Air pollution is a crisis with global impact: 92% of the world’s population lives in places where air quality levels exceed WHO limits and 3 million deaths a year are linked to exposure to outdoor air pollution. The resulting three main health challenges are: (i) on-site measurements to determine the true exposure situation, (ii) population-based epidemiological studies to identify the resulting health effects and (iii) mechanistic studies on air pollution-induced health damage in order to be able to develop tailored preventive strategies. In order to be effective, it is crucial that all three challenges are tackled at the same time in an integrated research approach. Because of their specific socio-economical situation, different countries have very different priorities when it comes to meet these challenges. The goal of this symposium is therefore to foster international exchange and collaborations between scientists from South Africa, BRIC States and Germany in an attempt to overcome these differences.

The Academy of Science of South Africa (ASSAf) aspires to be the apex organisation for science and scholarship in South Africa, recognised and connected both nationally and internationally. Through its membership which represents the collective voice of the most active scholars in all fields of scholarly enquiry, ASSAf aims to generate evidence-based solutions to national problems.
Tuesday, 7 November 2017

9:00 – 9:30 | Registration

9:30 – 10:00 | Welcome Addresses
Prof Jörg Hacker ML
Leopoldina President
Prof Matthias Kleiner ML
Leibniz Association President
Prof Angela Mathee
ASSAf

Session 1: Indoor Air Quality
Facilitator: Prof Jean Krutmann ML
IUF – Leibniz Research Institute for Environmental Medicine, Düsseldorf
10:00 – 10:30
An Overview of Contextual Factors Associated with Exposure to Indoor Air Pollution in South Africa
Prof Angela Mathee
South African Medical Research Council, Johannesburg
10:30 – 11:00 | Coffee Break

Session 2: Black Carbon
Facilitator: Dr Caradee Wright
South African Medical Research Council, Johannesburg
11:00 – 11:30 | Coffee Break

Session 3: Pollution and Health Effects (1): Low Level Pollution
Facilitator: Prof Ulrich Pischl
Max Planck Institute for Chemistry, Mainz
13:30 – 14:00
Emissions Impact on Urban Air Quality and Commuters’ Exposure to Fine Particles in the São Paulo Metropolitan Area, Brazil
Prof Maria de Fatima Andrade
University of São Paulo, São Paulo
14:00 – 14:30
Interactions between Air Pollution and Temperature in a Climate Change Context: A South African Health Perspective
Dr Caradee Wright
South African Medical Research Council, Johannesburg
14:30 – 15:00 | Coffee Break
Facilitator: Prof Haidong Kan
Fudan University, Shanghai
15:00 – 15:30
Increasing Levels of Pollutants in the Indian Region: Effects on Health and Crop Yields
Prof Shyam Lal
Physical Research Laboratory, Ahmedabad
15:30 – 16:00
Health Effects of Air Pollution
Dr Tamara Schikowski
IUF – Leibniz Research Institute for Environmental Medicine, Düsseldorf

16:00 – 16:30 | Concluding Remarks
Prof Jean Krutmann ML
IUF – Leibniz Research Institute for Environmental Medicine, Düsseldorf
Dr Caradee Wright
South African Medical Research Council, Johannesburg

Wednesday, 8 November 2017

Session 4: Pollution and Health Effects (2): Modifying Factors
Facilitator: Prof Angela Mathee
South African Medical Research Council, Johannesburg
9:30 – 10:00
Urban Climate and Its Influence on Inhabitants’ Thermal Comfort under Global Changes
Prof Pavel Konstantinov
Lomonosov Moscow State University, Moscow
10:00 – 10:30
Air Pollution, Oxidative Stress, and Public Health in the Anthropocene
Prof Ulrich Pischl
Max Planck Institute for Chemistry, Mainz
10:30 – 11:00 | Coffee Break
Facilitator: Prof Tamara Schikowski
IUF – Leibniz Research Institute for Environmental Medicine, Düsseldorf
11:00 – 11:30
Outdoor Air Pollution, Health Impact and Interventions in China
Prof Haidong Kan
Fudan University, Shanghai

11:30 – 12:00
Air Pollution and Poverty: The Perfect Storm for Adverse Childhood Respiratory Health in Developing Countries
Prof Rajen Naidoo
University of KwaZulu-Natal, Durban
12:00 – 12:15 | Concluding Remarks
Prof Jean Krutmann ML
IUF – Leibniz Research Institute for Environmental Medicine, Düsseldorf
Dr Caradee Wright
South African Medical Research Council, Johannesburg

ML = Member of Leopoldina