

# The RIAS Workshop:

**Future Ageing-friendly Communities, Business, and Technologies** 

# 西浦老龄化社会研究院

研讨会:未来老龄友好社会的社区营造、商业模式、及技术革新



Date and Location | 研讨会时间与地点

15-16<sup>th</sup> July 2017 | 2017年7月15-16日

西交利物浦大学,CB117W | CB117W, Xi'an Jiaotong-Liverpool University (XJTLU)

# Organizer | 主办方:

Research Institute on Ageing and Society (RIAS), XJTLU 老龄化社会研究院,西交利物浦大学

# Co-organizer | 协办方:

Department of Public Health, XJTLU 公共健康系, 西交利物浦大学

Department of Computer Science and Software Engineering, XJTLU 计算机科学与软件工程系, 西交利物浦大学

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# Workshop Introduction | 研讨会介绍

China has become an ageing country since 1999 (with 10% of the population above 60s or with 7% of the population above 65s per WHO standards) and now it has the largest number of the elderly worldwide. To accommodate the growing need of the elderly, the provision of the elderly care is moving from a centralized model (i.e. the institutional care model) to a decentralized one (i.e. community/family-based care model). However, previous research indicates that most of the communities have not been designed to support ageing-in-place.

This cross-disciplinary workshop intends to stress the above issue and, by working closely with the industry partners, provide an insight into the future ageing-friendly communities — the design strategies, the business model and the emerging technologies — that can support active ageing from an integrated perspective (Fig 1).

根据世界卫生组织的标准,当一个国家或地区 60 岁人口以上占人口总数的 10%或 65 岁人口以上占人口总数的 7%时,这个国家或地区就进入了老龄化社 会,据此标准,中国自 1999 年以来就已成为老龄化国家。如今,中国拥有世界上最大数量的老年人。为了适应老年人日益增长的需要,老年护理的正在从集中模 式(例如机构照顾模式)转变为分散模式(例如社区照顾或以家庭为基础的照顾模式)。但是,此前的研究表明,绝大部分的既有社区在设计过程中并没有考虑到 "居家养老"的需求。

本次跨学科研讨会旨在于聚焦上述问题,同时,通过与业界合作伙伴的紧密协作,深入探讨从全面的视角来支持"积极养老"的未来老龄友好社会的社区营造、商业模式、及技术革新。

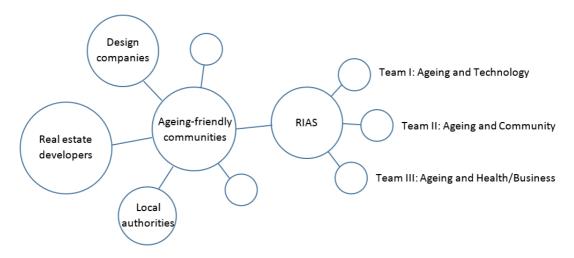


Figure 1: The 2017 RIAS workshop structure

#### Workshop Themes | 研讨会主题

- 1) Ageing and Technology: to identify the key technologies that can be used to support ageing-in-place in the future 老龄化与科技: 研究可以在未来用以支持居家养老的关键科技;
- 2) Ageing and Community: to develop planning and design proposals that can change/adapt the built environment to house the technologies as required in Theme 1 and other necessary caring facilities in order to meet the needs of the elderly

老龄化与社区:研发能够使建筑环境适应主题 1 所需求的科技和其他必要的护理设施的规划和设计策略来满足老年人的需求:

3) Ageing and Health/Business: to foster business models that can demonstrate the business case of ageing-in-place with the application of technologies (as required in Theme 1) and of design/retrofit strategies (as required in Theme 2) 老龄化与健康/商务:培育能够满足主题 1 所需求的技术应用和主题 2 所需求的设计/改造策略的居家养老的商业模式。

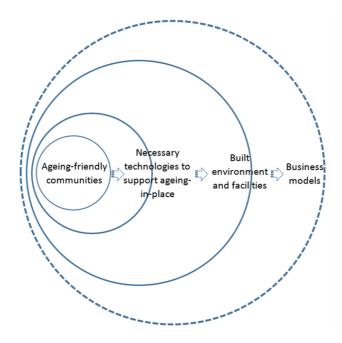


Figure 2: The interaction between the three themes

# About RIAS | 西浦老龄化社会研究院

The Research Institute on Ageing and Society's mission is to promote cross-disciplinary, cross-regional and cross-national research on the implications of population ageing in order to co-create innovative responses and solutions for the ageing society that will help China to position itself as a global leader in responding to this challenging demographic shift.

The Institute uses the opportunity of China's unique situation to study the cultural, economic, social, and technological implications of population ageing from an interdisciplinary perspective. This emphasis on the implications of and responses to population ageing is unique as most research on ageing and gerontology tends to focus on ageing per se rather than its consequences for society and the economy.

西浦老龄化社会研究院的主要任务是促进有关人口老龄化影响的跨学科、跨区域和跨国界的研究,积极应对人口老龄化问题并提出解决措施,使中国这一世界大国在应对人口结构转变带来的挑战时能明确自身定位。

通过学科交叉的视角,老龄化社会研究院根据中国的特殊国情研究老龄化问题给我国带来的文化、经济、社会和技术方面的影响。我们将研究重心放在老龄化问题的影响和对策上。由于现有大部分针对老龄化和老年医学的研究都只关注问题本身,可以说,我院对其影响与对策的研究是一个较新的研究视角。

# Workshop Programme | 研讨会议程

	•	Saturday 15 <sup>th</sup> July : Central Building -			
8:30-9:00		Registratio			
	会议注册				
9:00-9:10	Opening/Welcome remarks– Prof. Yong Yue / Dr. Hai-Ning Liang				
	开幕/欢迎致词: Prof. Yong Yue / Dr. Hai-Ning Liang				
	Launching opening ceremony of RIAS				
	老龄化社会研究院开幕				
9:10-10:00	Florian Kohlbacher	The Economist	Transgenerational design:		
		Corporate	Innovation strategies for ageing		
		Network	societies		
			跨代设计:老龄化社区的创新策略		
10:00-10:15	Tea Break 茶歇				
10:15-10:30	Group Picture 合影				
Theme 1: Ageing and Technology					
	主是	<b>匝一:</b> 老龄化与技术.	革新		
Session Chair: Dr. Hai-Ning Liang					
10:30-11:00	Nazlena Mohamad	Universiti	Towards Healthy Ageing: Overview		
	Ali	Kebangsaan	of technology-based interventions		
		Malaysia	among the Malaysians		
			技术干预对马来西亚健康养老的影响		
11:00-11:30	Pin Sym Foong	National	Can Personal Profiles for Dementia		
		University of	Care be Crowdsourced?		
		Singapore	老年痴呆病人的个人护理病历可以众		
		新加坡国立大学	包吗?		
11:30-12:00	Xue Bai	XJTLU	Adoption of e-Services and Quality of		
		西交利物浦大学	Life among Older Consumers in		
			China		
			网上购物行为对中国老年消费者的生		
			活质量的影响		
12:00-13:30		Suffet Lunch – XJTLU			
	自	助午餐 - 西交利物浦	f大学会议中心酒店 		
		e 2: Ageing and Com	-		
		<b>瓦二</b> :老龄化与社区			
10.00.41.00	1	sion Chair: Dr. Bing (			
13:30-14:00	Bin Li	Tongji University	The Elderly Facilities in Community		
	李斌	同济大学建筑与	Based on Integration of Person and Environment		
		城市规划学院	Environment   人与环境融合的社区养老设施		
14.00 14 20	76 - 147	Honor Universit			
14:00-14:30	Zhe Wang 王哲	Henan University	Promote Ageing-in-place at Home		
	土智	河南大学	through environmental support of		

14:30-15:00	Dong Yao 姚栋	Tongji University 同济大学建筑与 城市规划学院	neighborhood walking and yard activities 通过街区步行及庭院活动等环境支撑来促进居家养老 Spatial Countermeasures for Aging in place in Metropolis 大城市原居安老的空间措施
15:00-15:15	Tea Break 茶歇		
	主	3: Ageing and Health, 题三:老龄化与商业	模式
15:15-15:45	Ping Zeng 曾平	The Key Laboratory of Geriatrics, Beijing Hospital & Beijing Institute of Geriatrics 老年医学重点实 验室,北京老年 医学研究所,北 京医院	Sarcopenia Related Features in Chinese Elderly 中国老年人群的肌少症相关特征
15:45-16:15	Pelin Kinay	XJTLU 西交利物浦大学	Climate Change Adaptation and Human Health: Reducing Climate Change Health Risks in the Ageing Chinese Population 气候变化适应和人类健康: 为中国老龄化人口减少气候变化带来的风险
16:15-17:15	Robert Lynch	XJTLU 西交利物浦大学	Aging and Public Health: Determinants of health in older populations and their association with the built environment 老龄化与公共健康:影响老龄人口健康的决定因素以及人为建设环境对其影响
17:15-18:30	Group/Roundtable Discussion 圆桌讨论 Discussant: Robert Lynch		
18:30-20:00	Gala Dinner - XJTLU Conference Centre 欢迎晚宴 - 西交利物浦大学会议中心酒店 99 Ren'ai Road, Dushu Lake Higher Education Town 独墅湖科教创新区仁爱路 99 号		

	Day 2 Sunday 16 <sup>th</sup> July 2017			
Venue: Central Building - 117W				
9:00-9:30	Introduction to the XuShuGuan project			
	<b>浒墅关镇(青灯村)项目简介</b>			
9:30-11:00	Reports from the interdisciplinary XJTLU team			
	西浦多学科学生团队汇报前期研究成果			
11:00-11:15	 Tea Break 茶歇			
	<u> </u>			
11:15-11:50	0 Feedback from the experts team			
	专家团队回馈意见			
11:50-12:00	OO Closing ceremony of the 2017 RIAS workshop			
	研讨会闭幕			
12:00-14:00	Buffet Lunch – XJTLU Conference Centre			
12.00 11.00	自助午餐 - 西交利物浦大学会议中心酒店			
14:00-16:00	Guided tour in the old town of Suzhou			
	苏州老城区考察: 拙政园、苏州博物馆、平江路			

# RIAS Contact | 联系人

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Please refer to our website for further information | 更多相关信息,请访问我们的网站: <a href="http://www.xjtlu.edu.cn/en/research/institutes-centres-and-labs/research-institute-on-ageing-and-society">http://www.xjtlu.edu.cn/en/research/institutes-centres-and-labs/research-institute-on-ageing-and-society</a>

# XJTLU Map | 西交利物浦大学校园地图



Our campus is located in Suzhou Industrial Park, to the east of Suzhou's historic centre. Suzhou is only 24 minutes due west from Shanghai on the fastest high-speed train. The University's nearest train station is the high-speed Suzhou Industrial Park station 苏州园 区站 although Suzhou 苏州站 and Suzhou North 苏州北站 train stations have more regular services from other cities around China. You can easily get a taxi from these train stations to our campus.

我们的校址位于苏州工业园区内,风景秀丽、人文气息浓厚的独墅湖科教创新区。位于苏州古城的东边,距离无锡硕放国际机场 45 公里,上海虹桥国际机场 80 公里,杭州萧山国际机场 95 公里,上海浦东国际机场 120 公里。距离我们最近的高铁站是苏州园区站,此外苏州高铁还设有苏州站和苏州北站。

# Speakers' Bios & Presentation Abstracts | 演讲嘉宾及报告简介

#### Nazlena Mohamad Ali

嘉宾简介: Nazlena Mohamad Aliboshi 是马来西亚 Kebangsaan 大学视觉信息研究院的高级研究员和副教授。她于 2009 年拿到了都柏林城市大学的博士学位。她的主要研究方向侧重在人机交互领域 包括互动设计,用户评估以及技术适用性。她目前参与了多个研究项目,其中一部分是基于网络和手机应用的互动系统的开发。Nazlena 截至目前已经在不同学刊和研讨会上发表了 90 余篇学术论文。她成功地辅导了 6 个博士,14个硕士和 47 个本科毕业论文。她从 2016 年开始担任视觉信息研究院研究生部的主任。

Nazlena Mohamad Ali is a senior research fellow and an Associate Professor at the Institute of Visual Informatics (IVI), Universiti Kebangsaan Malaysia. She received her PhD degree from Dublin City University, Ireland in 2009. Her major research interest is Human Computer Interaction (HCI) in particular: interaction design, user evaluation and usability. She involved with a number of research projects, some of which are related to web-based and mobile interactive system development, persuasive design, emotion and games engagement. To date, she has published more than 90 papers from multiple journals/proceedings, an active technical paper reviewer and program committee member. She has completed her supervision for 6 PhD, 14 Master and 47 final year students project. Since 2016, she has been Head of Postgraduates Studies of IVI.

报告: 技术干预对马来西亚健康养老的影响

**Topic**: Towards Healthy Ageing: Overview of technology-based interventions among the Malaysians

摘要:健康养老通常被解释为是一种通过优化健康活动形式以提高老年人生活质量的过程。大量的研究表明通过辅助科技和信息交流系统可以更好地从身体,心理和社会三个方面理解老龄化问题。研究结果也证明了科技的应用有助于增强老年人的活动量从而提高他们的生活质量。年龄引起的脑力和视力上的能力下降可能影响老年人与技术和数据信息系统的有效互动。因此,大量的工作应该着重在提高老年人群体对相应技术操作的技能上的支持。这个报告旨在介绍由Nazlena Mohamad Ali 副教授带队的一项健康养老研究。截至目前,其研究表明支持老年群体的相关技术技能对于预防老年慢性疾病以及在马来西亚的人口老龄化进程中起着举足轻重的作用。

Abstract: Healthy ageing generally refers to the process of optimising opportunities for health and participation in order to enhance the quality of life as a person's age increases. A vast amount of research has proven that the use of assistive technologies and information communication technologies (ICTs) which in particular addressing the physical, cognitive and social aspects of ageing, have the potential to encourage activities among older adult and subsequently increase their quality of life. Interacting with technology may be challenging for older adults due to cognitive-declined and vision impairments. Therefore, a significant amount of work is needed to support the skills and abilities of this vulnerable population. In this presentation, we will highlight research and effective approaches towards healthy ageing that have been carried out lead by Associate Prof Dr Nazlena Mohamad Ali, a senior research fellow at IVI, UKM. Our current research suggests that these works are imperative for prevention of chronic diseases and relevance for Malaysian expanding ageing population.

#### 白雪 | Xue Bai

**嘉宾简介:**白雪目前在西交利物浦大学国际商学院攻读博士学位。作为校友,她拿到了西交利物浦大学信息管理和信息系统学士学位。之后她又拿到了拉夫堡大学的信息管理与商业技术专业的硕士学位。她的研究方向包括老年消费者,技术沿用,消费者行为以及网上销售。

Xue Bai is a second-year doctoral student in the Department of International Business School in Suzhou (IBSS) in Xi'an Jiaotong-Liverpool University. She received an MSc Information Management and Business Technology in Loughborough University and a Bachelor degree of Information Management and Information Systems in Xi'an Jiaotong-Liverpool University. Her research interests include older consumers, technology adoption, consumer behaviour and online purchase.

报告: 网上购物行为对中国老年消费者的生活质量的影响

Topic: Adoption of e-Services and Quality of Life among Older Consumers in China

**摘要**: 网上购物在中国的发展迅猛,但是网购群体大多是年轻人。目前对于老年消费群体(尤其在中国)采用网购方式的研究非常有限。因此这个研究旨在调查影响中国老年消费群体采用网购方式的因素包括助力和阻力,以及其对老年人生活质量的影响。通过量化研究方法,研究重心包括对已经采用网购方式的老年消费者的经历进行分析。这项研究旨在帮助填补关于中国老年消费群体采用网购消费的知识空白,其研究成果将有助于市场营销人员以及网络设计师更好地了解老年消费群体的需求。

**Abstract**: The development of online shopping in China is accelerating quickly, but the usage is primarily amongst younger people. The adoption of online shopping among older consumers (50+) is still under-researched, especially in China. This research investigates the facilitators and barriers for older people in China to adopt online shopping, and its contribution to quality of life. A quantitative approach will be used to analyse the antecedents of adopting online shopping among older Chinese consumers. This research addresses a knowledge gap surrounding the use of e-services among older consumers in China, and it will help marketers and web designers to gain more insightful understanding of older consumers' needs.

#### Pin Sym Foong

**嘉宾简介**: Pin Sym 有着人机互动设计专业的硕士学位,她目前在新加坡国立大学互动科学与机械学员攻读博士学位。她目前的研究项目着重在通过可以支持社交和认知激励的技术来完善探访者与疗养院患者的关系。她的研究方向包括说服,健康,人机互动和看护。有关她在老龄人口化领域的工作来自于她之前的经历,包括人机互动专业的教学,多媒体服务公司的界面设计师以及新媒体创业公司的辅导老师。

Pin Sym has a M.Sc in Human Computer Interaction Design and is currently pursuing her PhD at the School of Integrative Sciences and Engineering in the National University of Singapore. Her current project is focused on supporting the visitor-nursing home resident relationship with technologies that support social interaction and cognitive stimulation. Her research interests are in persuasion, health, HCI and caregiving. Her work with older adults is supported by her previous experience as an HCI lecturer, and interface developer for multimedia services, and as a mentor to new media startups.

报告: 老年痴呆病人的个人护理病历可以众包(Crowdsourced)吗?

**Topic**: Can Personal Profiles for Dementia Care be Crowdsourced?

摘要:老年痴呆患者通常无法清晰地表达他们的想法。患者的社会心理病历可以帮助护工更好地了解病人的需求。然而,由于信息输入量大,数据缺乏更新,老年痴呆患者的性格多变性以及在长期医护机构中缺少相关信息来源,获取电脑支持的病历内容难度很大。 这项研究针对那些非亲属非专业的长期看护义工,旨在了解患者的社会心理信息是否可以以众包的方式分享。此纵向研究分析看护义工在相互不认识的情况下分享护理方式,研究团队主要调查了研究对象提供的信息的可靠程度以及他们在通过与患者积极交流过程中激起的性格上的变化。 我们认为护理方式通过语言交流和提高解决问题质量对于促进看护义工对老年痴呆患者的理解上有很大帮助。 然而,研究也表明为了更好地支持在一个信息搜集系统中信息的输入和输出,互动功能需要被维护,同时数据的真实性和时效性也需要用另一种机制去管理和完善。

Abstract: People living with dementia often cannot represent themselves. Pyschosocial profiles help to bridge this gap with caregivers. However, computationally supported profile content is difficult to obtain because of the burden of input, the lack of recent input, the changeability of personality in dementia and the lack of available informants, particularly in long-term care facilities. This research turns to non-kin, non-expert caregivers such as long-term care volunteers to see if psychosocial profile information can be crowdsourced. Using a longitudinal study of caregiving instructions between volunteers who don't know each other, we examined if information gathered from these informants is reliable and evocative of personality to the point of promoting engagement with the profile owner. We determined that the care instructions have a conversational, problem-solving qualities that promote understanding and engagement with the resident with dementia. However, to support the input and output interaction with a profile collecting system, care must be taken to ensure this iterative function is preserved, as well as introduce an additional mechanism to curate veracity and recency of information.

#### Pelin Kinay

嘉宾简介: PELIN KINAY, 1990 年出生于土耳其首都安卡拉。她在土耳其完成了她的学士学位,之后她为了工商管理硕士的学习来到中国,在苏州大学学习。她在 2014 年完成了工商管理硕士学位并于 2015 年在西交利物浦大学开始了她的博士学位的学习。她的导师是环境科学系的 Philip Staddon 博士, Elmer Villanueva 博士和 Andy Morse 教授。她正致力于她的主题为"气候变化适应和人类健康: 为中国老龄化人口减少气候变化带来的风险"的项目。对于环境问题,她总是有极高的兴趣,这也是她选择在这个领域继续她的学术生涯的原因。目前,她处于她的博士学位学习的最后一年。

Pelin Kinay was born in Turkey in 1990, in city of Ankara. She completed her Bachelor's degree in Turkey, and for her MBA studies she came to China to study in Suzhou University. She has completed her MBA in 2014, and she started her PhD in XJTLU in 2015 under the supervision of Dr. Philip Staddon, Dr. Elmer Villanueva and Prof. Andy Morse in Department of Environmental Science. She is currently working on her project with the topic 'Climate Change Adaptation and Human Health: Reducing Climate Change Health Risks in the Ageing Chinese Population'. She always had high interest in environmental issues, which is why she chose to continue her career in this field. She is in last year of her program.

报告: 气候变化适应和人类健康: 为中国老龄化人口减少气候变化带来的风险

**Topic**: Climate Change Adaptation and Human Health: Reducing Climate Change Health Risks in the Ageing Chinese Population

摘要:这个项目致力于应对气候变化相关的将会在未来数十年冲击中国老年人口健康的风险。我们有三个主要目标。第一,我们希望能够评估中国老年人对于气候变化给他们的健康带来的风险的认识以及他们将会如何改进他们的行为来最小化这些风险。参与者将会是六十岁以上的居住在以下三个城市的具有非常不同的人均收入的老人:厦门,苏州和合肥。我们将会进行调查和学术采访。第二,我们希望了解地方政府的政策是否对老年人足够清晰地阐明和预告了气候变化对健康带来的影响。最后,从以上所获得的信息,将会被用于开发关于为改善健康状况的气候变化适应策略的建议。

**Abstract:** This project addresses the climate change-related health risks that will impact the elderly Chinese population in coming decades. We have three main objectives. First, we wish to assess how elderly Chinese understand the risks of climate change to their health, and how they modify their behavior to minimise these risks. Participants will be aged >60 years residing in three cities—Xiamen, Suzhou, Hefei—with significantly different per capita income. Surveys and academic interviews will be undertaken. Second, we wish to understand whether local government policy enough in articulating and anticipating climate change health impacts in the elderly. Finally, the information from these sources will be used to develop recommendations regarding climate change adaptation strategies for improved health outcomes.

#### Florian Kohlbacher

**嘉宾简介**: Florian Kohlbacher 博士是经济学杂志企业协会的北亚区负责人。 加入 The Economist Intelligence Unit 之前,他曾在西交利物浦大学担任市场营销与创新专业副教授。他也是老龄化社会研究院的创始人。Kohlbacher 博士曾经在东京一所研究日本国情的德国研究院做高级研究员以及担任其商业与经济发展部门的负责人。Kohlbacher 博士的硕士和博士学位都是在维也纳经济与商业大学(WU Vienna)获得,并且在日本的大学教授市场营销和商务课程。他是'银发市场现象:老龄化发展下的市场营销与创新'一书的联合编辑;也是很多书籍的作者(之一),包括"了解日本老龄化影响的广告推广"、"在网络经济下的国际市场营销"。

Dr. Florian Kohlbacher is the North Asia Director of The Economist Corporate Network. Prior to joining The Economist Intelligence Unit, Florian was an Associate Professor of Marketing and Innovation in the International Business School Suzhou at Xi'an Jiaotong-Liverpool University and the Founding Director of the XJTLU Research Institute on Ageing and Society; he also was a Senior Research Fellow and Head of the Business & Economics Section as well as Deputy Director at the German Institute for Japanese Studies (DIJ) Tokyo. Florian holds both a master's degree and a doctorate from the Vienna University of Economics and Business (WU Vienna) and teaches marketing and business at universities in Japan. Florian is co-editor of "The Silver Market Phenomenon: Marketing and Innovation in the Aging Society", co-author of "Advertising in the Aging Society: Understanding Representations, Practitioners, and Consumers in Japan", and author of "International Marketing in the Network Economy: A Knowledge-Based Approach".

报告: 跨代设计: 老龄化社区的创新策略

**Topic:** Transgenerational design: Innovation strategies for ageing societies

**摘要**:人口结构的变动带来了适应老年消费群体的产品和服务的新需求。因此,对新型技术和方案的需求越来越高。这种变化意味着那些面向老年消费群体的公司和机构需要采用创新性的工作方式以影响他们的市场调研,产品开发和设计,以及包括服务在内的产品生产。商业机构首当其冲的需要清楚地了解和定位他们的市场开发空间并使其创新型战略更好地适应市场需求。然而,开发适合老年消费群体的产品和技术并不是容易的事。这个报告将对开发面对老年群体的产品和技术过程中遇到的挑战进行介绍并分析不同创新型战略。作为一种比较有潜力的战略模式,报告也将会介绍跨年龄段的战略设计并详细阐述其主要内容。

**Abstract**: The demographic shift gives rise to new needs and wants in terms of products and services that correspond to the expectations of older customers. Thus, it requires new technological solutions. This means that companies and other organizations developing new products for older users need to adapt their innovation-related work, which tends to affect their market research, product development/design, and product delivery, including service. Companies - first and foremost - need to clearly understand and define their market space and align their innovation strategy accordingly. However, developing products and technologies for older users is not an easy task.

This presentation will give an overview of the challenges associated with developing products and technologies for older people and analyze different innovation strategies for ageing societies. It will propose transgenerational design as one of the most promising strategies and explain its key features in detail.

# 李斌 | Bin Li

**嘉宾简介**: 李斌教授自 2004 年起任同济大学教授、博士生导师。现任同济大学建筑与城市规划学院建筑设计方法学科组责任教授,中国环境行为学会委员,国际学术杂志建筑科学评论(Architectural Science Review)编辑顾问委员,上海市海外交流协会理事,上海高校特聘教授(东方学者)。

作为一名学者和建筑师,李斌教授关注如何提高人的生活品质,如何构建人与环境的和谐关系。他综合了建筑学、环境行为学等学科方法,对老年人生活环境的形成和适应、城市化中的环境转换和行为、人与环境关系视角中的比较文化论等方面进行了系统研究。截止至2017年5月,在国内和国外发表论文204篇,出版著作4本。

1991年,李斌教授毕业于清华大学建筑学院建筑系。1994年,赴日本大阪大学工学研究科建筑工学专攻留学,先后获工学硕士、工学博士学位。2000年,任日本大阪大学大学院工学研究科建筑工学专攻助理教授,并取得日本一级建筑士资格。

Professor Bin Li has been a Professor of Tongji University and Doctoral advisor since 2004. He is responsible for the faculty of Methodology of Architectural Design, College of Architecture and Urban Planning in Tongji University. Besides a committee member of Environment-Behavior Research Association of China, he is an Editorial Advisory Board member of Architectural Science Review, Council member of Shanghai Overseas Exchange Association and Distinguished Professor of universities in Shanghai (Eastern Scholar).

Professor LI Bin is a scholar and an architect by training and Environment-Behavior Studies interested in how to improve the quality of people's life and how to construct harmony relationship between person and environment. Synchronizing the research methods of Architecture and Environment-Behavior Studies, he has been working on a systematical research on formation and adaptation of the old people's living environment, environmental transition and behavior in urbanization, and cross-cultural studies from the viewpoint of the relationship between person and environment as well. Until May of 2017, he has published 204 papers and 4 books in China and abroad.

Professor LI Bin received his bachelor degree from School of Architecture of Tsinghua University in 1991 and moved to Japan in 1994. He received his Master and Ph.D. degree in Engineering from Osaka University. In 2000, he became an Assistant Professor in the Department of Architectural Engineering of Osaka University and qualified as a 1st Class Registered Architect of Japan.

#### 报告: 人与环境融合的社区养老设施

**Topic**: The Elderly Facilities in Community Based on Integration of Person and Environment

摘要:作者从老年人环境行为的角度,调查分析了上海Y长者照护之家和巴塞罗那F社区综合体后发现:前者: 1.接近老年人原居生活环境,有一定居家氛围; 2.短期居住老年人以必需行为为主,行为内容偏个体化; 3.日间照料老年人集体性社交行为占比最大; 4.老年人活动分布楼层化明显,少有交流; 5.短期居住老年人居室缺乏私密性,与社区生活隔离。后者: 1. 老年人灵活地选择社区综合体多样的活动场所,与熟悉的社区保持着密切联系; 2. 老年人较自主地安排日常作息,在社区综合体及周边进行活动,与其他人群交流互动。

作者比较了京都 I 社区养老设施的物质环境和社会环境后指出:以上海长者照护之家为代表的小规模社区复合养老设施还刚刚起步,含养老设施的社区综合体的出现还有待条件成熟,为实现老年人与环境的融合,改善老年人生活品质,社区养老设施必须在物质环境方面做到居家氛围、保证私密、设施联动、无障碍设计,社会环境方面做到以老年人为中心、精细化服务、社区融合、居民互动。

Abstract: From the environment-behavior perspective of the elderly, the authors investigated and analyzed the elderly's care home in Community Y of Shanghai and the complex of Community F in Barcelona. It is found that, for the former one: 1. It is close to home living environment of the elderly with a certain home atmosphere; 2. Necessary behavior of the elderly in short stay takes the most of time and they behave more individually; 3. Group social behavior of the elderly in day care takes the most of time; 4. The elderly's behavior distribution is limited on different floors without enough communication across the floor; 5. The room of the elderly in short stay, who are isolated from community life, is lack of privacy. For the latter one: 1. The elderly have the flexibility to choose a variety of places for activities in the community complex, keeping in close contact with the familiar community; 2. The elderly are free to arrange their schedules for activities inside or surrounding the community complex, interacting with other groups.

After comparing the physical environment and social environment of the elderly facilities of Community I in Kyoto, the authors point out that the small-scale composite elderly facilities, represented by the elderly's care home of Shanghai, has just started, while the conditions of the community complex including the elderly facilities are not ready; however, the elderly facilities in community must ensure home atmosphere, privacy, facilities cooperation and barrier-free design in physical environment, as well as priority to the elderly, fine service, community integration and residents' interaction in social environment, in order to realize the integration of person and environment and improve quality of life of the elderly.

# Robert Lynch

**嘉宾简介:** Robert Lynch 是西交利物浦大学公共健康系的副教授,他的研究方向侧重于环境健康。来到西交利物浦大学任职之前,他曾在 Oklahoma 大学健康科学专业公共健康学院担任职业与环境健康系的主任。他在美国也曾在环境保护和规划政府部门工作。他的学术研究包括由于长期接触有毒化合物而带来的危害人体的因素。他近期的研究侧重于公司和学校室内空气质量问题。

Robert Lynch is an Associate Professor in the Department of Public Health at Xi'an Jiaotong-Liverpool University (XJTLU) with a focus on environmental health. Before joining XJTLU, Dr. Lynch was Chair of the Department of Occupational and Environmental Health at the University of Oklahoma Health Sciences, College of Public Health. He worked for a number of years in government environmental protection and planning programs in the U.S. as well as public health laboratories. His academic research has focused on determining human health risks associated with exposure to toxic compounds in the environment. Most recently, his research has focused on indoor air quality issues in work environments and schools.

报告:老龄化与公共健康:影响老龄人口健康的决定因素以及人为建设环境对其影响

**Topic**: Aging and Public Health: Determinants of health in older populations and their association with the built environment

摘要:目前世界大部分国家都面临着人口老龄化问题。虽然各国老龄人口(65 岁以上)数量不均,但是预测到 2030 年世界老龄人口将达到 10 亿,其中很多发达国家的老龄人口比例将会超过 20%。到 2050 年,在中国将有大约 4.37 亿人口超过 60 岁,占人口总数的 30%。人口结构的变化带来的压力之一在对于支持人类活动的系统需求的变化。人为建设环境对于老龄人口健康的影响有好有坏。然而,目前大多数社区及其架构并没有考虑到如何提高老龄人口的健康和提供更好的保护。伤患,社会隔绝,噪音,室内生活环境质量,运动和正常老年疾病只是公共健康和人为建设环境相互影响所带来的部分问题。更好地面对和解决这些具有挑战性的健康问题不仅能够对促进和提高健康质量,更能对控制逐步上升的康护成本有所帮助。

Abstract: Most areas of the world are facing a rapidly ageing population. Estimates vary by region but the number of older (>65 yrs.) people will near 1 billion by 2030 at which time their numbers will exceed 20% of the population in more developed countries. It is estimated that China will have ~437 million people >60 yrs. by 2050 - nearly 30% of the total population. The changing demographic profile will put pressure on human support systems as the world shifts to address the needs of older populations. The built environment can have both positive and negative effects on the health of older populations; however, most communities and their structures are not designed to promote good health. Injuries, social isolation, noise, indoor environmental quality, exercise, and common chronic diseases are just a few of the scenarios where public health and the built environment interact. Addressing the changing health needs of world's population will not only promote good health, but can address the spiraling costs of healthcare.

#### 王哲 | Zhe Wang

**嘉宾简介**: 王哲,博士,教授,黄河学者,国际环境设计研究学会(EDRA)常委、国际老年学学会(GSA)会员、五项国际学术期刊和二项国际会议审稿人。1993年郑州大学本科毕业,2004和2009年在美国德州AM大学分别获建筑学硕士和哲学博士学位。主要从事建筑循证、医疗、养老、健康和可持续发展的研究。在国际上发表一作/独著论文15篇: SSCI收录5篇,ASC收录3篇;在国际会议上发表和宣读报告31篇。专著一部、编辑著作二部,由中国建筑工业出版社和EDRA出版。在2006年获得美国建筑师学会研究基金奖;2011年获得由世界健康设计组织颁发的国际学术研究项目奖;2013年获得中国国家社科研究基金并于2016年底以成果优秀结项。

Dr. Zhe Wang is the holder of the Yellow River Professorship at Henan University. Supported by her twelve years of experience in design practice in the USA, Singapore, and China, her research focuses on Health Design and Environmental Gerontology. She leads the Environments-for-Aging research funded by the National Social Science Foundation (NSSF) of China. Wang received the International Academy Awards in Research Project announced by the World Health Design (WHD) and has published a number of first-author and single-author papers in peer reviewed journals and publications for the WHD and American Institute of Architects (AIA); presented findings at international and national conferences including the annual conferences of Environmental Design Research Association, AIA, Gerontological Society Association, and Active Living Research; and has received grants from the NSSF, AIA, Nurture by Steelcase and TX Architectural Foundation.

报告:通过街区步行及庭院活动等环境支撑来促进居家养老

**Topic**: Promote Ageing-in-place at Home through environmental support of neighborhood walking and yard activities

**摘要:** 背景: 本研究关注与老年人积极运动相关的环境支撑元素,对其与居家养老的关联性展开了探讨。具体的指标为 65 岁之后和入住养老机构之前的居家养老时间长度。研究目标是为居家养老的老人提供环境支持。积极运动对促进健康和延缓老年残障有重要作用,本研究假设与老年人积极运动相关的环境支撑元素能促进居家养老。

方法: 研究数据来源于作者对美国德克萨斯州206 位老人的问卷调查; 其中117 位老人的居家养老环境数据在地理信息系统中展开了核查和分析; 分析包括了25 项在庭院和街区层级的环境元素。本研究比较了居住在不同环境中的老人们实际完成的居家养老时间。数据分析使用了ANOVA 统计比较法。

发现:可以步行的环境、宽裕的侧向庭院、和街区步行的目的地对居家养老的时间长度有促进作用。在本研究中,拥有上述环境支撑元素的老人实际居家养老的时间比没有这些环境元素的要长出3.3 年。

结论: 庭院和街区环境中支撑老年人积极运动的元素可以促进居家养老。

**Abstract**: Background With an emphasis on environmental factors correlated with physical activity, this research investigates environmental influences on aging-in-place at home (after age 65 and before moving to a senior-living institution). It intends to support community-dwelling older adults who wish to remain in their current residences for as long as possible. Given the benefits of physical activity on health and delay of disability, it is hypothesized that outdoor built environments that support physical activity may influence aging-in-place.

Methods Data were collected through a questionnaire survey of 206 older adults in Texas; 117 sample sites were examined in GIS; 25 environmental features at residential-lot and neighborhood levels were investigated. Lengths of aging-in-place at home were compared among participants whose community-dwellings were with different environmental factors. ANOVA tests were applied.

Findings Walkable environments, wide side-areas on residential-lots, and destinations for walking in neighborhoods may contribute to aging-in-place at home. Non-Hispanic White participants who had these features near home maintained residence at home 3.3 years longer than their counterparts (p<0.01).

Conclusion Supportive residential-lot and neighborhood environments of physical activity may promote aging-in-place at home.

# 姚栋 | Dong Yao

**嘉宾简介**: 姚栋博士系同济大学建筑与城市规划学院副教授,建筑系系主任助理 。自 2000 年开始从事老龄化与空间的研究,姚栋是"原居安老"理念在国内最早的倡导者; 国标《老年人居住建筑设计规范》编委;自科项目《城市养老机构研究》负责人。他目前的研究重点是"社区复合养老设施"与社区营造。

Dr. Dong Yao is an Associate Professor at the College of Architecture and Urban Planning and the Assist. Head of Architecture Department, Tongji University. Starting his research on Aging from 2000, Dr. YAO is the first advocate of Aging in Place concept in Mainland China, and had given public speeches domestic and aboard. Except for Assoc. Professor and Assist. Head of Architecture Department of Tongji University, Dr. YAO was the exhibition curator of Shanghai Ecohome of EXPO2010; co-editor of national standard-Code for Design of Residential Buildings for the Elderly from 2012; Director of NSFC projects – Research on Urban Facilities for the Elderly from 2014. Currently, his major research interests focus on Community-based Integrated Senior Facility and community empowerment.

报告: 大城市原居安老的空间措施

Topic: Spatial Countermeasures for Aging in place in Metropolis

摘要:尽管应对老龄化的政策包含"居家-社区-机构"的综合内容,但以往的精力都聚焦于机构建设而忽视了设施的选址与老年人的多样化需求。本研究首先通过上海的实证研究检验了当前政策的背景与存在的问题;继而通过文献综述强调了"原居安老"作为老年人普遍需求的重要性。为帮助大都市老年人原居安老,提出了介于居 家和机构之间的"社区复合养老模式",并通过实证研究检验了在上海实践上述模式的空间潜力。

**Abstract**: Although the national policy for aging is the combination of institution-community-home services, most efforts were paid to the development of various institutions regardless the locale or the needs of our older people. Using the case study of Shanghai, the research surveyed the background as well as the problems of the current measures; then reviewed various literature and emphasized the importance of aging in place as the general need of the older people. To help the seniors in metropolis to age in place, Community-based Integrated Senior Facility (CISF) is suggested as a new prototype between home and institutions. At the end, an empirical research has been carried out to test the spatial potential for the Shanghai seniors to age in place with the new prototype.

# 曾平 | Ping Zeng

**嘉宾简介**: 曾平就职于北京医院北京老年医学研究所流行病室,研究员,室主任,硕士生导师。1992年7月毕业于华西医科大学公共卫生学院; 1999年12月毕业于美国俄克拉何马大学公共卫生学院。主要研究领域为运用流行病学方法进行老年健康相关因素、肌少症及其防控技术的研究。自 2000年以来,多次参加并承担部分国家科技攻关项目、科技支撑项目、卫生行业专项课题,负责现场调查、数据管理和统计分析等工作。在国家政策研究方面,负责了"中国健康老龄化战略研究——老年卫生服务体系建设规划"的研究,以及"国民营养计划—老年人群营养改善行动 2016—2030"的撰写。发表 30 多篇研究论文。

Ping Zeng, researcher, director, and MA student Supervisor, working in Beijing institute of Geriatrics, Beijing Hospital.

Education: Graduated from West China University of Medical Sciences in 1992, and the University of Oklahoma Health Sciences Center in 1999.

Research area: Using Epidemiological methods to study on the factors related to the health of the elderly, and sarcopenia and relevant methods for Sarcopenia intervention.

Main research experience: A co-investigator for nationwide studies funded by the Ministry of Science and Technology, and Ministry of Health since 2000. As a main researcher to complete two Policies researches, i.e., "The establishment of Medical Service System for the elderly of China" (2014), and "The Nutrition Supporting Plan for Chinese Elderly 2016-2030".

Publishing: Published over 30 original research papers.

报告:中国老年人群的肌少症相关特征

Topic: Sarcopenia Related Features in Chinese Elderly

摘要:背景:人口老龄化给医疗卫生和老年照护带来巨大的挑战。近年来,肌少症的诊断和预防已经成为现代老年医学研究的重要议题。肌少症是一组老年综合症,特指随着增龄而出现的骨骼肌肉容量和肌肉力量、身体活动能力下降,下降到一定程度,引起机体功能障碍,使失能、跌倒、照护需求与死亡风险等大大增加。肌少症所带来的种种负面后果都意味着健康的损失、生活质量的下降以及医疗服务需求和社会负担的增加,也预示着研究和干预肌少症的重要性。

目的:本次交流的目的是为了展示肌少症相关指标:四肢肌肉容量(appendicular skeletal muscle mass, ASM)、握力(handgrip strength, HS)以及步速(gait speed, GS)随增龄的变化趋势;肌少症的流行特征以及其相关影响因素;步速降低和老年人的健康状况之间的关系。根据这些数据,为肌少症的干预提供一定的线索。

方法:用生物电阻抗法测量肌肉容量,用HS代表肌肉力量,用6米GS代表身体活动状况。用亚洲人肌少症工作组发布的肌少症诊断标准进行各项指标的定义。5次起坐时间(time required for completing repeated chare stands, RCS)也用来分析老年人的身体活动能力。

结果: ASM、HS 和 GS 随增龄显著降低(RCS 时间延长)。ASM、HS 以及 GS 的降低发生在 50-60 岁之间,70 岁之后快速降低; HS 和身体活动能力的降低比肌肉容量减少更加明显,而女性和农民的身体活动能力下降更加突出。ASM、HS、GS 和 RCS 之间的相关性受年龄的影响。在老年人中,ASM 只与 HS 相关。生活无规律(OR=2.77)与步速降低有关,而体育锻炼(OR=0.27)和业余爱好(OR=0.11)与快步速有关。多种慢病(OR=1.99)与 RCS 减慢相关,而业余爱好(OR=0.35)与 RCS 加快相关。在一组全国资料中,低步速与健康状况以及认知功能、日常活动能力、心理状况降低显著相关。

结论: 肌力和身体活动能力随增龄降低。步速和 5 次起坐时间是非常容易获得和有效的评估老年人功能下降的指标。保持健康的生活方式和日常活动状况对维持老年人的身体活动能力非常重要。

**Abstract**: Background: Population has brought huge Challenge on the health care and elderly care of China. Sarcopenia has been newly recognized as geriatric syndrome characterized by progressive and generalized loss of skeletal muscle mass (SM), as well as decrease of muscle strength and physical performance in the elderly. The associations of sarcopenia with adverse health status have highlighted the importance of sarcopenia research and intervention.

Objectives: This presentation was designed to show the characteristics of aging-related difference of appendicular muscle mass (ASM), handgrip strength (HS) and gait speed (GS), which are three variables to define sarcopenia; the epidemiologic features of sarcopenia and their associated factors; and the association between gait speed and the health related status in Chinese elderly, in order to provide basis for sarcopenia intervention in this population.

Methods: Body composition measurements were obtained using a bioelectrical impedance analyzer (BIA); muscle strength was determined by handgrip strength (HS); and physical function was evaluated by the subjects' 6-m gait speed (GS). The criteria proposed by Asian Working Group for Sarcopenia were used to define low ASM, HS, and GS. The time required for five repeated chair stands (RCS) was also measured to evaluate physical performance.

Results: There were significant differences among age groups for ASM, HS, GS, and RCS while females were found to have significantly lower HS and GS values. Loss of muscle mass, muscle strength and physical performance begins at age 50-60, and faster after age of 70. Muscle strength and physical performance (especially RCS) declined to a greater extent than did muscle mass. Women and rural farmers declined more in their physical performance. Correlations among ASM, HS, GS and RCS were influenced by age differences. In the older group, ASM was significantly correlated with HS but not with other measures. Unstructured daily routine (OR = 2.77) was associated with the risk of low GS, while physical exercise (OR = 0.27), and engaging in hobbies (OR = 0.11) were associated with faster GS. Co-morbidity (OR = 1.99) was associated with the risk of reduced performance of RCS, while engaging in hobbies was associated with faster RCS performance (OR = 0.35). In another group of nationwide data, low gait speed is significant associated with health status, decline of cognitive function, activities of daily living, and psychological status in the elderly.

Conclusions: Muscle strength and physical performance varied with aging in Chinese population. Measures of GS, HS, and RCS provide a readily available and effective method for assessing the risk of functional mobility decline. Maintaining a healthy life style and physical activity throughout life is beneficial for older people to improve their physical performance, especially in the early stages of aging.

# 老龄化社会研究院

# RESEARCH INSTITUTE ON AGEING AND SOCIETY

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本研究院的目标:通过严格地学术研究得出能够推动理论和实践知识发展的深刻见解,研究人口老龄化所带来的文化、经济、社会和技术影响建议私有和公共部门的决策者能够以创新的解决方法应对国内外人口结构转变所带来的诸多挑战提高老年人口的生活质量,同时促进国内外形成可持续的老龄化社会。

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