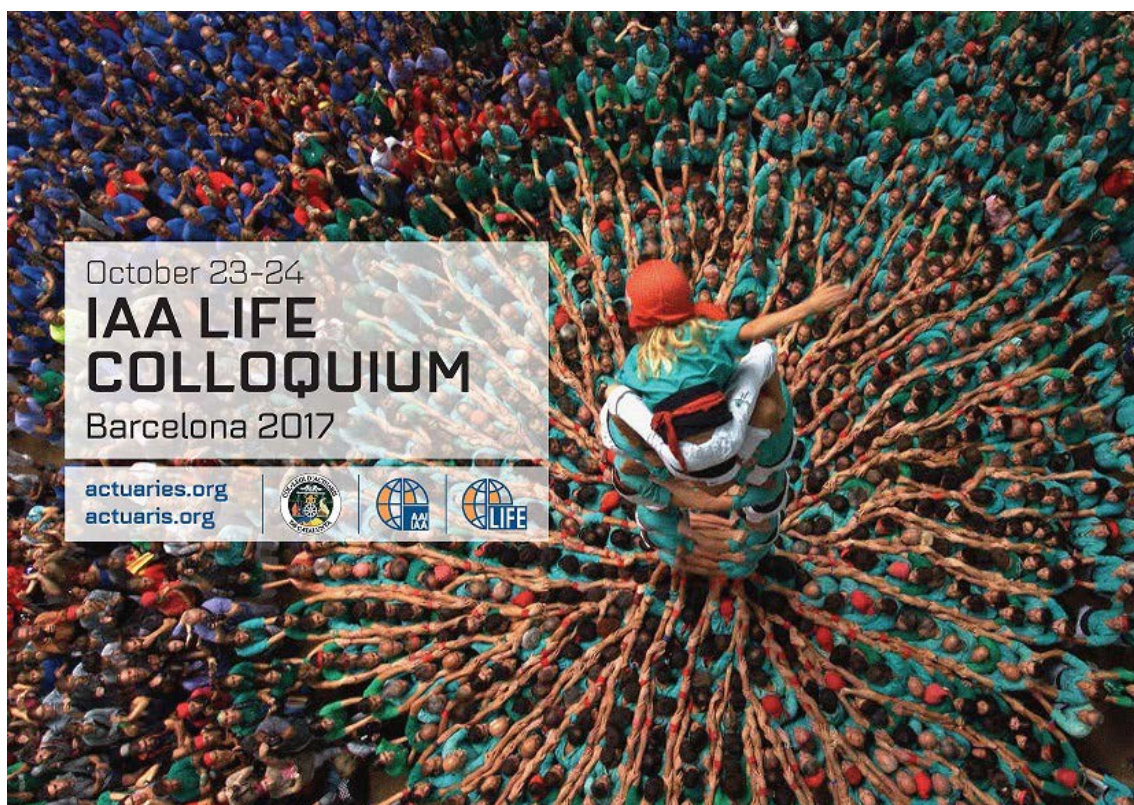


IAALS COLLOQUIUM IN BARCELONA,
SPAIN
23 – 24 OCTOBER 2017



COL·LEGI D'ACTUARIS DE CATALUNYA



INTRODUCTION



Dear Colleagues,

I wish to welcome you to the Colloquium “**Long-Term Saving in an Ageing World**”, run under the auspices of the International Actuarial Association — Life Section (IAALS). This event is to be held in Barcelona, (Spain), 23 and 24 October 2017 and organized by the Col·legi d'Actuaris de Catalunya, (Catalan Actuaries Association).

The seemingly unstoppable growth in human life expectancy, which coupled with the current state of health and social services, has led to a remarkable rise in longevity right across the face of the Earth.

While this may be heralded as great news for mankind, it nevertheless lays down a major challenge to both private and public pension schemes, the life insurance industry as a whole and therefore the actuarial profession itself.

In this event, entitled; “**Long-Term Saving in an Ageing World**” we aim to take a closer look at the matter mentioned above and the repercussions implied by it.

For this purpose, we are privileged to count upon the participation of the following specialists on the subject, who will share their wisdom and insight on the theme: Dr Nicholas Barr, Professor at the London School of Economics, Dr Stéphane Loisel, Professor at the University of Lyon and Dr. Jens Perch Nielsen, Professor of Actuarial Science at City University London.

We are confident that the Colloquium will also provide participants unfamiliar with the city with an ideal opportunity to get to know Barcelona, now one of the world's most visited metropolis, with its outstanding, cultural, leisure and gastronomic delights.

Looking forward to seeing you in Barcelona in October 2017.

Miquel Viñals

Chairman of the Col·legi d'Actuaris de Catalunya.

PROGRAM

VENUE

COSMOCAIXA.

Address: Isaac Newton, 26 - 08022 Barcelona

[Google maps](#)



The building's history started more than a century ago, in 1904, when the architect Josep Domènech i Estapà used the Modernista style of the time to construct the Amparo de Santa Lucía institution, in operation for 75 years.

In 1979 the "la Caixa" Foundation commissioned the architects Jordi Garcés and Enric Sòria to remodel and enlarge the building to house the Science Museum,

becoming Spain's first interactive museum dealing with scientific themes. The subsequent refurbishment to transform the museum into CosmoCaixa was designed by the architects Robert and Esteve Terradas and the new centre opened its doors on the 25th of September 2004. The complex has become the reference museum of sciences in Catalonia.

PROGRAM

SUNDAY OCTOBER 22

18:00 – 21:00

WELCOME RECEPTION

L'AQUARIUM.

Address: Moll d'Espanya del Port Vell, s/n 08039 Barcelona

[Google Maps](#)



On Sunday, October 22, the Reception and Welcome Dinner will be held at the Aquarium in Barcelona. This is a unique and outstanding attraction within the city, located on the shores of the Mediterranean Sea. Here it is possible to marvel at over 11,000 aquatic animals that are kept here. This event is designed as the perfect starting point for the coming days in which we hope, you will be able to enjoy the city.

Dress code: smart casual

MONDAY OCTOBER 23

8:00 – 17:30 **COLLOQUIUM SESSIONS**

	AUDITORI	SALA ALFA	SALA BETA	SALA GAMMA	SALA TAU
8:00 – 9:00	REGISTRATION				
9:00 – 9:45	WELCOMING CEREMONY				
9:45 – 11:00	CONFERENCE 1 – NICHOLAS BARR -				
11:00 – 11:30	COFFEE BREAK				
11:30 – 13:30	PARALLEL SESSIONS				
11:30 – 12:30		Papers 1, 7, 14	Papers 16, 27, 30	Papers 8, 10, 11	
12:30 – 13:30		Papers 1, 7, 14	Papers 16, 27, 30	Papers 8, 10, 11	
13:30 – 14:30	LUNCH				
14:30 – 16:30	PARALLEL SESSIONS				
14:30 - 15:30		Papers 21, 23, 6	Papers 31, 32, 5	Papers 13, 4, 19	
15:30 - 16:30		Papers 21, 23, 6	Papers 31, 32, 5	Papers 13, 4, 19	
16:30 – 17:00	Presentation by Mr. Ermanno Pitacco.				
17:00 – 18:15	CONFERENCE 2 - STEPHANE LOISEL -				

Nº	PAPER	AUTHOR / AUTHORS
1	Why the Deferred Annuity Makes Sense	Steven Haberman, Stephen Thomas and Anran Chen
4	Long-Term Care Models and Dependence Probability Tables by Acuity Level: New Empirical Evidence from Switzerland	Joël Wagner and Michel Fuino
5	How a Cause-of-death Reduction can be Compensated in Presence of Heterogeneity? A Population Dynamics Approach.	Héloïse Labit Hardy, Sarah Kaakai, Séverine Arnold and Nicole El Karoui
6	Solvency Requirement in a Unisex Stochastic Mortality Model	Montse Guillen, An Chen and Elena Vigna
7	The Inter-Relatedness of the Financial Sector and Annuitization: A State-Aggregate Approach	Patricia Born, Hugo M. Montesinos-Yufa and E. Tice Sirmans
8	Addressing Longevity Heterogeneity in Pension Scheme Design and Reform	Mercedes Ayuso, Jorge Miguel Bravo and Robert Holzmann
10	Basis Risk in Index Based Longevity Hedges: A Guide for Longevity Hedges	Andrew Cairns and Ghali El Boukfaoui

Nº	PAPER	AUTHOR / AUTHORS
11	It Takes Two: Why Mortality Modelling is more than modelling one Mortality Trend	Johanne Schupp, Matthias Börger, Jochen Russ and Aihua Zhang
13	A Class of Random Field Memory Models for Mortality Forecasting	Yahia Salhi, P. Doukhan, D. Pommeret and J. Rynkiewicz
14	One Size Fits All? Drawdown Structures in Australia and The Netherlands: A Utility Study for Heterogenous Income Levels	Jennifer Alonso García and Michael Sherrisy
16	Collective Defined Contribution Plans - Backtesting Based on German Capital Market Data 1955 - 2015	Oskar Goecke
19	Marital Status, Mortality and Pensions: The Special Case of Being an Unmarried Elderly Woman in Spain	Estefanía Alaminos and Mercedes Ayuso
21	Using Fuzzy Set Theory to Evaluate Medically Underwritten Life Annuities	Laura González-Vila, Jorge de Andrés and Aihua Zhang
23	Nonfinancial Defined Contribution Pension Schemes: Construction of Annuity Divisors Using the Direct Method	Poontavika Naka, Carmen Boado-Penas, Jacques Janssen and Raimondo Manca
27	Alternative Measure of the (In)Adequacy of Public Pensions During Retirement	Manuela Bosch Príncipe and Oriol Roch
30	Distributing Long-Term Saving Policies in a Low-Saving Environment: Lessons from South Africa	Rob Rusconi
31	Personal Financial Planning Project	Patricia Born, Anne Eyraud-Loisel and Baptiste Dieltens
32	A Cross-Country Study of Saving and Spending in Retirement	Hazel Bateman, Jennifer Alonso-Garcia, Johan Bonekamp, Arthur van Soest and Ralph Stevens

21:00 – 23:30

GALA DINNER

PARANIMF DE LA UNIVERSITAT DE BARCELONA.

Address: Gran Via de les Corts Catalanes, 585 08007 Barcelona

[Google Maps](#)

On Monday, October 23, the gala dinner will be held at the Auditorium of the University of Barcelona, a neo-Romanesque monument built in the 18th century, which breathes a blend of history, tranquility and knowledge.



During the gala dinner, awards will be given to the best works, according to the criteria of the scientific committee.

- **Aperitif:** Catalanian cava (free access)
- **Castellers exhibition** (free access): Castells, or human towers, are one of Europe's most genuine and unique cultural displays. Under the traditional motto of "strength, balance, courage and seny" (a Catalan expression encompassing virtues such as good sense and calmness), castells are an excellent way of showcasing Catalonia to the world. On November the 16th, in Nairobi (Kenya), Unesco approved the inscription of human towers on the Representative List Of the Intangible Cultural Heritage of Humanity, giving then a universal recognition to this element. The Unesco statement said: "Human towers are recognized by Catalan people as an integral part of their cultural identity, transmitted from generation from generation and providing community members a sense of continuity, social cohesion and solidarity."
- **Gala Dinner**



Dress code: business formal

TUESDAY OCTOBER 24

8:00 – 17:30 COLLOQUIUM SESSIONS

	AUDITORI	SALA BETA	SALA GAMMA	SALA TAU
9:00 – 9:30	REGISTRATION			
9:30 - 10:45	CONFERENCE 3 – JENS PER NIELSEN -			
10:45 – 11:00	Presentation ICA Congress 2018 - Berlin -			
11:00 – 11:30	COFFEE BREAK			
11:30 – 13:30	PARALLEL SESSIONS			
11:15 – 12:15		Papers 2, 3, 9	Papers 24, 26	Papers 18, 25, 15
12:15 – 13:15		Papers 2, 3, 9	Papers 24, 26	Papers 18, 25, 15
13:30 – 14:30	LUNCH			
14:30 – 16:30	PARALLEL SESSIONS			
14:30 – 15:30		Papers 12, 20, 22	Papers 28, 29, 17	
15:30 – 16:30		Papers 12, 20, 22	Papers 28, 29, 17	
16:30 – 18:00	CLOSING EVENTS			

Nº	PAPER	AUTHOR / AUTHORS
2	Around the Life-Cycle: Deterministic Consumption-Investment Strategies	Mogens Steffensen and Marcus C. Christiansen
3	The Life Cycle Model with Recursive Utility: Defined Benefit vs Defined Contribution	Knut Aase
9	Self-Selection of Financial Risk	Munir Hiabu, Jens Perch Nielsen, Russell Gerrard and Ioannis Kyriakou
12	Rising Interest Rates and Lapse Risk for Life Insurers	Elia Berdin, Helmut Grundl and Christian Kubitz
15	Adapting to Changes in Life Expectancy in the Finnish Earnings-Related Pension Scheme	Kaarlo Reipas and Mikko Sankala
17	Reviewing Dependencies Among Longevity and Mortality Risks in Standard Solvency Capital Requirements	Jaume Belles Sampera, Miguel Santolino and Antonio Rubio Pallarés
18	Who Wants to Live Forever? An Analysis of the Maximum Lifespan in the US	Martin Genz, Jan Feifel and Markus Pauly

Nº	PAPER	AUTHOR / AUTHORS
20	Behavioral Patterns of Long Term Saving: Predictive Analysis of Adverse Behaviours on a Saving Portfolio	Babacar Sow and Thomas Behar
22	Nudging Long-Term Savings. Might the “Save More Tomorrow” Approach Work in Spain?	Jesús María García Martínez and José Vila
24	A Non-Homogeneous Semi-Markov Approach for the Calculation of the Balance Sheet of a Health Fund	Guglielmo D’Amico, Fulvio Gismondi, Montserrat Guillen, Jacques Janssen, Raimondo Manca and Ernesto Volpe di Prignano
25	Extension, Compression, and Beyond – A Unique Classification System for Mortality Evolution Patterns	Martin Genz, Matthias Börger and Jochen Russ
26	Lapse Tables for Lapse Risk Management: A Competing Risks Approach	Xavier Milhaud and Christophe Dutangy
28	The Life Insurance on Several Heads: Sensitivity Analysis to Increases in Life Expectancy	Armando Nieto Ranero
29	A Short Discussion on a Simplified Approach of Model Risk Assessment Associated with the "Stochastic" Models of the Prospective Mortality Tables	Anani A. OLYMPIO

ABOUT THE COLLOQUIUM

In the Life Insurance Colloquium of the International Actuarial Association (IAALS) "Long-Term Saving in an Ageing World" a number of the following topics will be addressed:

- Longevity and ageing
- Limits to human life
- Mortality at older ages and related trends
- Stochastic Modelling of Longevity
- Longevity risk
- Longevity bonds
- Protection against longevity
- Financial and real assets to cover long term liabilities
- Annuities, programmed withdrawals, other withdrawals
- Long term care saving products.
- Behavioral patterns of long term saving
- Barriers to saving
- Interest rates: how to survive in a low interest rate environment
- Public pensions and the need to top them up

This topics and others will be discussed during the Parallel Sessions, where 32 papers previously related by the Scientific Committee will be presented, as prepared by actuaries from Spain, United Kingdom, Norway, Australia, the United States, Belgium, Denmark, and Germany, among other countries.

The Scientific Committee is made up of 10 leading figures from the academic and professional spheres, both national and overseas, chaired by Diego Valero, one of the most pre-eminent specialists in pensions in Spain, and member of the advisory group of the Pacto de Toledo.

The Scientific Committee will award the best work in the following categories:

- Theoretical contributions: For the best academic research.
- Practical contributions: For the best essay or presentation of the applied work.

The prizes (\$ 1,000 each prize) will be presented during the gala dinner on Monday, October 23, which will take place in the auditorium of the historic building of the University of Barcelona.

SPEAKERS



Dr. Nicholas Barr. With a MSc in Economics from the London School of Economics and a PhD from the Berkeley University in California. He's a Professor of Public Economics at the London School of Economics(LSE). He is author of numerous articles, and author or editor of more than twenty books. At the heart of his work is an exploration of how market failures can both explain and justify the existence of welfare states. He's one of the world's greatest specialist in pensions.



Dr. Stéphane Loisel. With a PhD in Applied Mathematics from the University of Lyon, a MSc in Actuarial and Finance Science. He is a fellow of the Institute de Actuaries. Professor at ISFA, Université Lyon 1, and associate researcher at CMAP, Ecole Polytechnique. Associate Editor in various journals, and he is a specialist in longevity risk, among other things.



Dr. Jens Perch Nielsen. is Professor of Actuarial Science at City University London. Actuary from Copenhagen and statistician from UC-Berkeley. He became research director of RSA with responsibilities in life as well as non-life in 1999. From 2006 until 2012 he worked as an entrepreneur. He is the co-author of more than 100 scientific papers reviewed journals of actuarial science, economics, econometrics and statistics and also one book on quantitative operational risk modelling and associate editor of Digital Finance.

COMMITTEES

ORGANIZING COMMITTEE

Board of Directors, Col·legi d'Actuaris de Catalunya, (Catalan Actuaries Association).

Miquel Viñals, (Chairman) Chairman of the Col·legi d'Actuaris de Catalunya

Julia Soler, Vice-president of the Col·legi d'Actuaris de Catalunya

Emilio Vicente, Secretary

Francisco Durán, Treasurer

Marc Arias, Board member and Head of Institutional Relations

Lluís Bermúdez, Board member and in charge of Training and Research

Xavier Plana, Board member and Head of the Professional Section.

SCIENTIFIC COMMITTEE

Diego Valero (Chairman), University of Barcelona

Carme Ribas, University of Barcelona

Jan Dhaene, University of Leuven

Abraham Hernández, Vitalis Mexico

José Antonio Iglesias, Vidacaixa

Ermanno Pitacco, University of Trieste

María Jesús Romero, Zurich

Antonio Rubio, Catalana Occidente

Miguel Santolino, University of Barcelona

Mogens Steffensen, University of Copenhagen

REGISTRATION

REGISTRATION FEES

	Fees
IAA Section Members	600
Non IAA Section Members	700
Academics & Students	500
Corporate (3-5 participants)	15% discount
Corporate (+ 5 participants)	25% discount

Gala Dinner (accompanying person)	100
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All rates include:

2-day Colloquium

Sunday Evening Welcome Reception

Monday Evening Gala Dinner

All amounts expressed in €uro. VAT incl.

INFORMATION

Web: <http://www.actuaries.org/barcelona2017/index.cfm>

In this web, you will find all the updated and necessary information as well as the steps to follow to be able to register and participate in the IAALS Colloquium the coming 23 and 24 October.

HOTEL ACCOMMODATION

To make your hotel reservation easier, we offer this travel agency:

EL CORTE INGLES - TRAVEL AGENCY.

Contact information:

Telephone (+34) 933 635 760

Adress: Carrer Bolivia, 234-236

08020 Barcelona

Email: congresosbcn@viajeseci.es

You must indicate that you are attending the IAALS Colloquium Barcelona 2017.

Organizing Committee

Please contact the Organizing Committee for any questions.

Mr. Joaquim Celma

papers.iaals.barcelona2017@actuaris.org

actuaris@actuaris.org

Looking forward to seeing you in Barcelona this 23-24 October

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