two events have marked the past year, one internal and the other external to the Foundation.

Many of our Alumni have stressed how much their experience abroad made possible by the Foundation had enriched their lives both professionally and personally and have offered to “give back” in some fashion to the Foundation.

As we considered how they could do so, we decided that, unlike most Alumni initiatives, we would not be soliciting financial contributions. Instead, we want to offer our Alumni the opportunity to strengthen their bond with other Alumni. In particular, we want to encourage opportunities for cross-generational support for them by other Alumni willing to act as mentors or coaches, as they seek to launch their professional career.

The external event is the Brexit referendum. Brexit will not be effective until April 2019, but it is already starting to have an impact on the world of higher education and research, as its prospect influences the behaviour of students, universities and public authorities. We know that it will present challenges, such as the likely higher cost of education in the UK for EU students, but we can be confident that the Foundation is strong enough to weather its consequences.

The challenge for higher education institutions post-Brexit will be to demonstrate that, by working together, they can continue to offer students and researchers opportunities to learn and to collaborate effectively across borders. Within its mandate, the Foundation intends to work closely with the ULB and the universities of Cambridge and Oxford, to face successfully this more trying environment.

Pierre Francotte
President of the Foundation

THE FOUNDATION



The Fondation Philippe Wiener - Maurice Anspach was established by **Phyllis A. Beddington** in 1965 to honour the memory of her husband, **Philippe Wiener**, who died during World War II at Esterwegen, where he was imprisoned as a political opponent. After the death of **Maurice Anspach**, Philippe Wiener's close friend, who had taken care of her family during the war, Mrs Wiener modified the Foundation's statutes to add his name to her husband's.

OUR ACTIVITIES

- ▶ Enabling graduates and researchers from the ULB to study or work at the Universities of Cambridge and Oxford and vice versa
- ▶ Supporting two-year collaborative research projects
- ▶ Organising lectures and chairs in Brussels, Cambridge and Oxford
- ▶ Encouraging contacts between researchers and academics by funding short-term visits

Board of Directors

- Mr **Pierre Francotte**
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- Professor **Catheline Périer-d'Ieteren**
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Rector of the ULB
- Professor **Graeme Barker**
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- Professor **Luc Lemaire**
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- Professor **Christina Redfield**
- Professor **Jean-Pierre Spreutels**
- Mr **Pierre Vaesen**
- Professor **Philippa Watson**
- Mr **Fernand Wiener**

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- Professor **Luc Lemaire - President**
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- Professor **Pierre Desmarez**
Faculty of Philosophy and Social Sciences, ULB
- Professor **Michèle Galand**
Faculty of Philosophy and Social Sciences, ULB
- Professor **Véronique Kruids**
Faculty of Sciences, ULB
- Professor **Isabelle Rorive**
Faculty of Law and Criminology, ULB
- Professor **Philippa Watson**
City Law School, City University, London

TRIBUTE TO BARON ANDRÉ JAUMOTTE



Baron André Jaumotte, who passed away in December 2016, held many important positions in the scientific and economic life of Belgium. He was associated with the Fondation Philippe Wiener - Maurice Anspach since the start of its activities.

From 1968 to 1974, in his quality of Rector of the Université libre de Bruxelles, he was an *ex-officio* member of the Foundation's Board of Directors. He was subsequently elected as a Board Director, while serving as President of the Board of Directors of the ULB, and was re-elected every three years until 2011, when he announced that he would not pursue another mandate after 43 years of presence in the Board.

During all these years Baron Jaumotte made an outstanding contribution to the Foundation. While serving as President of the University, he concluded with the Foundation's President, Walter Jean Ganshof van der Meersch, the agreement organising the relations between the Foundation and the University in accordance with the testamentary dispositions of Mrs Phyllis Beddington-Wiener.

Firmly believing, from the very beginning, in the potential importance of the Foundation for all scientific disciplines,

Professor Jaumotte advocated for its action to benefit all faculties and for its Board of Directors to reflect this openness in its composition.

An active and watchful member of the Foundation's Financial Committee from the creation of the latter in the late Nineties, Baron Jaumotte brought to the Foundation his expertise in the management of scientific institutions and in the business world. His opinions combined a fundamental caution with the wish to constantly develop the activities of the Foundation.

He gave his enthusiastic support to the first Presidents of the Foundation and helped ensure its essential balance between its contribution to the reputation of the ULB and its necessary autonomy.

Jean-Victor Louis
Former President of the Foundation

THE 50th ANNIVERSARY CELEBRATIONS IN BRUSSELS

To celebrate its fifty years of activity, the Foundation had intended to hold a gala evening in late November in Brussels, but the security conditions in the city at that time compelled us to postpone the event.

The celebrations were thus rescheduled and took place on May 25th, 2016, at the Académie royale de Belgique, under the auspices of its Permanent Secretary, Hervé Hasquin.

Over 200 people attended, among which we were delighted to count many of our former fellows. We had the privilege of

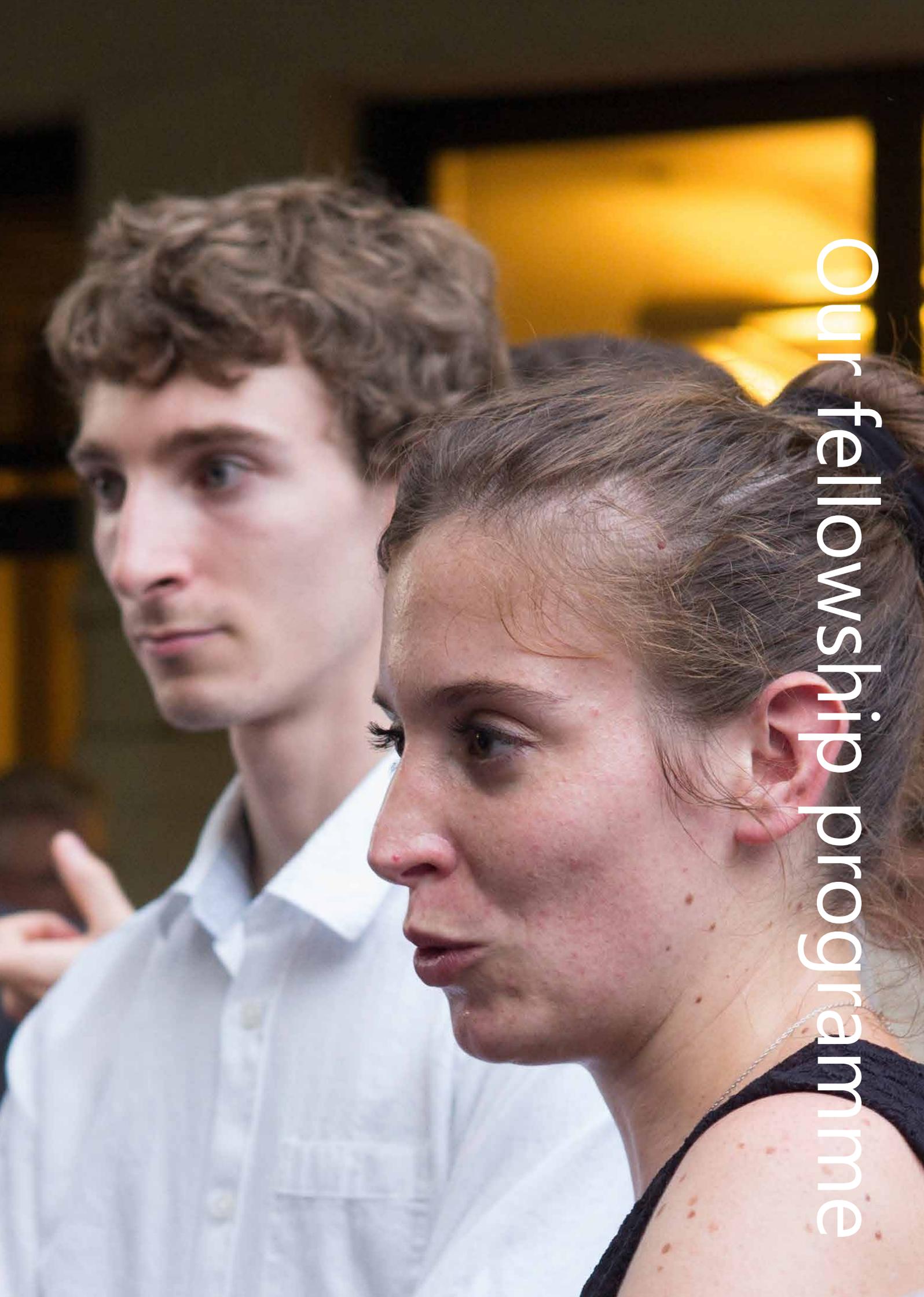
having Carlos Moedas, EU Commissioner for Research, Science and Innovation, deliver a speech on "European research for 21st century global challenges", which was followed by the remarks of Leszek Borysiewicz and Louise Richardson, Vice-Chancellors of the Universities of Cambridge and Oxford, and of Didier Viviers, at the time Rector of the Université libre de Bruxelles.

The evening went on with a walking dinner in the magnificent setting of the salon of the Académie royale de Belgique and its terrace, bathed by a benevolent sun.



Page 4, clockwise from top left: Ian Walmsley, Pro-Vice-Chancellor of the University of Oxford, with Pierre Francotte; members of the Foundation's Board of Directors (Pierre Francotte, Catheline Périer-d'Ieteren, Kristin Bartik, Christina Redfield and Graeme Barker); EU Commissioner Carlos Moedas; Louise Richardson, Vice-Chancellor of the University of Oxford, Didier Viviers, at the time Rector of the ULB, and Leszek Borysiewicz, Vice-Chancellor of the University of Cambridge; Britain's Ambassador to Belgium, Alison Rose, with Louise Richardson. **Page 5, clockwise from top right:** Wiener-Anspach Alumna Alexandra Kasserl with Sue Black, from the ULB International Welcome Desk; François Comeliau, husband to Maurice Anspach's granddaughter Gwendoline Logé, with Phyllis Beddington-Wiener's nieces, Jenny Beddington and Liz Mills; Didier Viviers with Caroline Pauwels and Yvon Englert, currently Rectors of the Vrije Universiteit Brussel and of the ULB; Wiener-Anspach Fellow Matthew Willner-Reid; Marco Della Motta (Interim Communications Officer of the Foundation), Mélanie Vander Geeten, Nicole Bosmans (Secretary of the Foundation), Francesca Spinelli (Communications Officer), and Wiener-Anspach Alumnus Christophe Snoeck; Mr Pierre Drion, President of the Fondation ULB, with Michel and Serge Goldman.



A young man with curly brown hair and a young woman with brown hair pulled back are shown in profile, looking towards the left. They appear to be in a lecture hall or classroom, with a blurred background of warm yellow lights. The man is wearing a light blue button-down shirt, and the woman is wearing a black top. The text 'Our fellowship programme' is written vertically in white on the right side of the image.

Our fellowship programme

OUR FELLOWSHIP PROGRAMME

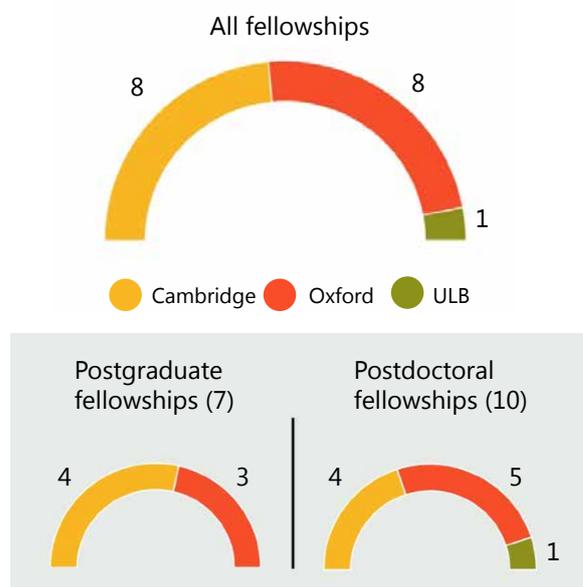


In line with its objectives, the Foundation promotes the development of academic activities between the ULB and the Universities of Oxford and Cambridge by awarding:

- ▶ Postgraduate fellowships to ULB graduates to enrol at the University of Cambridge or Oxford
- ▶ Doctoral fellowships to ULB students to undertake part of their research at the University of Cambridge or Oxford and vice versa
- ▶ Postdoctoral grants to researchers who have obtained their PhD from the ULB to work at the University of Cambridge or Oxford and vice versa

Applications are examined by the Scientific Board. For the 2016/2017 academic year, the Foundation selected 17 Fellows.

Breakdown by academic destination



Postgraduate fellows in Oxbridge



Pierre-Loïc Bacq
Civil engineer in Physics

MSt in Applied Mathematics, Part III of Mathematical Tripos at the University of Cambridge



Julien Decharneux
Master in Modern Oriental Languages and Literature

MSt in Study of Religion at the University of Oxford



Laurence Pirenne
MA in Biochemistry

MPhil in Biological Sciences at the University of Cambridge



Céline Vanhecke
MA in Law

LLM in Law at the University of Cambridge



Nathan Vandromme
MA in Science in Chemical and Materials Engineering

MPhil in Engineering for Sustainable Development at the University of Cambridge

Doctoral fellows in Oxford



Serena Bolis
PhD student in Engineering (FRIA Research Fellow)

Research project entitled "Flexoelectro-optic effect and laser emission in chiral nematic dye-doped liquid crystal cell" under the supervision of Prof. Stephen Morris at the Department of Engineering Science.



Ahmed Hamila
PhD student in Political Sciences (FNRS Research Fellow)

Research project entitled "The European Asylum Policy: A Common System, Several Ways of Implementaiton. A Sociological Survey Among Authorities Responsible for Asylum in Belgium, France, and the UK", under the supervision of Prof. Bridget Anderson at the Centre on Migration, Policy and Society.

Postdoctoral fellow at the ULB



Fraser McNair

PhD in History (University of Cambridge)

Research project entitled "Frameworks of authority and local power: Bishops and kings in the West Frankish Kingdom, c. 888-1066" under the supervision of Prof. Alain Dierkens in the Groupe de Recherche en Histoire Médiévale.

Postdoctoral fellows in Cambridge



Christophe Bertiau

PhD in Literature

Research project entitled "The defence of Latin between 1750 and 1850: An ancient language on the threshold of Modernity" under the supervision of Dr David Money at the Department of Italian.



Arthur Borriello

PhD in Political Sciences

Research project entitled "Populism(s) against austerity in the European Great Recession" under the supervision of Dr. Christopher Bickerton at the Department of Politics and International Studies.



Roy Lavendomme

PhD in Chemistry

Research project entitled "Development of regulated transmembrane channels based on metal-organic complexes" under the supervision of Prof. Jonathan Nitschke at the Department of Chemistry.



Daniel Zamora

PhD in in Philosophy and Social Sciences

Research project entitled "The dualization of the welfare state and the structure of social risks" under the supervision of Prof. John Thompson at the Department of Sociology.

Postdoctoral fellows in Oxford

Sophie Bauduin

PhD in Chemistry

Research project entitled "Retrieval of stratospheric H₂O from disc-averaged CIRS observations of Titan" under the supervision of Prof. Patrick Irwin at the Atmospheric Physics Clarendon Laboratory of the Department of Physics.



Michael Depreter

PhD in History

Second year of research on "External state action and power relationships between Princes, Cities and Noblemen. An analysis of local and regional players in the state-building process through Anglo-Burgundian diplomacy (1467-1530)", under the supervision of Dr Steven Gunn at the Faculty of History.



Guillermo Perez

PhD in Computer Science

Research project entitled "Counter automata based verification and synthesis algorithms" under the supervision of Prof. James Worrell at the Department of Computer Science.



Violette Pouillard

PhD in History

Second year of research on "The Imperial Zoo. The appropriation and conservation of colonia fauna by the Western elites (Uganda, Kenya, Congo, XIXth century – c. 1963)" under the supervision of Professors Miles Larmer and William Beinart at the African Studies Center.

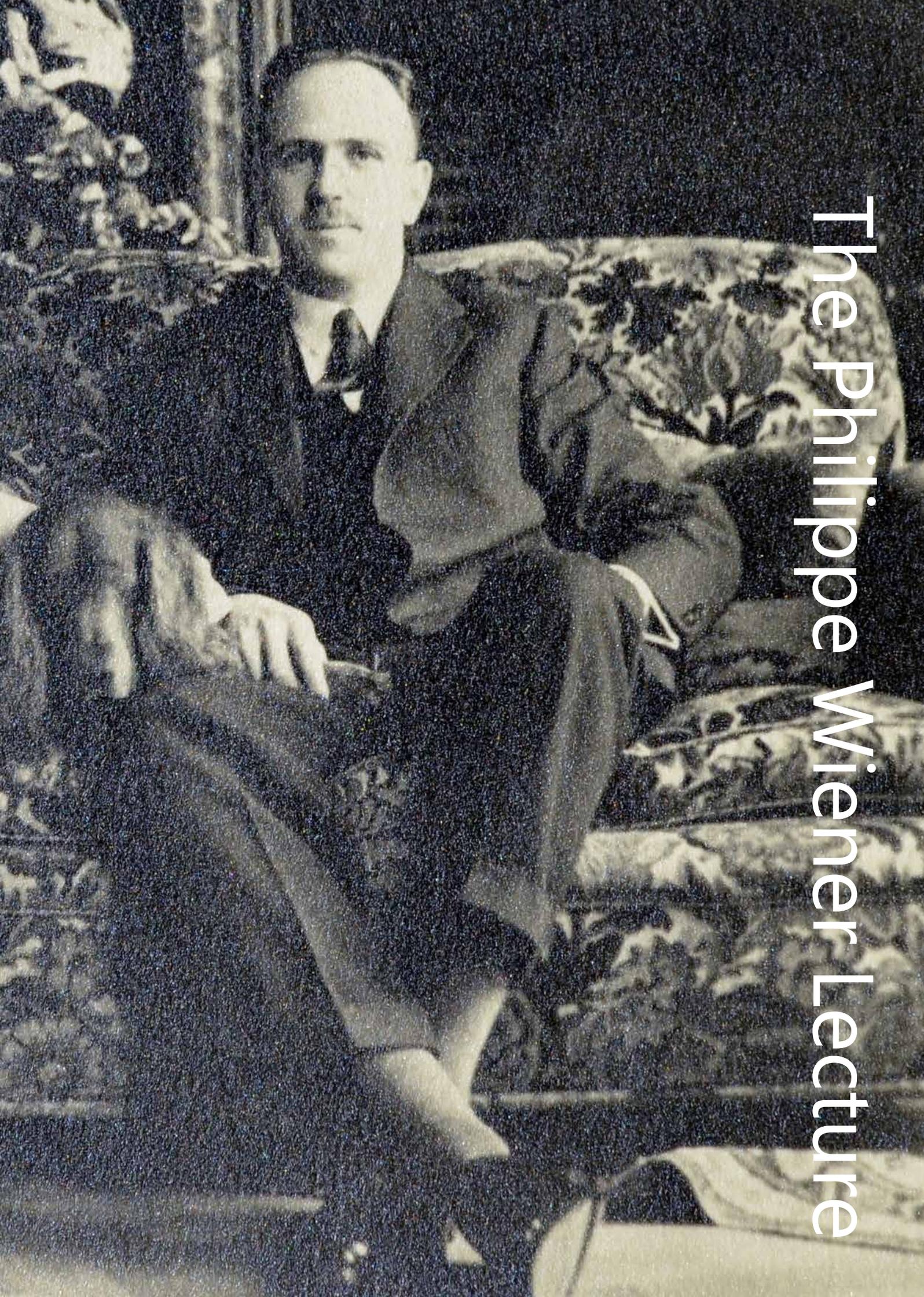


Jérôme Verdoot

PhD in Philosophy and Social Sciences

Research project entitled "A common political culture? Studies on the integration of the monasteries from England and from the Low-Countries in their political environment (1300-1500)" under the supervision of Prof. John Watts at the Faculty of History.

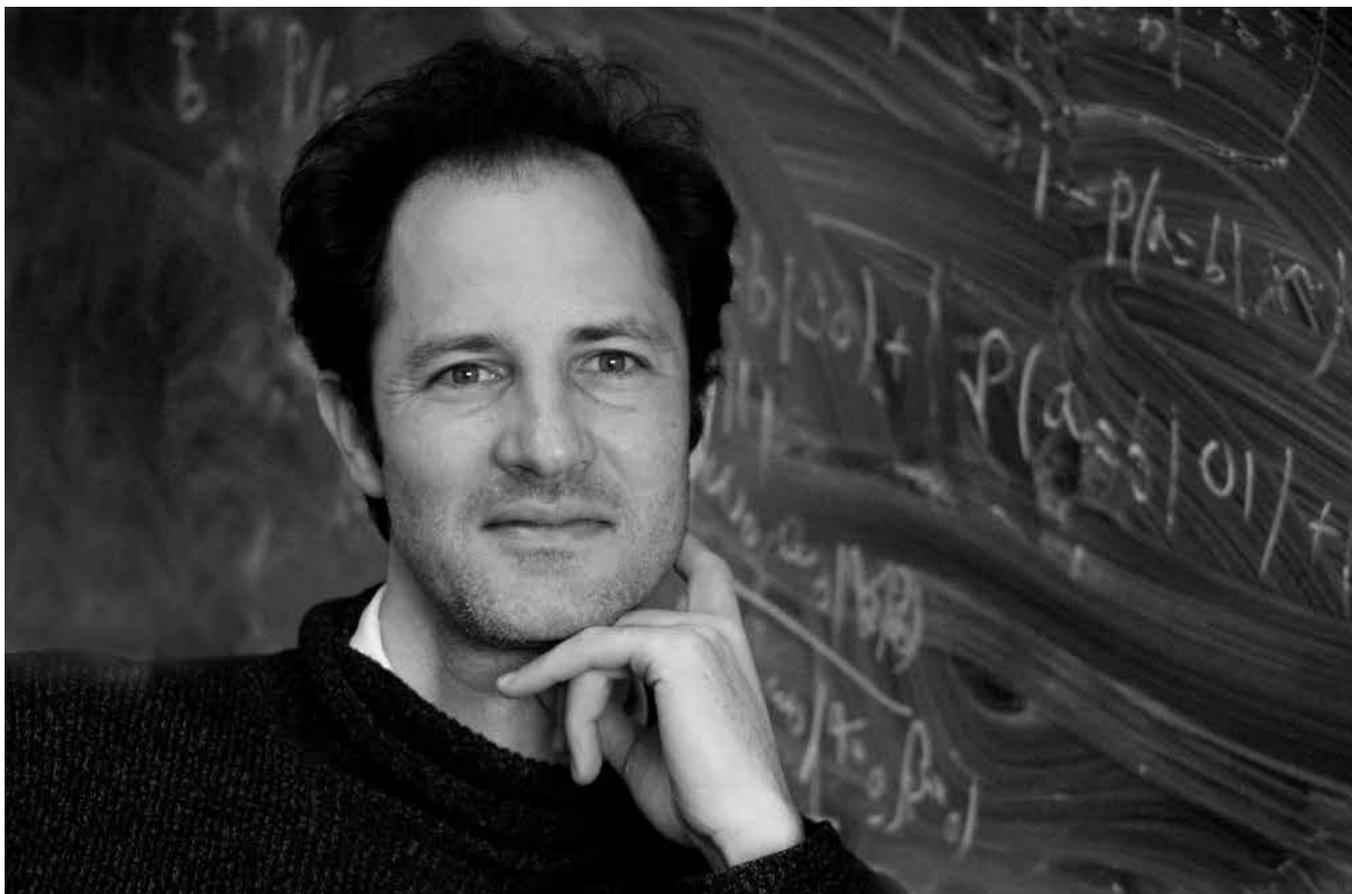




The Philippe Wiener Lecture

SERGE MASSAR

Certified quantum randomness



On November 8th, 2016 Professor Serge Massar (Quantum Information Laboratory, Université libre de Bruxelles) gave a Philippe Wiener lecture at the University of Oxford. He was welcomed by Dr Jonathan Barrett (Department of Computer Science). Established in 2007, the Philippe Wiener annual lectures are delivered at the Universities of Cambridge and Oxford by academics and researchers from the ULB, and vice versa.

Biographical Note

Serge Massar was born in Zambia in 1970 and spent most of his youth in Africa. He graduated in physics from the Université libre de Bruxelles (ULB) in 1991 with highest honours. He defended his PhD at the ULB in 1995 with highest honours.

From 1995 to 1997 he was a postdoctoral researcher at Tel Aviv University (Israel), and then from 1997 to 1998 at Utrecht University (Netherlands). In 1998 Serge Massar came back to the Université libre de Bruxelles as a Research Associate (Chercheur Qualifié) of the Fonds National de la Recherche Scientifique (FNRS-FRS).

In 2012 he joined the faculty staff at the ULB. Since 2004 he directs the Quantum Information Laboratory at the ULB.

His research interests include quantum gravity, quantum information and the foundations of quantum mechanics, experimental optics, artificial intelligence. Serge Massar was awarded the Alcatel-Bell prize of the FNRS, the 2010 La Recherche prize, and won the STOC2012 best paper award.

He has co-authored more than 120 publications in peer reviewed scientific journals, more than 60 conference proceedings, and holds 2 patents.

Fondation Philippe Wiener - Maurice Anspach
Department of Computer Science - University of Oxford

PHILIPPE WIENER LECTURE IN OXFORD

Prof. Serge Massar
Quantum Information Laboratory
Université libre de Bruxelles

**CERTIFIED
Quantum
RANDOMNESS**

Tuesday 8th November, 4 pm
Lecture Theatre 8
Department of Computer Science
Wolfson Building, Parks Road - OX1 3QD

The lecture will be followed by a reception
More information: fwa.ulb.ac.be





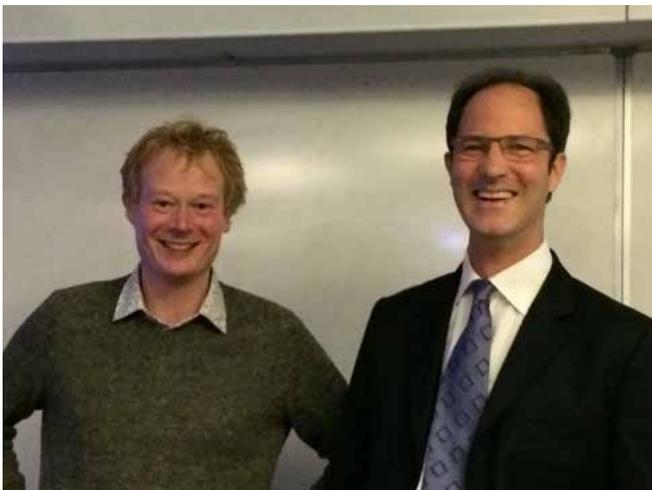

Abstract of the lecture

Randomness is a phenomenon which we are confronted with all the time. Will it rain today? Will the train be on time? What present will I receive at Christmas? But are such phenomena truly random?

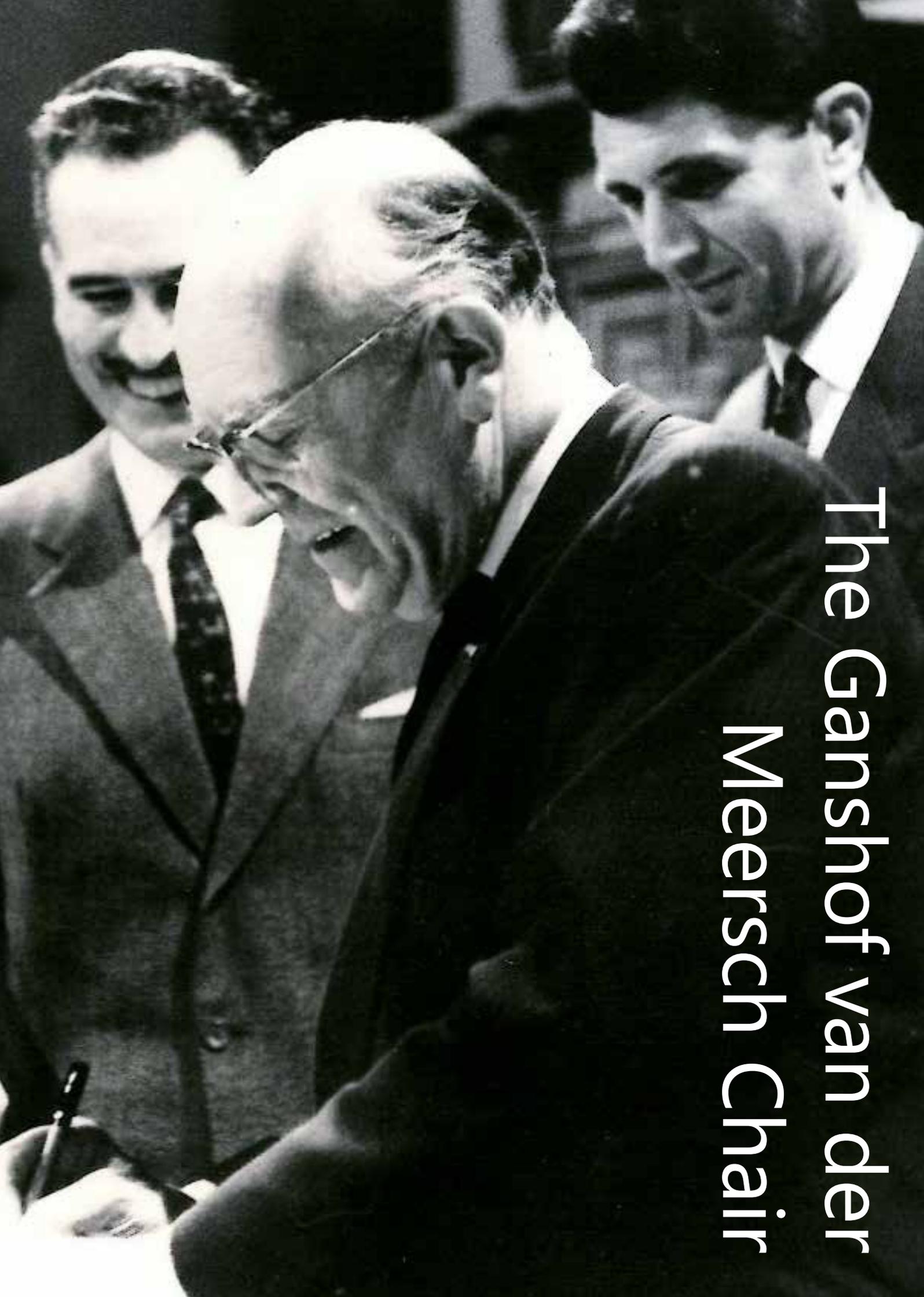
Good randomness is essential for many applications. For instance, cryptography, the art of hiding information from malicious parties, is only as good as the sources of randomness that underlie it.

Quantum mechanics, the theory of microscopic phenomena, can only predict the probability of events. For instance quantum theory can only predict the probability that a radioactive nucleus will decay, not when the nucleus will decay. Does this mean that microscopic phenomena are truly random?

By studying systems of two entangled particles, it can be shown both theoretically and experimentally, that events at the microscopic scale are truly random, truly unpredictable. Beyond its philosophical implications, this result also has important potential applications. Indeed it implies that one can build random number generators that certify that they work correctly. That is, if the random number generator malfunctions in some way, if the numbers it produces cease to be random, this will automatically be detected. By extending this idea, one could also build quantum cryptographic systems and quantum computers that certify that they work correctly.



Clockwise, from top left: Jonathan Barrett and Serge Massar; Serge Massar with Luc Lemaire, President of the Scientific Board of the Foundation, and Pierre Francotte; our Fellow Serena Bolis with Wiener-Anspach Alumna Federica Infantino; Stefano Pironio and Raúl García-Patrón Sánchez, promoters of two projects supported by the Foundation.



The Ganshof van der
Meerssch Chair

PAUL CRAIG

Oxford University - Holder of the 2016 Ganshof van der Meersch Chair



Professor Paul Craig was invited on the recommendation of Professor Emmanuelle Bribosia, Director of the European Law Centre, and Professor Arnaud Van Waeyenberge, Assistant Director of the Perelman Centre of Legal Philosophy at the ULB. The opening lecture, entitled “European Public Law: Challenge and Change”, was delivered on March 8th, 2016.

Paul Craig is Professor of English Law at St John's College, Oxford. His academic career began at Worcester College, Oxford where he began teaching in 1976. He has written extensively on Administrative Law, Constitutional Law, EU law and Comparative Public law. He is one of the UK representatives on the Venice Commission on Law and Democracy.

“Public law, more especially Administrative law, develops as a result of regulatory activity, broadly conceived”, writes Professor Craig. “Public law thus conceived seeks both to render such regulatory power accountable, procedurally and substantively, while at the same time seeking to ensure that the regulatory objectives are fulfilled. EU Public law faces difficult challenges in part at least because of the serious regulatory problems that it has had to confront”. In his opening lecture, Professor Craig considered three such problems and the difficulties thereby posed for public law. The regulatory challenges relate to the financial crisis, the migration crisis and challenges posed to the rule of law within Member States.

The Ganshof van der Meersch Chair was established in 1995 in memory of Walter Jean Ganshof van der Meersch, founder and president of the Institute for European Studies at the ULB, holder of the chair of Public Law at the ULB, attorney general at the Belgian Court of Cassation and vice-president of the European Court of Human Rights. Mr Ganshof van der Meersch, who understood from the very beginning the potential of the Foundation, was its second President after the death of its founder, Mrs Wiener.

The chair is held at the ULB by a visiting professor from Oxford or Cambridge. The course must focus on the economic, historical, political and legal aspects of European integration or on public law.

Fondation Philippe Wiener - Maurice Anspach
CHAIRE GANSHOF VAN DER MEERSCH

Prof. Paul Craig
Faculty of Law, University of Oxford

Opening Lecture
**European Public Law
Challenge and Change**

Tuesday 8 March 2016, 18.00
ULB - Campus du Solbosch - Auditoire Lameere
(S UB2 252A - Building U - Door B)

The lecture will be followed by a reception at the Institute for European Studies
Avenue Franklin Roosevelt 39 - 1050 Brussels
All welcome. Registration by February 29:
<http://gvdmchair.eventbrite.com>

**Following lectures
Information: fwa.ulb.ac.be**

Thursday 10 March
12-13.30, Room H5.150
14.00-16.00, Room UD.2.218.A

Monday 14 March
16.00-18.00, Room H.1309

Tuesday 15 March
10.00-12.00, Room H2215
12.30-14.00, Room H1304

Thursday 17 March
14.00-16.00, Room UD.2.218.A
16.00-18.00, Room SAW.1.125

Programme of the 2016 Chair

Thursday 10 March
European Public Law
and the Challenge of Global Regulation

Thursday 10 March
Common Law and EU Law
Policy, Reasoning and Interpretation: I

Monday 14 March
European Public Law
The Financial Crisis and Shared Administration

Tuesday 15 March
Common Law and EU Law
Policy, Reasoning and Interpretation: II

Tuesday 15 March
European Public Law: Theory, Fact and Value

Thursday 17 March
National Limits to EU Law: Comparative Reflections

Thursday 17 March
Legal reasoning in the EU
Gauweiler, the CJEU and the Bundesverfassungsgericht

Clockwise, from top left: Professor Emmanuelle Bribosia, Director of the European Law Centre; Professor Craig with his wife.



Digilie
mortuorum
Antiphona

Dilabo domino in regione viuorum

ps Dilaxi qui. Quouac. **an**

Deu me qua

ps No
dominum
colatus meus prolongatus est. cum. **an**

custodit te ab omni malo custodiat animam tuam

ps Leuaui
oculos meos
numis. in **an**

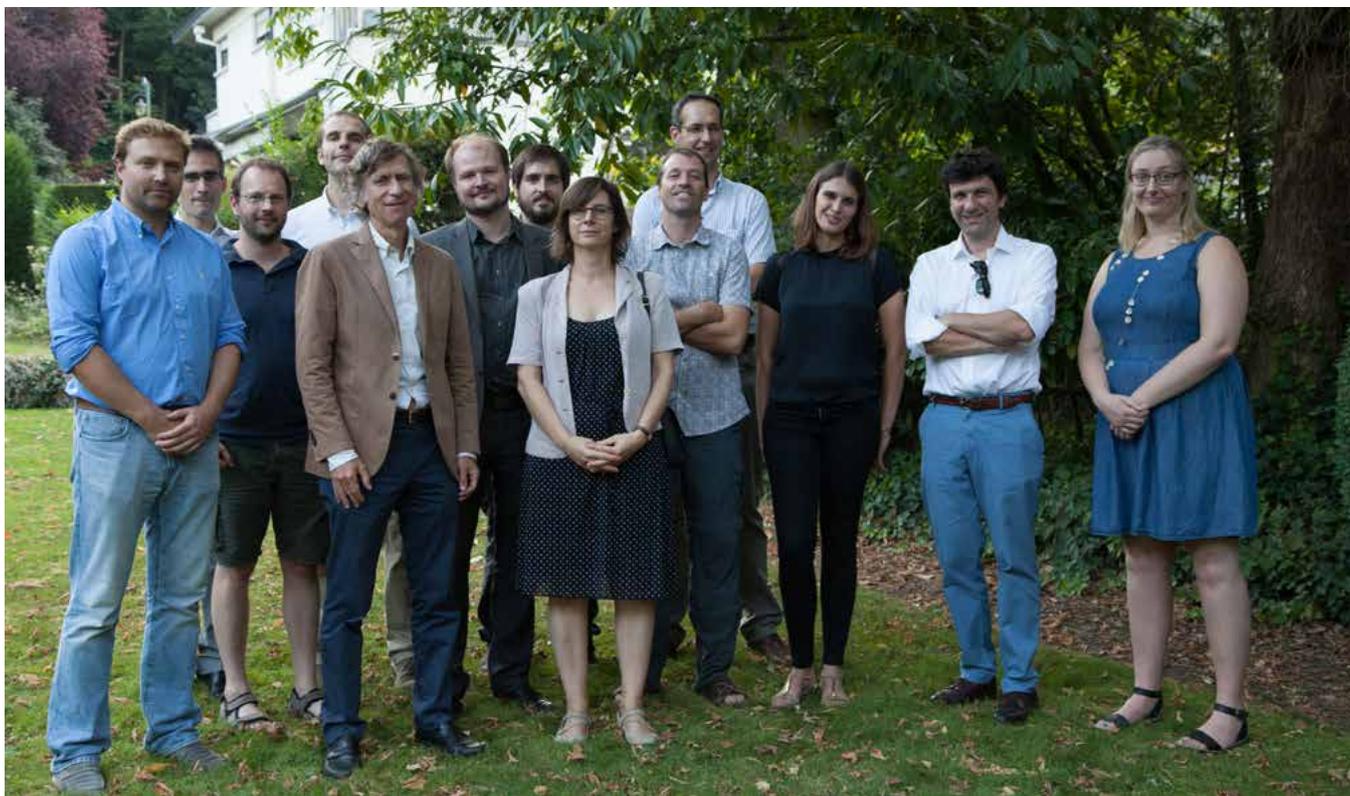
Di iniquitates obleruere

nunc domine quis sustinebit. **ps**

De profundis

The Research Projects

The Foundation supports two-year collaborative research projects in any field between teams of the Université libre de Bruxelles and the Universities of Cambridge or Oxford. For the 2016/2018 period, eight new projects were selected and three 2014/2016 projects were granted a one-year extension of the funding.



The ULB teams at the 2016 Fellows' Meeting in Brussels. **From left to right:** Gilles Bruylants, Raúl García-Patrón Sánchez, Patrick Laurent, Stefano Pironio, Serge Goldman, Alexis Wilkin, Lorenzo Ramiro, Marie-Alexis Colin, Wim Gevers, Stijn Vansummeren, Sophie Antoine, Mikhail Kissine, Alma Veenstra.

CAUSALITY IN QUANTUM THEORY: FOUNDATIONS AND APPLICATIONS

Quantum systems can behave in a manner that is fundamentally different from classical systems, and this enables quantum advantages in a wide range of tasks from cryptography to computation. Many of these advantages stem from the fact that causality plays a significantly different role in quantum theory than in classical physics. The purpose of the project is to investigate causality in quantum theory, both from a foundational perspective and with applications to quantum information processing. The foundational part will develop a theory of quantum causal networks, which will provide a method for describing quantum systems that have definite causal relationships between them. The aim is to determine quantitatively the non-classical behaviours that such quantum systems can exhibit. The applications part will apply this theory to novel protocols for quantum communication and cryptography, where an understanding of more involved causal structures is essential.

Oxford Promoter: Jonathan Barrett (Department of Computer Science)

ULB Promoter: Stefano Pironio (Quantum Information Laboratory)

Postdoctoral researchers: Ravishankar Ramanathan and Ognan Oreshkov

DYNAMIC PROCESSING OF FREQUENTLY ASKED FUNCTIONAL AGGREGATE QUERIES

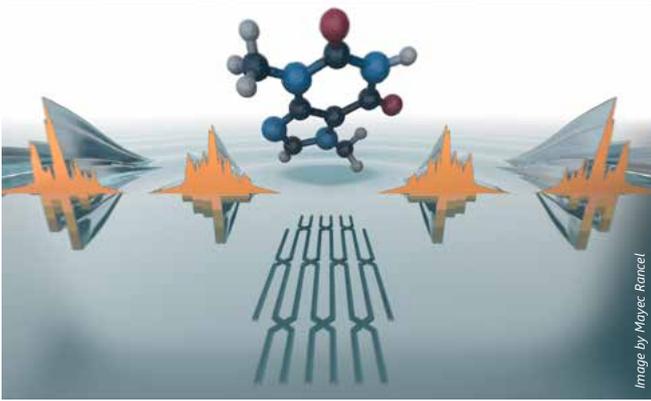
Successful exploitation of Big Data hinges on innovative Computer Science algorithms for dealing with the so-called 3-V characteristics of Big Data: Velocity, Volume, and Variety. The Velocity characteristic in particular requires so-called dynamic algorithms that can support data analytics in the presence of real-time updates.

While there is disparate work on dynamic analytics in individual areas of Computer Science, this project proposes a uniform framework to dynamically solve diverse analytic problems that recur frequently in Computer Science in areas as diverse as constraint satisfaction, databases, machine learning, matrix operations, probabilistic graphical models inference, and logic.

By studying these dynamic analytics problems in a common framework, and implementing them in open-source software, this project will establish novel dynamic, worst-case-optimal algorithms that are of immediate relevance to the host of problem settings mentioned above.

Oxford Promoter: Dan Olteanu (Department of Computer Science)

ULB Promoter: Stijn Vansummeren (Brussels School of Engineering)



QUANTUM SIMULATION OF MOLECULAR VIBRATION SPECTRA

Molecular spectroscopy is an essential tool for analytic chemistry whereby structural information is revealed by comparing measured spectra with theoretical models. Current methods, however, face a fundamental limitation. Despite the development of sophisticated computational tools, the quantum character of molecules limits its precise modelling.

The critical bottleneck is the numerical estimation of wave function overlaps corresponding to vibrational states of molecules. During this research project we will demonstrate how to replace this costly computing step by an algorithm, recently put forward by Aspuru-Guzik's group at Harvard, that runs as a subroutine on an integrated quantum photonic circuit.

We will then study the feasibility of scaling this method to a large-size simulator capable of surpassing conventional methods. Additionally, we will design novel efficient classical algorithms for spectral computation for high temperature leveraging concepts from quantum optics.

Oxford Promoter: Ian Walmsley (Department of Physics)
ULB Promoter: Raúl García-Patrón Sánchez (Brussels School of Engineering)

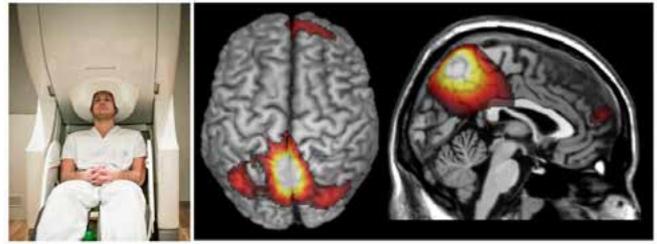
PAYING ATTENTION TO TIME AND SPACE: A VIRTUAL LESION APPROACH

Hemispatial neglect is a neurologic syndrome characterized by the failure to orient attention to one side of space. Neglect patients also present non-lateralized attention deficits (i.e. not specific to one side of space), such as difficulties in orienting attention towards information maintained in memory.

Currently, the relationship between lateralized and non-lateralized deficits remains unclear, albeit it was suggested that non-lateralized deficits worsen neglect. We aim to untangle this relationship in the current project, by using brain stimulation combined with electroencephalography to induce transient neglect in healthy adults and investigate the directionality of this relationship. This project will provide basic knowledge with translational impact toward rehabilitation.

Oxford Promoter: Roi Cohen Kadosh (Department of Experimental Psychology)
ULB Promoter: Wim Gevers (Faculty of Psychological Science and Education)

Postdoctoral researcher: Sophie Antoine



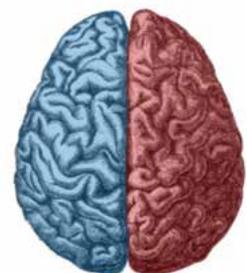
MAGNETOENCEPHALOGRAPHIC EXAMINATION OF COGNITIVE DYSFUNCTION IN MULTIPLE SCLEROSIS

Cognitive impairment (CI) is found in 40-70% of patients with multiple sclerosis (MS). CI in MS is an important contributor to employment status, quality of life, and social functioning. Therapeutic strategies for CI in MS are currently insufficient and require the development of novel approaches. In that context, the development of novel early biomarkers of CI in MS are of paramount interest.

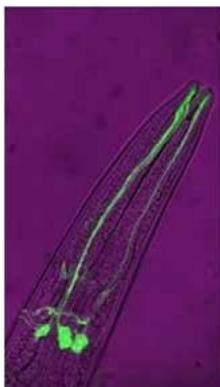
This research project therefore aims at combining the expertise of the applicants' group in magnetoencephalography (MEG) signal processing to specifically address the link between the alterations in stationary and non-stationary MEG resting state functional connectivity (rsFC) and CI in MS patients. For that purpose, we will first investigate and compare stationary and non-stationary MEG rsFC in MS patients and healthy subjects using an original combination of the methods developed at the applicants' laboratories. We will then search for correlations between CI measures and MEG rsf-FC alterations.

Oxford Promoter: Mark Woolrich (Oxford Centre for Human Brain Activity)
ULB Promoters: Serge Goldman and Xavier De Tiege (Faculty of Medicine)

Postdoctoral researcher: Martin Sjogard



SYSTEMATIC GENETIC ANALYSIS OF DENSE CORE VESICLE BIOLOGY



Neuropeptides are ancient, potent regulators of behaviour and physiology. They are synthesized in the cell body and sorted to appropriate organelles called dense core vesicles (DCVs). Studies in endocrine cells (e.g. pancreatic β -cells) link DCV cell biology to multiple pathophysiologicals. However, DCV cell biology remains poorly understood, particularly in neurons. *C. elegans* has proven useful to delineate molecular mechanisms for synaptic release. It offers similar opportunities to investigate DCV

biology - the focus of this proposal. Confirming this, recent *C. elegans* work is uncovering mechanisms for DCV biogenesis. Our previous works bring us to a unique position in the field to reveal several new mechanisms controlling neuropeptide biology in neurons. Our collaboration will best exploit our separate strengths: forward genetics and cell biology expertise.

Cambridge Promoter: Mario De Bono (MRC Laboratory of Molecular Biology)

ULB Promoter: Patrick Laurent (Neurophysiology Laboratory)

Postdoctoral researcher: Lorenzo Romiro

USE OF MULTIVALENT INTERACTIONS TO ACHIEVE SUPERSELECTIVE TARGETING IN BIOLOGICAL SYSTEMS

The targeting of specific cells amongst a vast cell population is a key step in the development of effective nanocarriers for drug delivery. Multivalent strategies that consist in functionalizing carriers with a large number of identical weakly binding ligands have been developed. These can effectively target cells overexpressing a specific receptor, but their application is limited by the possibility that multiple cell types may display similar levels of expression.

Our goal is to develop multivalent interaction schemes that enable the simultaneous targeting of a precise combination of multiple surface receptors, thus drastically reducing the chances of spurious adhesion. Our strategy will be tested using theoretical modelling and proof-of-concept experiments in which DNA-functionalized liposomes serve as target and DNA-functionalized nanoparticles as probes.

We will then apply our method to the selective targeting a pathogenic strain of *E. coli* in vitro using nanoparticles functionalised with multiple DNA aptamers, reported to efficiently interact with this bacterial strain.

Cambridge Promoters: Pietro Cicuta and **Lorenzo Di Michele** (Cavendish Laboratory)

ULB Promoters: Gilles Bruylants (Brussels School of Engineering) and **Bortolo Moggetti** (Faculty of Sciences)

Postdoctoral researcher: Roberta Lanfranco

MUTUAL RECOGNITION AND CRIMINAL LAW: DO WE NEED A NEW RIGHT TO LIBERTY IN EUROPE?

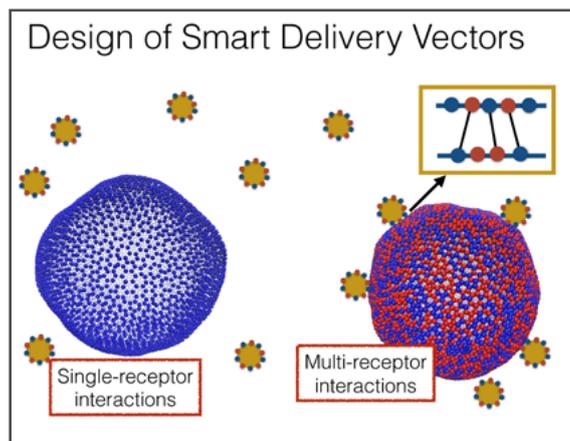
This project raises the following research question: what is the impact of mutual recognition (MR) on the right to liberty in European Union (EU) law? The main hypothesis is that MR instruments involving deprivation of liberty result in the need of rethinking the current content of the right to liberty in Union law. The research focuses on the interaction between the right to liberty and the Framework Decisions (FDs) on: the European Arrest Warrant; the transfer of prisoners; the probation measures; and the European Supervision Order (ESO).

Two levels of analysis are outlined: EU law, and in particular the relevant fundamental rights provisions, the four FDs and the case-law of the CJEU; and national law, namely the United Kingdom's and Belgium's systems. The research will show whether: the current content of the right to liberty in EU law is suitable for mutual recognition; an alternative EU notion of the right to liberty must be envisaged.

Cambridge Promoter: John Spencer (Faculty of Law)

ULB Promoter: Anne Weyembergh (Institute for European Studies)

Postdoctoral researcher: Irene Wieczorek



EXTENDED PROJECTS

PEASANT HOUSEHOLDS AND CHANGING LANDSCAPES (WESTERN EUROPE, AD 200-1200)

This research questions the role of peasant households in the shaping of landscapes in Western early medieval Europe.

Archaeologists and historians study different aspects of the dynamics that affect medieval landscapes and societies, but models for comparative and interdisciplinary research that combine their evidence are rare. This research project considers the peasant household as a key object, that allows to combine various approaches and types of evidence.

In the first part of the project, archaeologist and historians from the University of Oxford and the ULB have explored three main topics (peasant 'protagonism', the 'mapping' of peasant households, and agrarian technologies) in workshops, a winter school, and collaborative work.

As a next step, the team intends to explore questions related to agrarian production, strategies of risk-avoidance, crisis and societal collapse. Finally, the results of the research project will be published in a collective book.

Oxford Promoters: Chris Wickham and Helena Hamerow (Faculty of History)

ULB Promoters: Jean-Pierre Devroey and Alexis Wilkin (Centre sociAMM - Sociétés anciennes, médiévales et modernes)

THE IMPACT OF BILINGUALISM AND BI-DIALECTALISM ON LINGUISTIC AND COGNITIVE DEVELOPMENT

Speaking two or more languages is becoming the norm rather than the exception. It is therefore imperative to understand the impact of bilingualism on child development. Research to date reports negative effects of bilingualism on linguistic development (when the bilingual child is compared to monolingual peers), but positive effects on cognitive development.

We propose that there are aspects of linguistic development, namely pragmatics and conversational skills, where bilingualism should have a positive effect. Moreover, we propose that the contrastive study of bilingualism and bi-dialectalism (children speaking two dialects) has unique potential to reveal the nature of the cognitive correlates of bilingualism.

We designed a number of linguistic, pragmatic and cognitive tasks, administered to a large set of children from three groups: (a) monolingual Dutch, (b) bilingual Dutch-French and (c) bi-dialectal Western Flemish and Dutch. A one-year extension of the project will allow us to exploit the rich data we collected and gain new insights into the nature of multilingual minds.

The website of the project: bibli.ulb.ac.be/Bibi/English.html

Cambridge Promoter: Napoleon Katsos (Department of Theoretical and Applied Linguistics)

ULB Promoter: Mikhail Kissine (Centre of Research in Linguistics)

Postdoctoral researcher: Alma Veenstra

CROSSING BOUNDARIES, DEFINING STATES: CONFESSION, MUSIC AND TERRITORIALITY IN SIX CITIES OF THE SOUTHERN NETHERLANDS (C.1520-1630): BRUSSELS, MONS, SOIGNIES, DOUAI, COURTRAI AND VALENCIENNES

Six representative cities have been selected to demonstrate how the composition, the interpretation and the diffusion of music in the Southern Netherlands between c.1520 and c.1630 served to associate a particular group with a specific confessional religion, and how this association may also have served to project a territorial claim.

The project is interested primarily in four main issues, namely conversion, belief, resistance, and memory. This study draws largely on archival (including public accounts) and literary sources (including diaries). A study of the musical repertory (notably diffusion and style) and a critical edition of music (for performance and study) supplement this information.

Cambridge Promoter: Iain Fenlon (Faculty of Music)

ULB Promoter: Marie-Alexis Colin (Faculty of Philosophy and Social Sciences)

Postdoctoral researcher: Matthew Laube





Our Alumni.

Ayesha Vardag in Brussels at the time of her Wiener-Anspach fellowship (1990/1991)

AYESHA VARDAG

The birth of an international legal career

Ayesha Vardag is the President and founder of top family law firm Vardags. In 1990/1991 she was granted a Wiener-Anspach fellowship to come study at the Université libre de Bruxelles. In this interview she recalls the racy year she spent in Brussels and explains how it radically influenced her professional life.



What was your experience of Brussels during the year of your fellowship?

It was the first time I lived in such a hot, urban area. I was living in the centre, very close to the Grand-Place, and it was all very wild and bohemian and racy. I had tremendous fun there. The ULB was a completely different experience too, because I had been used to the tranquil environment of Cambridge, while the ULB had so many students. It was again very exciting, very busy, and so extraordinarily international. I had a best friend from Cambridge, Georgina Laverack, who was also a Wiener-Anspach fellow and with whom I am still in touch, but I also became very good friends with someone from Venice, and I remember a fascinating German girl... It was an incredibly stimulating environment.

Was it easy to adapt to the new teaching style?

You had to be much more self-disciplined and organized. And of course it was in French. Although I had done French A level and had visited France, I hadn't had the opportunity to acquire a real facility, so those first few weeks were really tough. I had to acclimatise so that I could follow the lectures. The prospect of having entirely oral exams was also quite dramatic. The examiner can immediately see if you're unsure about something, and they can probe those areas. It's a very challenging form of assessment, and it was something I found absolutely terrifying. I had to learn how to deal with my own nerves and my own performance. It was incredibly helpful because throughout the rest of my career I have had to be there on the spot, reacting to challenging situations, to challenging questions.

How would you describe the impact that your experience at the ULB had on your professional life?

That year had the most immense effect on the whole rest of my life. When I left Cambridge I had become somewhat disenchanted with the law. I had actually started doing research work at the BBC with the view to becoming a documentary maker. And then this opportunity came through and it was just too exciting to resist. It repivoted my career back to the law and it gave me a perspective that I could have an international legal career. My objective became doing something that would enable me to get back to Brussels and back to working with European law. I applied to the global law firms, with Linklater's at the top of my list, and they accepted me. Thanks to a section on nuclear energy in the course in Droit des relations extérieures, I was able to do a stage in Vienna at the International Atomic Energy Agency and a research programme at the Centre for Studies of the Hague Academy of International Law. And all of that had come out of this one quite concentrated section within the course at the ULB.

Why did you change direction into matrimonial law?

It was one of those fortuitous things that life brings you. I had moved, still within commercial law, from being in a global firm to requalifying as a barrister, and I was doing my pupillage in commercial professional negligence law at the Bar. In 2000 my divorce began, and it was a very traumatic event for the whole family. During the course of that I gave up my pupillage at the Bar and I went to stay at home with my little children, doing consultancy work. I worked on my own divorce quite heavily myself, because I was a lawyer and I was trying to save costs. Somewhere in the midst of all that chaos, after my divorce was

finished, my divorce lawyer made me an offer to hire me. I had an intense experience for nearly a year and then moved across academic work, because I was having a baby. I did a couple of academic years teaching the family law course at Queen Mary University of London and then set up my own firm, Vardags, after that. When I started doing family law, I realised both how challenging an area of law it is and what a very profound impact it has on the clients. It makes such a difference to their life, not only to their emotional life - because you're the one trying to give them hope - but also because their financial stability depends on the process, what their home is going to be, how their children are going to be educated, what sort of life they're going to have in the future. Family law worked for me in a way I had never expected to, because it builds intellectual challenges into very strong personal relationships.

You have been described as "Britain's top divorce lawyer". What were the turning points in your career?

I had a lot of very good fortune, from right at the beginning of starting up Vardags. I had a conversation with a mother at the school gates and ended up taking her case. It was a very big case. I didn't expect to launch my firm with such a bang. And then I had another extraordinary piece of good luck. I was trying to call a friend and I got the wrong person by mistake. I ended up having this rather awkward conversation with someone I didn't know very well, and in the course of that I said that I had set up a family law firm, and this person said: "Really? A friend of mine would really benefit from your advice!". And that also became another big High Court case that was about child contact with the father. It was hugely satisfying. Suddenly I had a big run of high-net-worth cases and a busy practice. It was time to hire an assistant!

We then had the *Prest* case, which established that where corporate assets were concerned, if the spouse had effectively a trust interest in those, then the claiming party could have access to those assets. It meant that the whole thing of just putting stuff in a company and thus getting out of paying for a divorce was broken.

And then there was the Radmacher case...

People say there are two fundamental cases in English family law, because they go most to the heart of it: the *White v White* case in 2000, which was about the principle of equality between breadwinner and home maker, and the *Radmacher* case, my case at Vardags, which was about personal autonomy versus state control, about the right of the couple to make their own arrangements. That principle of autonomy permeates the whole of family law now.

Would you say the European perspective acquired in Brussels helped you deal with this case?

It was actually fundamental. The pre-nuptial agreement of my client, a German national married to a French national, didn't work in England. I started looking at it from a European perspective and thought: everyone else applies these agreements and gives couples this autonomy. The zeitgeist has changed and we need to keep up with it. I feel very strongly that it was the European perspective that I had acquired at the ULB that gave me the confidence to adopt what was a very novel, very challenging position. And we changed the law! It was the biggest case in the history of English family law, with nine judges in the Supreme Court, and it was a career game-

changer which brought Vardags to prominence.

After that you had a whole series of record-breaking cases.

We had the case of Michelle Young, in which we got an award that was around 25 million pounds, though the husband was declared bankrupt. And we have just had the *Chai v Khoo* case. First we won, in the Court of Appeal and the High Court, a very big jurisdiction battle, spanning from Malaysia to England, with assets across the world. The husband was a major international tycoon, the owner of Laura Ashley and Corus Hotels. This was a 43-year marriage with five children, so the wife had made an immense contribution and the wealth had been built up during their time together. If the divorce had been held in Malaysia, she would have got almost nothing. The case has been very important in showing that you have to have a real connection to England in order to get English jurisdiction, but in the cases in which you do, then the English Courts will really support that. Now we have obtained a 64 million pound award for the wife, based on an equal share of the marital assets, one of the biggest ever won in the English courts, hailed as a validation of the contribution of stay-at-home mothers. That payout is currently being appealed by the husband.

Will Brexit have an impact on English family law?

We have to wait and see what will be established, but what I expect is that the reciprocal enforcement arrangements and the arrangements under the Brussels II Regulation will continue. Some will need to be reenacted and some will continue automatically, but the impact of Brexit on English family law will be relatively low. Everyone will just be sensible and make it work.

You have recently moved to Dubai. What prompted you to take this decision?

I am taking this opportunity to build the Middle Eastern profile of Vardags. We always had a lot of Middle Eastern clients, so being here is a very useful platform for raising awareness of our firm. And there is another element. I believe very strongly that if you're going to have a really sustainable business, you have to let other leaders develop. But as long as you're always there, you're sort of smothering everyone. Everyone wants to talk to you, clients don't see past you. We have a big fleet of absolutely brilliant family lawyers and it was really important to enable them to develop. I'm not building a business just for me, a business that will finish when I retire. I've built something that I want to last for many generations. When I moved to Dubai I shifted from being Managing Director to President. Catherine Thomas is now running Vardags on the ground, day to day, as Managing Director, consulting with me and with my husband, who is Director of Strategy. The three of us work like a triumvirate, and it is an incredibly strong management platform. I had been trying to achieve this before I went to Dubai but it just wasn't possible until I took that physical step. I'm in communication all day with the office, I'm back every month, seeing clients and spending time with the people at the firm, and I'm consulting on all of the challenging cases, but I'm making space for the next leaders.

OTHER FUNDED INITIATIVES

The Ganshof van der Meersch Prize



Established in 1994, the Ganshof van der Meersch Prize rewards a student from the Faculty of Law and Criminology of the ULB who achieved academic excellence in the study of public law and who obtained a Master's degree in this field with at least a "Grande Distinction" (magna cum laude).

In 2016 the prize was awarded to Antoine Mayence. Mr Mayence holds a Master of Law from the Université libre de Bruxelles and is currently teaching assistant at the Centre de droit public of the ULB.

Short Stays - 2016 Recipients

Academics and researchers from the ULB, Oxford and Cambridge who wish to conduct research for a limited period of time or participate in conferences organised by one of these universities can apply for funding.

- ▶ In the framework of his doctoral research in French at the University of Cambridge, Tomas Weber spent one month at the ULB (March-June 2016). He was welcomed by Wiener-Anspach Alumnus Didier Debaise (Faculty of Philosophy and Social Sciences).
- ▶ On March 17th, 2016, Antonios Tzanakopoulos (Oxford Law Faculty) gave a seminar entitled "Economic coercion in international law" at the ULB. He was welcomed by Vincent Chapaux (Centre de droit international).
- ▶ On April 25th, 2016, John Spencer (Faculty of Law, University of Cambridge) was invited to the ULB on the occasion of the 10th anniversary of Eclan (European Criminal Law Network) and took part in the panel entitled "The balance between prosecution and defence".
- ▶ In the framework of a doctoral seminar at ULB Department of History (1-2 July, 2016), Alexandra Paulin-Booth, Riccardo Liberatore and Matthew Chang (University of Oxford) came to present their work. They were welcomed by Pieter Lagrou.
- ▶ On September 10th, 2016, Paolo Fait (Faculty of Philosophy, University of Oxford) gave a seminar entitled "Protagoras's legacy in Aristotle's Sophistical Refutations" in the framework of the symposium "L'Éristique: Définitions, caractérisations et historicité". He was welcomed by Sylvain Delcomminette (Département de Philosophie, Éthique et Sciences des religions et de la laïcité).
- ▶ R.R.R. Smith (School of Archaeology, University of Oxford) gave a lecture entitled "Care of the past. Buildings and statues at Aphrodisias in later Antiquity and after" at the ULB on October 7th, 2016. He was welcomed by Wiener-Anspach Alumna Athéna Tsingarida.
- ▶ Kalypso Nicolaïdis (Department of Politics and International Relations, University of Oxford) took part in a two-day conference on "The Euro-Crisis and Euroscepticism" (1-2 December, 2016). She was welcomed by Wiener-Anspach Alumna Nathalie Brack.



Information about fellowships and grants

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