



*Insatiable* Cut paper by Theodore Bolha, USA <https://www.talenthouse.com/theodorebolha>

2017 Symposium of the Society for the Study of Human Biology &  
International Association of Physiological Anthropology

# Human Biology of Climate Change

12 -15<sup>th</sup> September 2017, Loughborough (UK)

## Programme

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Queen's Park Bell Tower

Dear Symposium Participant,

A very warm welcome to Loughborough!

The 2017 Symposium of the *International Association of Physiological Anthropology (IAPA)* & *Society for the Study of Human (SSHB)* is focused on the overarching theme of "The Human Biology of Climate Change". The main aim is to bring together an interdisciplinary team of researchers, academics, practitioners, and community leaders to tackle questions around climate change and its consequences for human health, nutrition, demography, physiology, environmental design and other biological outcomes. We have about 60 participants coming from the United Kingdom, Japan, Turkey, Lithuania, USA, Russia, and other countries.

Climate change is a large-scale, long-term shift in the planet's weather patterns or average temperatures. Earth has had tropical climates and ice ages many times in its 4.5 billion years. Some of those past changes were drivers of major evolutionary change giving rise to species ancestral to humans and, very likely, the human species.

So what's happening now? The rise of average world temperature by nearly 1°C since 1901 is associated with changing rainfall, disrupted food production, sea level rises (19 cm globally), glacial and sea ice melts, floods and changes in biology and behaviour of insects, birds and many other animals and plants. Climate change and climate uncertainty are global phenomenon with implications for human biology. Climate change makes many existing diseases and conditions worse, but it may also help introduce new pests and pathogens into new regions or communities. In addition, there are social, economic, psychological and political impacts. Understanding climate – human biology interrelations will help us prepare for and tackle the myriad of challenges and opportunities posed by climate change. With appropriate policies and planning, climate change can be mitigated and inevitable changes can be used to foster new types of sustainable bio-social and economic environments. The cross-cultural and 'deep-time' perspectives of evolutionary human biology and physiological anthropology must play a key role.

We have 9 plenary speakers and more than 40 contributed oral and poster presentations. We are especially pleased to welcome student members of the SSHB and IAPA who are presenting their research.



*The Sock* by Shona Kinloch  
symbolic of Loughborough's hosiery industry

We have organised some social activities to give you the opportunity to relax and network in a more informal setting. A Welcome Reception follows the Opening Ceremony on the first afternoon (Tuesday). At 1PM on Wednesday we have a tour of Loughborough. Thursday afternoon, after a visit to the town Market, our scientific sessions are on the Loughborough University campus followed by a tour at 4:30PM of the Environmental Ergonomics Research Centre. Thursday evening is our Gala Dinner at the Ramada Hotel. There is an Award Ceremony on Friday afternoon followed by the Closing Ceremony of the Symposium. On Saturday there is an optional tour to the King Richard III Visitor Centre in Leicester (<https://kriii.com/>).

We know this will be a great symposium and we hope that you enjoy the academic sessions and all that the beautiful town of Loughborough has to offer!

The Organising Committee

# GENERAL INFORMATION

## Organising Committee at Loughborough University

Prof Barry Bogin, Dr Susana Monserrat, Dr Paula Griffiths, Prof George Havenith, Dr Emily Pethrick

## Officers of the International Association of Physiological Anthropology

President, Elena Z. Godina (Moscow, Russia)

Vice-Presidents, Douglas E. Crews (Columbus, USA), Hajime Harada (Sendai, Japan)

Secretary-General, Yuko Tsunetsugu (Tsukuba, Japan)

Secretaries, Phil Kim-Sung (Ulsan, Korea), Takayuki Nishimura (Nagasaki, Japan)

Treasurer, Koichi Iwanaga (Chiba, Japan)

Editors of the *Journal of Physiological Anthropology*, Prof Harunobu Nakamura, Prof Akira Yasukouchi, Prof Elena Godina

## Officers of the Society for the Study of Human Biology

Chair, Dr Simon Underdown (Oxford Brooks University)

Secretary, Dr William Johnson (Loughborough University)

Treasurer, Prof Barry Bogin (Loughborough University)

Programme Secretary, Dr Helen Liversidge (Institute of Dentistry, London)

Web editor and Communications officer, Dr Djuke Veldhuis (Aarhus University, Denmark)

Grants and Awards Officer, Dr Silvia Costa (University of Cambridge, UK)

Editors of the *Annals of Human Biology*, Prof Noel Cameron, Dr Olga Rickards, Dr Babette Zemel

## Venue:

Ramada Loughborough Hotel

High Street

Loughborough

Leicestershire

LE11 2QL

Phone - +44 (0) 1509233222

Further information on the location, travel information & accommodation may be found at our web site - <http://www.sshb.org/future-meetings/2017symposium/>

**Registration** for the symposium is available at the web site or at the Ramada hotel on the days of the symposium.

## Internet and Social Media:

Wireless internet is available for all participants - details available at the Welcome Desk. We will be posting updates/information about the symposium on Twitter - do join us [@SocStudyHumBiol](#) and using [#SSH2017](#). Photos and updates may be posted on the dedicated Facebook event page and you can also contribute on: <https://www.facebook.com/events/1940550296178248>

**Oral Presentations:**

Contributed presentations will last 10 minutes, followed by 5 minutes of questions. All participants with an oral presentation are encouraged to transfer their PowerPoint to the Symposium laptop well in advance of their session. The laptop will be available at the Welcome Desk. Please be at the Charnwood room (Ramada hotel) at least 5 minutes before the scheduled session start, to ensure a timely start and allow time for any last-minute questions/instructions

**Poster Presentations:**

Posters may be size A0 or A1. All participants with a poster presentation are required to place their posters on the attributed boards in the Queen's room (Ramada hotel). The main poster session is Tuesday, 12 September, from 5-6PM. Presenters should be available for questions near their posters for the duration of the main Poster Session. Posters will remain in place throughout the days of the Symposium and presenters will be able to interact with participants during receptions, coffee breaks and other times.

**Coffee and Lunch Breaks:**

A selection of hot/cold drinks, cakes and fruit will be served in during the coffee breaks. Lunch will be served at the Ramada Hotel for all registered participants on Wednesday, Thursday and Friday. A selection of starters, main courses, salads, fruit and desserts will be available, including vegetarian options.

**Breakfast and Evening meals:**

Guests of the Ramada Hotel have breakfast included. Evening meals are available at many restaurants within short walking distance from the Hotel. A list of restaurants will be provided at the Welcome Desk. Your registration includes the evening meal at the Welcome Reception on Tuesday. The Gala Dinner on Thursday is open to all who purchase a reservation. The Gala Dinner is a formal 3-course meal, with music and dancing, at the Ramada Hotel. Evening meals on Wednesday are on your own (a list of recommended restaurants and pubs would be available at the Welcome Desk).

**Social activities:**

Walking tours of Loughborough Town Centre and museums are scheduled for Wednesday afternoon, 13 September. On the evening, there is also an optional theatre production "South Pacific" at Loughborough Town Hall (5 min. walking from the hotel, you can book tickets at [www.loughboroughtownhall.co.uk/events/2017/09/12/south\\_pacific](http://www.loughboroughtownhall.co.uk/events/2017/09/12/south_pacific)). A tour of the Loughborough University campus and the Environmental Ergonomics Research Centre takes place on Thursday afternoon, 14 September. These tours are included for all participants. On the morning of Saturday 16 September there is an optional tour of the King Richard III Centre in Leicester (<https://kriii.com/>). Further information and a sign-up sheet for this optional tour will be available at the Welcome Desk.

## SCHEDULE

### Tuesday, 12<sup>th</sup> of September:

Time	Activity and Location
10:00 - 15:00	<b>Welcome and hotel check-in</b> Ramada Hotel Lounge ( <i>Hotel rooms available from 14h</i> )
13:00 - 15:30	<b>Young Researchers Meeting</b> Charnwood room
15:30 - 16:00	<b>Welcome and Opening by Loughborough University</b> Prof Barry Bogin, Prof Elena Godina & Prof Akira Yasukouchi Prof Mark Lewis, Dean, School of Sport, Exercise & Health Sciences Prof David Stensel, Associate Dean for Research, School of Sport, Exercise & Health Sciences Prof Steve Rothberg, Pro-Vice Chancellor, Research Charnwood room
16:00 - 17:00	<b>Climate change and human health – risks and opportunities</b> <u>Session Chair:</u> Prof George Havenith <u>Plenary Speaker:</u> Dr Robert L Wilby Charnwood room
17:00 - 18:00	<b>Posters</b> Queen's room All participants with a poster presentation are required to place their posters on the attributed boards. Posters remain on all days; informal poster discussions each afternoon/evening following the presentations.
18:00 - 20:00	<b>Welcome Reception</b> Lounge and Restaurant

**Wednesday, 13<sup>th</sup> of September:**

<b>Time</b>	<b>Activity and Location</b>																	
<b>09:00 - 10:30</b>	<p><b>Climate change and its influences on human and primate evolution.</b>  <u>Session Chair:</u> Dr Elena Godina <span style="float: right;">Charnwood room</span>  <u>Plenary Speaker:</u> Dr Sarah Elton  <u>Presentations:</u></p> <table border="1"> <tr> <td>10:00 - 10:15</td> <td>Entrainment of Circadian Rhythm to Natural Light-Dark Cycle in Children</td> <td>Shigekazu HIGUCHI</td> </tr> <tr> <td>10:15 - 10:30</td> <td>Respiratory Disease and Air Pollution in Britain: An Epidemiological Study of Hospital Records between 1852 and 1921.</td> <td>Cara S HIRST</td> </tr> </table>			10:00 - 10:15	Entrainment of Circadian Rhythm to Natural Light-Dark Cycle in Children	Shigekazu HIGUCHI	10:15 - 10:30	Respiratory Disease and Air Pollution in Britain: An Epidemiological Study of Hospital Records between 1852 and 1921.	Cara S HIRST									
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<b>10:30 - 11:00</b>	<p><b>Coffee Break</b> <span style="float: right;">Ramada Hotel</span></p>																	
<b>11:00 - 12:30</b>	<p><b>Worldwide variation of newborns' body size in relation to geographic region, climatic and socio-economic factors.</b> <span style="float: right;">Charnwood room</span>  <u>Session Chair:</u> Dr Douglas Crews  <u>Plenary Speaker:</u> Dr Janina Tutkuviene  <u>Presentations:</u></p> <table border="1"> <tr> <td>12:00 - 12:15</td> <td>Effect of Imitation-inhibition Training on Human Mirror System Activity</td> <td>Yuki NISHIMURA</td> </tr> <tr> <td>12:15 - 12:30</td> <td>Impact of normal weight obesity on fundamental motor skills in pre-school children age 3 to 6 years</td> <td>Martin MUSALEK</td> </tr> </table>			12:00 - 12:15	Effect of Imitation-inhibition Training on Human Mirror System Activity	Yuki NISHIMURA	12:15 - 12:30	Impact of normal weight obesity on fundamental motor skills in pre-school children age 3 to 6 years	Martin MUSALEK									
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<b>13:15 - 14:45</b>	<p><b>Tour of Loughborough.</b>  Charnwood Museum and Carillon Tower at Queen's Park</p>																	
<b>15:00 - 15:30</b>	<p><b>Coffee Break</b> <span style="float: right;">Ramada Hotel</span></p>																	
<b>15:30 - 17:30</b>	<p><b>Variation in growth of children in Russian populations: does climate matter?</b> <span style="float: right;">Charnwood room</span>  <u>Session Chair:</u> Dr Debra Skene  <u>Plenary Speakers:</u> Dr Elena Godina  <u>Presentations:</u></p> <table border="1"> <tr> <td>16:30 - 16:45</td> <td>Effects of static and sinusoidal lower-body pressure on cerebrovascular regulation during heat stress.</td> <td>Keita ISHIBASHI</td> </tr> <tr> <td>16:45 - 17:00</td> <td>Infant growth, family diets and community food environment in informal settlements (slums) in flood-prone areas of Mumbai, India.</td> <td>Komal BHATIA</td> </tr> <tr> <td>17:00 - 17:15</td> <td>Effect of exposure to short-wavelength light on susceptibility to motion sickness.</td> <td>Kyungshil KIM</td> </tr> <tr> <td>17:15 - 17:30</td> <td>Does precipitation level in early life affect women's adult height? Evidence from India.</td> <td>Marios POULLAS</td> </tr> <tr> <td>17:30 - 17:45</td> <td>Change of political climate and the plasticity of human body.</td> <td>Christiane SCHEFFLER</td> </tr> </table>			16:30 - 16:45	Effects of static and sinusoidal lower-body pressure on cerebrovascular regulation during heat stress.	Keita ISHIBASHI	16:45 - 17:00	Infant growth, family diets and community food environment in informal settlements (slums) in flood-prone areas of Mumbai, India.	Komal BHATIA	17:00 - 17:15	Effect of exposure to short-wavelength light on susceptibility to motion sickness.	Kyungshil KIM	17:15 - 17:30	Does precipitation level in early life affect women's adult height? Evidence from India.	Marios POULLAS	17:30 - 17:45	Change of political climate and the plasticity of human body.	Christiane SCHEFFLER
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<b>19.30</b>	<p><b>IAPA Executive Committee dinner</b> <span style="float: right;">Ramada Hotel Restaurant</span></p>																	
<b>19.30</b>	<p><b>Optional theatre production "South Pacific" at Loughborough Town Hall</b>  Tickets at <a href="http://www.loughboroughtownhall.co.uk/events/2017/09/12/south_pacific">www.loughboroughtownhall.co.uk/events/2017/09/12/south_pacific</a></p>																	



**Thursday, 14<sup>th</sup> of September:**

<b>Time</b>	<b>Activity and Location</b>													
<b>09:00 - 10:30</b>	<p><b>Worldwide Stressors and Allostatic Load: Climate Instability, Sustainability and Migration.</b> <span style="float: right;">Charnwood room</span></p> <p><u>Session Chair:</u> Dr Yuko Tsunestsugu  <u>Plenary Speaker:</u> Dr Douglas E. Crews</p> <p><u>Presentations:</u> "Stressors, Built Environments, and Aging"</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">10:00 - 10:15</td> <td style="width: 60%;">Migration and allostatic load: A model based on Mexican migrants to the United States.</td> <td style="width: 20%;">Alexandra TUGGLE</td> </tr> <tr> <td>10:15 - 10:30</td> <td>Motivations matter more than measurements. How design thinking can inform future experiences for an aging population.</td> <td>Adam FROMME</td> </tr> <tr> <td>10:30 - 10:45</td> <td>Loughborough University International Programmes</td> <td>Ines VARELA SILVA</td> </tr> </table>		10:00 - 10:15	Migration and allostatic load: A model based on Mexican migrants to the United States.	Alexandra TUGGLE	10:15 - 10:30	Motivations matter more than measurements. How design thinking can inform future experiences for an aging population.	Adam FROMME	10:30 - 10:45	Loughborough University International Programmes	Ines VARELA SILVA			
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<b>10:45 - 11:15</b>	<b>Coffee Break</b> <span style="float: right;">Ramada Hotel</span>													
<b>11:15 - 12:15</b>	<p><b>Human circadian biology and modern society.</b> <span style="float: right;">Charnwood room</span></p> <p><u>Session Chair:</u> Dr Sophie Goudet  <u>Plenary Speaker:</u> Dr Debra Skene</p>													
<b>12:15 - 13:00</b>	<p><b>Lunch</b> After lunch, at 13:15, we will walk to Loughborough University Campus, passing through the town market. <span style="float: right;">Ramada Hotel Restaurant</span></p>													
<b>14:00 - 16:00</b>	<p><b>The beneficial effects of nature on well-being: from the perspective of physiological anthropology.</b> <span style="float: right;">Stewart Mason Building SMB 0.17, University</span></p> <p><u>Session Chair:</u> Dr Janina Tutkuviene  <u>Plenary Speaker:</u> Dr Yuko Tsunestsugu</p> <p><u>Presentations:</u></p> <table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">15:00 - 15:15</td> <td style="width: 60%;">Bergmann's rule – pre-Darwinian biology between creation and evolution</td> <td style="width: 20%;">Michael HERMANUSSEN</td> </tr> <tr> <td>15:15 - 15:30</td> <td>Age-associated lower extremity kinematics during gait motion in Japanese women.</td> <td>Hiroki NAKASHIMA</td> </tr> <tr> <td>15:30 - 15:45</td> <td>Transient overshoot in muscle deoxygenation and slowed oxygen uptake kinetics at the exercise onset with hypothermic skeletal muscle.</td> <td>Hitoshi WAKABAYASHI</td> </tr> <tr> <td>15:45 - 16:00</td> <td>Effects of seasonal change in basal metabolic rate on the seasonal difference in cold-induced thermogenesis.</td> <td>Takafumi MAEDA</td> </tr> </table>		15:00 - 15:15	Bergmann's rule – pre-Darwinian biology between creation and evolution	Michael HERMANUSSEN	15:15 - 15:30	Age-associated lower extremity kinematics during gait motion in Japanese women.	Hiroki NAKASHIMA	15:30 - 15:45	Transient overshoot in muscle deoxygenation and slowed oxygen uptake kinetics at the exercise onset with hypothermic skeletal muscle.	Hitoshi WAKABAYASHI	15:45 - 16:00	Effects of seasonal change in basal metabolic rate on the seasonal difference in cold-induced thermogenesis.	Takafumi MAEDA
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<b>17:30 - 18:00</b>	<b>Walk back to Ramada Hotel</b>													
<b>18:00 - 19:15</b>	<b>IAPA General Assembly</b> <span style="float: right;">Charnwood room</span>													
<b>19:30</b>	<b>Gala dinner</b> <span style="float: right;">Ramada Hotel Restaurant</span>													

**Friday, 15<sup>th</sup> of September:**

Time	Activity and Location												
09:00 - 10:30	<p><b>Heat-Shield - the impact of climate change on worker productivity and methods for alleviating its impact.</b> Charnwood room</p> <p><u>Session Chair:</u> Dr Sarah Elton <u>Plenary Speaker:</u> Dr George Havenith</p> <p><u>Presentations:</u></p> <table border="1"> <tr> <td>10:00 - 10:15</td> <td>Regional Sweat Distribution in Young and Older Individuals.</td> <td>Nicole COULL</td> </tr> <tr> <td>10:15 - 10:30</td> <td>Effect of Keyboard Typing on the Median Nerve Shape.</td> <td>Ping Yeap LOH</td> </tr> </table>	10:00 - 10:15	Regional Sweat Distribution in Young and Older Individuals.	Nicole COULL	10:15 - 10:30	Effect of Keyboard Typing on the Median Nerve Shape.	Ping Yeap LOH						
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10:30 - 11:00	<p><b>Coffee Break</b> Ramada Hotel</p>												
11:00 - 13:00	<p><b>Climate change, food security and nutrition in Myanmar.</b> Charnwood room</p> <p><u>Session Chair:</u> Dr Michael Hermanussen <u>Plenary Speaker:</u> Dr Sophie Goudet</p> <p><u>Presentations:</u></p> <table border="1"> <tr> <td>12:00 - 12:15</td> <td>Height and BMI status as indicators of vascular maintenance activity in general elderly Japanese subjects.</td> <td>Jun KOYAMATSU</td> </tr> <tr> <td>12:15 - 12:30</td> <td>An Asian-specific inflammatory single nucleotide polymorphism (SNP) is associated with height of general elderly Japanese subjects.</td> <td>Yuji SHIMIZU</td> </tr> <tr> <td>12:30 - 12:45</td> <td>Sex difference in nutritional status and growth patterns of skinfold thickness in Indonesian children and adolescents aged 6 – 18 years from Yogyakarta</td> <td>Janatin HASTUTI</td> </tr> <tr> <td>12:45 - 13:00</td> <td>Body size and type of children aged 7 – 18 years in Yogyakarta province, Indonesia.</td> <td>Neni T. RAHMAWATI</td> </tr> </table>	12:00 - 12:15	Height and BMI status as indicators of vascular maintenance activity in general elderly Japanese subjects.	Jun KOYAMATSU	12:15 - 12:30	An Asian-specific inflammatory single nucleotide polymorphism (SNP) is associated with height of general elderly Japanese subjects.	Yuji SHIMIZU	12:30 - 12:45	Sex difference in nutritional status and growth patterns of skinfold thickness in Indonesian children and adolescents aged 6 – 18 years from Yogyakarta	Janatin HASTUTI	12:45 - 13:00	Body size and type of children aged 7 – 18 years in Yogyakarta province, Indonesia.	Neni T. RAHMAWATI
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13:30 - 14:30	<p><b>Lunch</b> Ramada Hotel Restaurant</p>												
14:30	<p><b>Award Ceremony for IAPA &amp; SSHB.</b> Charnwood room</p> <p><b>Official closure of symposium</b></p>												

**Saturday, 16<sup>th</sup> of September:**

Time	Activity and Location
09:30 – 11:30	<p><b>Optional tour to King Richard III Centre, Leicester.</b></p> <p>Please send an email to <a href="mailto:sshb2017@lboro.ac.uk">sshb2017@lboro.ac.uk</a> to confirm your participation in this tour.</p>

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