RC23 NEWSLETTER

May 2019

Special Issue in Honor and Memory of Robert K. Merton
& First Robert K. Merton Award for Distinguished
Contributions to the Sociology of Science and Technology

In this issue:

ISA RC23 Sociology of Science and Technology

Forthcoming

December 2019 Newsletter

Please send articles, book announcements and other material by September 1, 2019 to:

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RC23 President's Introduction

May 2019

by Nadia Asheulova

Dear RC23 members,

As President of RC23, I welcome you to the Spring Issue of the RC23 Newsletter!

I was honored to be re-elected the President of RC23 during the XIX ISA World Congress held in July 2018 in Toronto. I thank all my colleagues from the RC23 and especially the excellent members of the Board for their hard work during 2014-2018. It was a great honor for me to collaborate with such a professional team of multinational researchers and academic experts: Alice Abreu (Vice-President), Gary Bowden (Secretary), Jaime Jiménez Gúzman (Chair of Merton Award Committee and President of RC23 in 2002-2010), Ralph Mathews (President of RC23 in 2010-2014), Antonio Brandão Moniz, Matthias Gross, Miwao Matsumoto, Leandro Raizer, Czarina Saloma-Alpendonu and Juha Tuunainen.

Together, we organized a lot of interesting initiatives over the past 4 years. One of our goals was to secure and develop personal and collegial contacts between sociologists of science and technology around the world. We launched the webpage of RC23, Facebook/Twitter pages and published newsletters with the history of RC23, archives of our meetings, a directory of RC23 members, current activities, among others.

Special attention was paid to one of the leading sociologists of the 20th century and the first RC23 President Robert K. Merton. In honour and memory of Robert Merton, the RC23 Committee has established "The Robert K. Merton Award for Distinguished Contribution to the Sociology of Science and Technology". The ISA Executive Committee approved the award in May 2016.

The first award was presented to Professor **Francisco Sagasti**, a notable Peruvian social scientist, during the Session "In Memory of First RC23 President Robert K. Merton" at the XIX World Congress in Toronto. **Harriet Zuckerman**, Professor Emerita at Columbia University, and the wife of Robert Merton, participated in this ceremony.

2016, was also a jubilee year for RC23, marking the semicentennial (50 years) of its existence. The Summer, 2017 RC23 Newsletter began with a brief history of the founding and legacy of RC23 and its contribution to the sociology of science and technology. There were also lots of interesting facts about RC23 and well-known figures associated with this legacy.

We organized very successful RC23 sessions during the Third ISA Forum of Sociology (Vienna, Austria, 2016) and Interim RC23 Workshop "Using Science Policy to Facilitate Innovation, Excellence and Global Cooperation" (St. Petersburg, Russia, 2017).

The papers from this workshop (Part I and Part II) have been published in the Journal Sociology of Science and Technology.

The XIX ISA World Congress of Sociology in Toronto was a great success with 5805 participants from 113 countries. Our RC23 organized 19 academic sessions and a business meeting, and generated new ideas for the future development of RC23. You can upload the program book and book of abstract at: https://www.isa-sociology.org/en/conferences/world-congress/toronto-2018

The new RC23 board was elected during the business meeting and the members of the board for 2018-2011 are as follows:

President	Nadia ASHEULOVA, Institute for the History of Science and Technology of the Russian Academy of Sciences, Russia, asheulovana@gmail.com
Vice-President	Alice ABREU, Federal University of Rio de Janeiro, Brazil, alicepabreu@gmail.com
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	Ingo SCHULZ-SCHAEFFER, Technical University of Berlin, Germany
	Junmin WANG, University of Memphis, United States
Past President	Ralph MATTHEWS, The University of British Columbia, Canada

We look forward to having a strong presence at the IV ISA Forum Sociology (July 14-18 2020) to be held in Porto Alegre, Brazil. The Forum's main theme is "Challenges of the 21st Century: Democracy, Environment, Inequalities, Intersectionality." The call for abstracts is open for submissions at: https://www.isa-sociology.org/en/conferences/forum/porto-alegre-2020.

We look forward to your participation in the forthcoming 16th ISA Laboratory for PhD Students in Santiago de Compostela, Spain, 2019, 4th ISA Forum of Sociology in Porto Alegre (Brazil, 2020), 5th ISA Conference of the Council of National Associations in 2021, and the 20th ISA World Congress in Melbourne, Australia, 2022.

Best regards,
Nadia Asheulova

INTERIM RC23 WORKSHOP

"Using Science Policy to Facilitate Innovation, Excellence and Global Cooperation"

St. Petersburg, September 18-19, 2017

The topic of the interim workshop attracted interest among various international sociological communities. More than 20 researchers from different regions took part in this event: *Brazil, India, Italy, France, Lithuania, Mexico* and *Russia*.

You can find the Workshop Agenda and Report on the RC23 webpage.

The papers from this workshop (Part I and Part II) were published in the journal Sociology of Science and Technology.

The workshop included papers covering the entire spectrum of topics related to science policy, but was particularly focused on papers (both theoretical and empirical) dealing with issues related to the governance of science, the role of science policy in the facilitation of innovation and excellence, the role of science policy in creating and eliminating barriers to global cooperation and the international mobility of scientists, and the implications of neoliberal reforms on academia (both locally and globally), particularly as they relate to new forms of association between industry and academia and the governance of the "entrepreneurial university."

The workshop provided opportunities for personal exchanges of scientific results and the strengthening of cooperation among researchers from different parts of the world.

RC23 is extremely pleased to have received a special grant from the International Sociological Association and is very grateful to all who contributed their scholarly papers to this meeting!

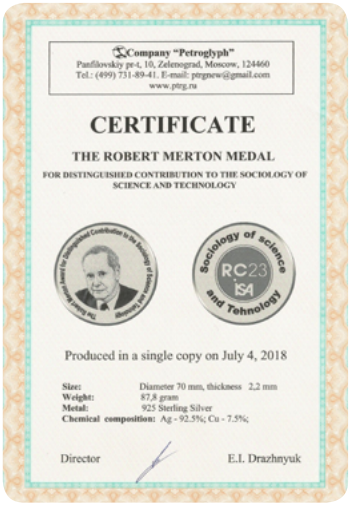
THE FIRST ROBERT K. MERTON AWARD CEREMONY during the session "In Memory of First RC23 President Robert K. Merton"

at the XIX World Congress in Toronto (July 18, 2018)

Please find below speeches from the ceremony

Nadia Asheulova: Dear colleagues and distinguished guests! It is a great honor for us to open a special Session in Memory of the First RC23 President Robert King Merton. Robert Merton was one of the leading sociologists of the 20th century. The interest in his activity has not dimished. R. Merton's name is connected with many directions in sociological research, but first and foremost it turned into the eponym for sociology of science, the phrase the "Mertonian sociology of science" was widely accepted by the scientific community. In 1966, R. Merton became one of the founders, organizer and the first President of the Research Committee on the Sociology of Science (RC23) of the International Sociological Association. Merton's activity in this position was in many ways decisive for theoretical and institutional development of the sociology of science worldwide. In honor and memory of Robert King Merton, the RC23 Committee has established **The Robert K. Merton Award for Distinguished Contribution to the Sociology of Science and Technology**.

The Executive Committee of ISA approved the award in May, 2016 and it is intended to recognize and showcase the outstanding, long-term achievement of an individual researcher to the field rather than the excellence of an individual book or single idea. RC23 kindly invites Merton's students, senior researchers and younger scholars with an interest in Robert K. Merton's work to contribute. The session will reconsider Merton's legacy and attempt to link it with contemporary issues. RC23 produced the Silver Medal with a special design.



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CERTIFICATE

THE ROBERT MERTON MEDAL

FOR DISTINGUISHED CONTRIBUTION TO THE SOCIOLOGY OF SCIENCE AND TECHNOLOGY

Produced in a single copy on July 4, 2018

Size: Diameter 70 mm, thickness 2,2 mm
Weight: 87,8 gram
Metal: 925 Sterling Silver
Chemical composition: Ag - 92.5%; Cu - 7.5%;

Director E.I. Drazhnyuk

According to certificate, a single copy of the medal was produced on the 4th of July, 2018, which is also a special date, as it is the birthday of Robert Merton.

The first Lifetime Achievement Award will be granted during this Special Session. I kindly invite the Vice President of RC23 and Board member of the Award Committee Professor Emerita Alice Abreu to announce the decision.

Alice Abreu: It is my great pleasure to present to you **Francisco Sagasti** winner of **The Robert Merton Award for Distinguished Contribution to the Sociology of Science and Technology** awarded by RC23 in recognition of his contribution to the field of social studies of science and technology.

Francisco Sagasti has been one of the leading scholars and policy makers in the field of social studies of science and technology, particularly with reference to developing countries, for the last fifty years. Since he published his first monographs and academic papers in the early 1970s, Dr. Sagasti has made significant conceptual and policy analysis contributions to the better understanding of the relations between science, technology and society in developing countries. In addition, he has played important roles as a policy maker at the national and international levels, using his theoretical and historical insights to better understand the role that knowledge plays in the process of development.

He is a Professor at the Graduate School of the Universidade do Pacífico, with a Ph.D in operations research and social systems sciences from the University of Pennsylvania. From his very first papers, Professor Sagasti focused on the application of the systems approach to science and technology policy making and planning, on technology transfer, and on planning methods for scientific research and technological development in developing countries.

A good example is the STPI project a large-scale comparative policy research project on science and technology policy implementation in ten developing countries, in Africa, Asia, and Latin America.

Since then his achievements have been many. He has been a visiting lecturer at universities in the United States, Europe and developing regions. In Peru, Dr. Sagasti has been founder and executive director of GRADE, a policy-oriented think tank; advisor to the ministers of Foreign Affairs, Education, Industry and the Prime Minister; advisor to the Chief of the National Planning Institute and member of the Board of the National Council for Science and Technology; and has taught at the Universidad del Pacífico and the Pontificia Universidad Católica del Perú, and has been a consultant to numerous private, public and civil society organizations.

Dr. Sagasti has published more than 25 books including: *Looking back to move forward: a 40 year retrospective of the STPI project*, Lima, FORO Nacional Internacional, 2015; *Ciencia, Tecnología, Innovación: Políticas para América Latina*, Lima/Mexico, Fondo de Cultura Económica, 2011 (2013); the first comprehensive assessment of the evolution of science and technology policies in the region, which is used as textbook in graduate courses *Knowledge and Innovation for Development: The Sisyphus Challenge of the 21st Century*, Cheltenham, Edward Elgar, 2004.

He is also the author of more than 150 papers and book chapters.

Combining academic research with policy practice throughout his academic and professional life, Dr. Sagasti has made unique contributions that amply justify awarding him the Robert Merton Prize for distinguished contribution to the sociology of science and technology.

Nadia Asheulova: It is a great honor for us that Dr. Harriet Zuckerman, Professor Emerita of Columbia University, the wife of Robert Merton, former board member of RC23, and a noted sociologist of science in her own right, has come to our special event. Dear Harriet we invite you to say some words and grant the Medal to professor Francisco Sagasti.

Harriet Zuckerman:
I didn't know that I would have the chance to award the first Robert Merton medal, of the International Sociological Association and the RC23. But I'm delighted that's the case. As I told Nadia Asheulova a little earlier today, I was in Evian, at the very first session of what came to be the RC23. Did I think at the time that some 34 years later that I would turn up here in Toronto, across the Atlantic, and that the field would be as vibrant and as active as it is? I was not that prescient. What I can say is you can think of me as a historical artifact. I think I am the only living person in this room, there are no dead people in this room, I'm the only person in this room that goes back that far and it's testimony to the to the endurance of the research that interests us all. Robert K. Merton and I (emphasize the *K* because there is a Robert C. Merton, who was his son and who is an exceedingly distinguished economist) have been very pleased, very pleased, with the willingness, of Nadia and all our friends on the RC23 Committee to get this prize established. He would have been delighted, I'm sure, that this, what I am discovering, is a kind of walk in total sociology. I say total because I discovered today at lunch that we even have a sociologist of dance who has received this medal. Robert King Merton really liked the ballet, but he never conceived that there would be a sociology of dance. So just let me say that Professor Sagasti is a wonderfully apt recipient to receive this medal, and remember Robert K. Merton's doctoral dissertation "Science, Technology & Society in Seventeenth Century Britain" was written in the 1930s. He remained active in the field his very last book "The Travels and Adventures of Serendipity", published when he was 93 years old. Well, that is a demonstration of commitment. He was a sociologist for all seasons and so is Professor Sagasti.

Nadia Asheulova: We now invite Professor Francisco Sagasti, a notable Peruvian scientist, to come and receive the Robert K. Merton Award.

The 2018 Robert K. Merton Prize acceptance address

Dr. Francisco Sagasti, Professor, Pacífico Business School, Lima, Peru

In the first place, let me thank the president of RC23, Dr. Nadia Asheulova, Dr. Jaime Jiménez, chairman of the Robert K. Merton prize committee, and the other committee members, Alice Abreu, Ralph Matthews, Gary Bowden and Antonio Moniz, for conferring on me such a high honor. Fully aware of the very special place that Robert K. Merton occupies in the study of science and technology, I am humbled by the decision made by the committee. I am also most grateful to have Dr. Harriet Zuckerman, a most distinguished scholar and partner of Robert K. Merton, to grace this event with her presence. Thanks again to all of you.

When thinking about how to express my gratitude for this honor, I went back half a century ago, when I started to work in the field of science, technology and development. A coincidence, clearly of the type Dr. Merton was fond of highlighting in his remarks about serendipity, led me to be in Lima at the time the National Research Council of Peru was created, and I was looking for a Ph.D. dissertation topic in social systems sciences and operations research. Soon I focused on how to design policy interventions and plan the development of science and technology capabilities in developing countries.

This is a most important issue, perhaps one of the most pressing in our times. While income and wealth inequalities between rich and poor countries have captured international attention, inequalities in science, technology and innovation capabilities are much more pronounced. The average income per capita of the Organization for Economic Cooperation and Development (OECD) countries — the rich countries club — is about 60 times greater than that of the low-income countries as defined by World Bank indicators; however, the number of scientific articles published per 100,000 inhabitants in rich countries is 170 times greater than that of low-income countries, and the number of patents registered in the former is 1000 times greater than in the later. Bear in mind that rich countries have accumulated these advantages for a long time, and that the "Mathew effect" clearly identified and reported by Robert K. Merton and Harriet Zuckerman, confers additional advantages on those that already have science and technology capabilities.

Dr. Merton's *Science, Technology, and Society in Seventeenth Century England* monograph was among the first works I read on the subject at the suggestion of University of Pennsylvania professor Thomas Hughes. Together with contributions from scholars Derek the Solla Price, John D. Bernal, Lewis Munford, Jacob Bronowski, Stephen Toulmin and June Goodfield, and Latin American intellectuals like Raúl Prebisch, Helio Jaguaribe, Jorge Sábato, Amílcar Herrera and Osvaldo Sunkel, among others, I began to develop a novel approach to the design and implementation of science and technology policies in developing countries. My dissertation advisor, Russell L. Ackoff and other mentors like Eric Trist, Ignacy Sachs, Geoffrey Oldham, Hasan Ozbekhan, Howard Perlmutter and Lawrence Klein guided my steps when venturing into the then no-man's land of science, technology and development.

Let me now link some of the work I did at that time with the seminal ideas of Robert K. Merton. In a sense, his characterization of "obliteration by incorporation" led to my taking several of his contributions for granted, and when revising his texts for this address I realized how much does my early work owes to him.

First, "middle-range theories" are what I set to develop in my dissertation and further research: those that lie between broad generalizations aiming at unified and universally applicable theories, and those intellectual constructs focused on specific issues derived from empirical evidence. As I worked in Latin American, African and Asian countries, I found similarities that afforded a certain degree of generalization, but also contextual differences that precluded sweeping statements and theories applicable in all settings. But my work was also "middle-range" in another sense: it lied squarely between academic intellectual work and practical public policy interventions. Theory and practice have been inextricably intertwined right from the beginning of my academic and professional life: not yet thirty years old, even before defending my PhD dissertation, I became vice-Chairman of the Board of the Industrial Technology Institute in Peru. The middle-range character of practically all my work, which combines theory and practice, continues until now.

Moreover, constructing theories to guide the creation of science and technology capabilities in developing countries is decidedly a "middle-range" task. During the last five decades I have been fortunate to be involved in numerous actual policy and political problems that required innovative concepts and interpretations to guide practical interventions. These include my work in several Peruvian and Latin American public and private institutions, in the Science and Technology Policy Instruments project carried in ten developing countries with more than 150 full-time researchers during the 1970s, in the preparations for and negotiations the 1979 UN Conference on Science and Technology for Development, in the creation of GRADE the leading Peruvian think-tank I helped to set up during the 1980s, in the organization of the strategic planning division at the World Bank, in the UN Advisory Committee on Science and Technology as member and chairman, in several international boards and advisory committees, and in many other organizations and agencies I have had the opportunity to work and collaborate with.

Second, the idea of "unanticipated consequences of social action," articulated by Dr. Merton, has led to detailed examinations of inconsistencies in science and technology policy design and implementation. Finding that science and technology policies often hit a wall when other policy interventions — economic, social, financial, trade, labor, and so on — block their intended effect, we developed the concepts of "explicit, implicit, and resultant policies;" "equivalent explicit policies;" "policy instruments

structures, vintages, and pathologies;" and "clusters of function- and issue-oriented policy instruments;" as well as criteria for evaluating the adequacy and effectiveness of different ways of designing and implementing science and technology policies.

With some trepidation, following in the footsteps of Robert K. Merton and Harriet Zuckerman, I would like to propose a "second Mathew effect." According to verse 6:3 of the Gospel of Matthew, "when you do merciful deeds, don't let your left hand know what your right hand does." This clearly explains what happens when the merciful deed of designing and implementing science and technology policies with a government's right hand is frustrated by the impact other government policies designed and implemented with the left hand. Since the early 1970s we have found many instances of the "second Mathew effect" all over the world, in which other public policies undermine and sabotage efforts to develop science and technology capabilities. This is also closely related to what has been called the "Sisyphus syndrome," which describes how carefully built capabilities are destroyed at the stroke of a pen by indifferent, ignorant or incompetent politicians and government officials.

I wish there was more time to describe how Robert K. Merton's contributions relate to my academic and professional activities during the last half century. However, let me conclude with some remarks on how they will affect my work in the future.

Robert K. Merton's references to Sir Francis Bacon in his *Science, Technology and Society in Seventeenth Century England* awakened my interest in the life, work and impact of this extraordinarily complex philosopher and statesman. Over the years I have tried to flesh out and understand better what philosopher Hans Jonas referred to as the "Baconian program" of dominating nature through understanding. After many years of research, I am now half way in the process of writing a book on "the twilight of Bacon's age," which attempts to provide an account of the unfolding, deployment, triumph and twilight of the program that Bacon articulated four centuries ago. I hope there will be another opportunity to exchange views on this subject with the members of RC23 in the not too distant future.

Finally, there is a passage in Robert K. Merton's seminal 1972 article on "Insiders and Outsiders" that I would like to quote somewhat at length:

> "As the society becomes polarized, so do the contending claims to truth, At the extreme, an active and reciprocal distrust between groups finds expression in intellectual perspectives that are no longer located within the same universe of discourse. The more deep-seated the mutual distrust, the more does the argument of the other appear so palpably implausible, even absurd, that one no longer inquires into substance or logical structure to assess its truth claims. … In the political arena, where the rules of the game often condone and sometimes support the practice, this involves reciprocated attacks on the integrity of the opponent; in the academic forum, where the norms are somewhat more restraining, it leads to reciprocated ideological analyses (which easily declines into innuendo). In both, the process feeds upon and nourishes collective insecurities."

Bearing in mind such clear-headed admonishment, I decided a couple of years ago to fully wade into the political swamps. Together with a dedicated leader, Julio Guzmán, and many other committed colleagues, we are in the process of creating a new political party to participate in the 2021 national elections. I will run for political

office, attempting to find common ground between those holding opposite views, and to introduce integrity and some measure of sanity in the way our country is run.

Armed with a panoply of intellectual weapons, several of them inspired by Robert K. Merton, in a very "middle-range" way I hope to contribute both to a better understanding of the human predicament at the twilight of Bacon's age, and to help improve the opportunity structure and the quality of life in my own and in other developing countries. Thank you once again for this honor, and I look forward to remaining engaged with the members of the International Sociological Association Research Committee 23 that Robert K. Merton so presciently founded.

Nadia Asheulova: We now have the pleasure of giving the floor to Professor Sari Hanafi, Vice-President of the International Sociological Association, for a final word.

Sari Hanafi: I am so pleased that RC23, my RC, took such initiative and on behalf of Margareth Abraham, President of ISA, who could not be here because of the parallel Past Presidents Session which she is chairing, I would like to congratulate you all for institution of the Robert K. Merton Award for Distinguished Contributions to the Sociology of Science and Technology. We found this initiative as exemplary and hope that other RCs will follow you example. Congratulations also to Prof. Francisco Sagasti, the first recipient of the award. Thank you all.

REPORTS FROM RC23 SESSION ORGANIZERS

at the XIX ISA World Congress of Sociology in Toronto

Some summaries of the RC23 sessions by the session organizers

RC23 Session
Global Debates about our Technoscientific Futures

The RC23 Session Global Debates about our Technoscientific Futures was held on Friday, July 20th, 2018. It was organized by **Leandro Raizer**, from the Federal University of Rio Grande do Sul and Fabricio Neves from Brasilia University, Brazil. The session had five presentations, followed by a period of discussion with the public. The session had around 20 attendees.

The first presentation was given by **Seohyun Park** (Virginia Tech, USA). Park investigates water resource development programs in South Korea after the Korean War (1950-1953). In 1961, President Park Chunghee (1917-1979) launched a national project, dreaming of an urbanized, industrialized, and modernized nation to overcome postwar turmoil and legitimatize his military regime. One key to realizing this was an abundance of water. In 1966, the Korean government started to survey major river basins with the aid of foreign agencies, such as the United States Geological Survey. The essential work of the surveys was to make river water calculable and set a specific water supply plan. Based on past precipitation and water levels data, the survey teams estimated the average water flow, thereby quantifying the rivers. They also constructed stream gauge stations, trained Korean personnel, and standardized measurement methods to establish and maintain a stable water management system. These infrastructures allowed the Korean government to transform the rivers into national resources and rationalize a rush of dam construction. This research is theoretically informed by a toolkit for studying the mutual construction of technology and politics developed in the field of science and technology studies (STS). Following the idiom of co-production in the STS literature, Park examines how water management technology and political orders were created, stabilized and transformed through constant interaction.

The second presentation was given by **Mariana Toledo Ferreira**, (Universidade de Sao Paulo, Brazil, IFG — Instituto Federal de Educação, Ciência e Tecnologia de Goiás, Brazil). Toledo Ferreira seeks to discuss the integration of Brazilian research on human and medical genetics in the global context, analyzing processes of international division of scientific labor among Brazilian laboratories, accounting for it through the analytical framework of center/periphery dynamics. In parallel, Toledo Ferreira intends to analyze the influence of the international circulation of ideas and researchers — and the growing internationalization of higher education — in the careers of Brazilian human geneticists, upon their return to the country after a period abroad. To look at the division of scientific labor as well as at knowledge circulation in terms of center and periphery is to take into account the assumption that scientific production is unevenly divided between different regions around the world. For this analysis, centers and peripheries are conceived as relational concepts, thus considering that both "central" and "peripheral" forms of science are heterogeneous entities, which include a variety of practices and methodologies. Empirically, the work is based on quantitative data on the career and trajectory patterns of 416 Brazilian researchers in the field of human and medical genetics, as well as bibliometric analysis of their work in international co-authorship. In addition, 50 in-depth interviews were conducted in three Brazilian regions (North, South and Southeast) in order to investigate in more detail, the different dilemmas, difficulties and strategies of knowledge production in the periphery.

The next was **Valerie Campbell** (University of Prince Edward Island, Canada). Campbell argues that technology, and in particular social media, are ubiquitous in the lives of young people. At the very least, an email address and internet connection are required just to search and apply for a job. However, it is their immersion in social media which most impacts the day to day lives of youth. In focus groups and workshops with first year university students in Atlantic Canada, Campbell explored with them the impact of social media in their lives, their feelings about technology, and ethical practices for both living and being researched in their online spaces. Through digital storytelling, they provided thoughtful and insightful glimpses into their online worlds. This presentation outlines the ways in which youth understand the ruling relations of technology use and their conflicted relationships with their apps. Hear Adrienne's frustration with using unfamiliar technology and Akinad's story of her attempt to protect her privacy within her social media platforms.

Tanja Carstensen (LMU Munich, Germany) thought that digital technologies are currently part of greater transformations of society. A range of sociological analyses focus on the related intensification of economic and political power relations, note the establishment of new regimes of surveillance, self-disclosure, (self-)exploitation, discipline, and control, and consider digital technologies to be neoliberal and governmental tools. Reasons cited for these negative scenarios are the power of large internet companies; the scope of platforms, bots, robots and algorithms which increasingly shape human actions; and self-tracking apps which lead us to a new stage of monitoring and self-control. Furthermore, digital technologies are ubiquitous and thereby often invisible, producing data continuously. These approaches address important sociological issues. However, it would be inappropriate to consider the use of digital technologies only as a practice of subjection under these new demands. Neglected in these are perspectives asking for individuals' own strategies and how individuals contribute to and shape digitalization. Carstensen develop a micro-sociological perspective on these digital transformations, focusing on the room to maneuver within the process of digitalization and conceptualize the questions of how individuals contribute to digital transformations, how they negotiate technological and social changes, and in how far they become obstinate, passionate, stressed, dismissive, or resistant actors of digitalization.

The final presentation given by **Richard Paluch** (University of Oldenburg, Germany), deals with the phenomena of digitalization and society. Nowadays it is not necessary to mention digitalization's tremendous role in many areas of society. However, the digitalization process is not limited to the role of the internet alone. Laboratories as such are also becoming more technically advanced. For example, medical scientists simulate virtual scenes, in which animated characters (so-called avatars) interact with hearing impaired test subjects in various settings (e.g., in a cafeteria or urban road). The interaction between avatars and test subjects is recorded on video and the movement patterns of the test subjects are measured by head and eye trackers. This form of digitalization, which can be termed algorithmization, raises further sociological questions, for instance, to which extent social behavior can be measured and quantified. This contribution deals with different forms of digitalization regarding medical care of persons with hearing impairment. Furthermore, the contribution illuminates whether and how the use of hearing aids structures the social relationships of hearing-impaired persons. When persons with hearing impairment use hearing aids, it is assumed that their relationship to others and to themselves changes. Persons aided with hearing aids should be able to communicate as if they were no longer in need of care and at the same time have to be concerned if their relationship to the environment remains undisturbed due to use of hearing aids. In order to investigate the underlying social mechanisms, an ethnographic field research was conducted for several months. The observation took place in an advanced audiological laboratory with virtual audio-visual environments. So far, not only medical researchers and test subjects were interviewed, but also observation protocols of laboratory experiments were written. The qualitative data were coded based on the grounded theory approach.

RC23 Session
Science Policy and the Sustainable Development Goals: Why Is a Gender Lens Necessary?

The RC23 Session *Science Policy and the Sustainable Development Goals: Why Is a Gender Lens Necessary (?)* was held on Monday, July 16th, 2018. It was organized by **Alice Abreu**, from the Federal University of Rio de Janeiro, Brazil, and chaired by **Lisa Frehill**, George Mason University, USA. The session had six presentations, organized in two panels, each followed by a sort period of discussion with the public. The session had around 15 attendants.

In the first panel, **Alice Abreu** talked about *Bringing a Gender Lens to the Production of Science and Technology: The Impact on the Sustainable Development Goals*, arguing that that gender inequality issues cannot be separated from actions to tackle poverty, hunger, poor health and well-being, maternal health, climate change adaptation, energy and environmental burdens, economic hardships, and societal insecurity, and that a gender lens on science and science education can enhance the success of the implementation measures. This paper will look at the latest research findings on how central it is to bring a gender lens to research and what are the elements on this process that influence the positions of men and women in the science and technology system. It's main argument is that a greater diversity of perspectives and insights in science innovation technology and engineering (SITE) will make the processes and products of SITE more equitable overall, and that greater equity in the products of science (knowledge, technologies and the ways they are applied) will in turn lead to more sustainable solutions to development challenges.

Liisa Husu, from Örebro University, Sweden, presented *Interrogating Science Policy in a Pro Gender Equality Setting: The Case of Sweden*, looking at the history of gender equality policy and actions in that country. With the current social democratic-green coalition government declaring itself as a "feminist government", it provides an interesting societal setting to look at how gender mainstreaming the activities of public authorities is a strong policy line, including, among others, public research funding and innovation agencies, and recently universities. The paper addresses the question in what ways are gender dimensions integrated in Swedish contemporary science policy. The presenter pointed out that an emerging issue in gendering of science policy-making that is of high relevance to the SDGs is highlighting the gender dimension of research content in funding of research, in addition to the gender distribution of scientific labour force and among gatekeepers and decision-makers in science.

The third presentation of the first panel was from **Emily Springer**, University of Minnesota, USA, *Understanding SDG5 Targets at the Site of Development: The Contested Terrain of Knowledge Production within Organizations*. Based on 45 interviews with gender, evaluation, and management professionals in East African countries and Washington DC around USAID's agricultural development initiative Feed the Future, the presenter argued that closer attention should be paid to the proliferating effects set in motion by a global interest in 'data driven decisions' and 'evidence-based policy', especially when applied to transformative development agendas. With difficult-to-measure concepts, such as women empowerment, metrics and targets may in fact lead to women and girls losing out. Women's empowerment provides a useful case for understanding how metrics and targets help induce accountability to international goals, while creating proliferating effects as they travel the globe and work their way into the daily agendas of development professionals and organizations tasked with

implementing 'development'. The author argues that if concerted and sustainable progress is to be made on SDG5 we must first understand the local site of development as a contested space of professional and organizational pressures and demands.

The second panel started with the presentation of **Anne Kovalainen**, University of Turku, Finland, presenting *The Growth of Gig Science and its Gendered Effects*. The paper focused attention on the increasing precariousness of the academic careers in science and in research and in the wake of this precariousness also called for replacing metaphors for the leaky pipeline—a metaphor originating from the industrial period of science's rise which no longer carries accuracy in describing the current situation. Focusing on analysing the reasons for differing positions in patenting, the paper argues that the most common reason for the gender-patenting gap arises from the fact that women do not get to be in charge of research groups that actively work on inventions leading to patents. It is known that gender, human capital, technical background, type of business and the social networks of the entrepreneur importantly shape decision making on invention activities and patenting, and in other, related types of work. One of the key aspects is the discrepancy between the organizational ideal worker and the actual resources of women and men working in the organization. Increasingly though, in the wake of market based higher education activity with stronger competition and overflow in the education system, the metaphor of a pipeline does not accurately portray current neoliberal higher education institutions and R&D policies.

Ingo Bednarek, Braunschweig University of Art, Germany, presented *The Gender of Technology. Approaching a Feminist Actor-Network Theory*, his PhD project focusing on gender in sales environments and sales negotiations in digital technologies and digital media. They are characterized by new images of the flexible, the flowing, and the differentiation in process; gendered images of transformation. Media and their specific uses are, however, mistaken almost exclusively for genderless and, supposedly, neutral objects, whereby the (re)producing properties of society and gender are lingering in hiding. For a scientific recording of media transformations, new perspectives are needed on the subject of media in order to decipher the images mentioned and take their effects seriously. Actor-Network Theory (ANT) offers such a perspective, which allows the actions of human and non-human actors to be taken seriously in their interconnectedness. With a research perspective inspired by Actor-Network Theory, the project asks how gender and gender inequality are produced in this human-machine encounter, which characterizes current sales environments.

Finally, **Ann Denis** and **Ruby Heap**, both from University of Ottawa, Canada, presented the paper *Using a Feminist Interdisciplinary Lens to Research Gender and Canadian Engineering Education: Processes, Challenges and Potentials*, that looked at the issue of why women, that have an increasing participation in Canadian higher education since the 1970s, remain underrepresented among undergraduate students in engineering. To explore why this is, the authors interdisciplinary research team has undertaken a complex mixed methods study of selected faculties of engineering in which women, though still a minority, constitute an atypically large percentage of the undergraduate student population. The study included questionnaires and interviews, completed by women and men engineering students, professors and administrators within engineering, along with direct observation and the collection of documentary material. The presenters reported on the various processes and challenges we encountered, linked to the development and use of multiple methodologies within an interdisciplinary research team, including the mutual education of team members about theory, research techniques, engineering cultures and practices, and the building of a consensus over the rationale for our eventual research design. To date, little Canadian research on gender and engineering education has been conducted with the basic goal of bridging perspectives across social sciences, education and engineering, while this was identified from the start as a key objective of their team of feminist professors and graduate students. The authors concluded discussing how the resulting research experience confirms their conviction that such interdisciplinary research offers great potential for generating new knowledge that can help improve the situation of women in engineering education.

RC23 Roundtable Session
Debates between Early Career and Experienced Researchers

On the 16th of July, 2018, from 15:30 to 17:20, the roundtable discussion ***Debates between Early Career and Experienced Researchers*** was held within the framework of the XIX ISA World Congress of Sociology. The roundtable session featured 5 thematically organized and concurrently running sets of presentations in one room.

These included the following topics:

Roundtable A: Science, Technology and Innovation 1
Roundtable B: Science, Technology and Innovation 2
Roundtable C: Producing and Disseminating Knowledge: From Local to Global
Roundtable D: The Role of the University: Academic Networks and Careers
Roundtable E: The Science and Technology of Health and Medicine

Overall, 32 people participated in the discussion, with about 5-7 participants in each roundtable. Each roundtable had a chairperson selected by the session organizer — Natalia Popova — prior to the beginning of the discussion. Chairpersons were asked to handle the discussions, assigning equal amounts of time to each presenter and facilitating the Q&A afterwards.

The participants—both experienced and young researchers — exchanged their perspectives on most relevant topics in the corresponding fields.

One of the roundtables was devoted to the problems of University and Higher Education and included 5 short presentations. The discussion attracted the attention of three more researchers who joined the discussion. Among the presenters were M. Bershadskaya, J. Nastesjo, E. Ivanova, O. Nikiforova and N. Popova. The first presentation was about problems encountered by Russian scholarly journals in the process of adaptation to international publishing standards. Natalia Popova presented the results of an empirical study covering about 150 Russian journals. Among the major adaptation problems were those related to use of the English language and provision of a stricter control over the ethical aspects of publishing. In addition, it was found that the traditional Western European approaches to doing research are different from those practiced in Russia, particularly in such fields as the humanities and social sciences. J. Nastesjo, a young researcher from Sweden, supported the discussion by describing the experience in his country. Thus, he recounted that researchers in Sweden choose in which language—English or Swedish—to publish their research depending on the research topic. Studies that have importance for the development of the country are mostly published in the local language, not in English. O. Nikiforova, a researcher from Canada, shared her experience on publishing research articles in Canada. Other topics of heated debates were criteria for measuring research productivity in universities, changes in university rankings globally, and university reforms.

Round Table on Innovation

Participants: **Klara-Aylin Wenten, María Cruz Cuevas Álvarez, Mariella Berra, Konstantin Fursov; Junmin Wang**

The paper *"Now, with the Tools Available at a Makerspace, Anyone Can Change the World..." How Makerspaces Can(not) Contribute to a Democratization of Work and Production* by **Klara-Aylin Wenten** (Technical University Munich, Germany) focuses on the interdependence between democratized production—as supported by the "Maker Movement" — and prevailing work practices in industrial companies. It seeks to understand what forms of work become visible in novel innovation tools and, more particularly, in the socio-material infrastructure. The future of work is often debated in close connection to the impact of digital technology on work processes. For instance, public discourses predict a growing dynamic of outplaced jobs due to automation

technology. Therefore, even though the impact of technology on work remains an uncertain development, companies and workers need to prepare themselves for the future development of technology and work.

It is in this setting that the Maker culture plays an important role as it supports the democratization of manufacturing and innovation processes. Actors of the Maker culture aim at the increase of collective, decentralized and democratized production processes by establishing open workshops (Makerspaces or FabLabs), in which every actor is invited to produce and manufacture physical products at accessible machines. Makerspaces are communal spaces and open to everyone. Thus, democratization in this context means the growing personal authority over technological knowledge, collective production and the empowerment of every actor to work on the machines autonomously. Consumption and production would finally happen beyond hierarchies and power relations or exclusive structures in production processes should be eliminated.

Over the past few years, however, industrial companies from product development of the automobile industry have also started to integrate Makerspaces into their business models. By letting their employees create prototypes outside of the company, Makerspaces now seem to become workplaces, where actors can experiment with the idea of democratized work and production. Yet, this development yields questions as to what forms of work become visible in (industrial) Makerspaces? And how does this respond to the idea of democratized production? My analysis is based on mainly two theoretical stances: the sociology of labor and science and technology studies. While the former is mainly investigating the role of work and how work is organized, the latter is more interested in how technology and knowledge are constructed, co-shaped and enacted by society. STS also focuses on the question as to how is work made visible or invisible by the use of technology. One of my cases deals with an automobile company in Germany, which has established a Makeathon as a novel tool for innovation practices into its innovation strategy. Makeathons are short-termed events, where actors should develop prototypes of a first innovative idea. In the present case, innovation practices of the automobile company now take place in the Makerspace and employees should now innovate in a novel, cross-organizational setting. Hence, what kind of work becomes visible in this peculiar setting at a Makerspace? The Makerspace is very openly constructed such that every step of the innovation process is transparent and intelligible to everyone. This could engender a collaborative mode of knowledge production, because every employee can see the other practitioners in the workshop. Democratization could here mean symmetric expertise hierarchies and the idea of shared working practices. This is particularly done by the given infrastructure that finally enforces a mode of work that is highly interwoven into a collaborative community. This working practice hence turns into a collaboratively working community by practicing at the respective machines through the enactment of sharing and collaborating. However, this form of work in a collaborative community can operate as a novel mode of control as it now becomes a requirement for the employees by the company. It is now the community that controls individuals since everyone can see — and therefore control — every single practice in the open workshop. Moreover, it is the infrastructure that controls the way how individuals — and also the community as a whole — interact and, in this case, how the employees are required to perform. As follows, the idea of collaborative communities is not only inscribed into infrastructure, but it also becomes a mode of control. Consequently, this principle of democratized production being used a novel form of work in collaborative communities turns into a mode of control, reinforcing power asymmetries in turn. It moreover blurs the boundary between

the aforementioned aims at a more democratized production process and industrial work. This case can be regarded as an example for the co-optation of hitherto oppositional tenets into capitalist and industrial work processes in innovation. Thus, this very intricate and complex condition cannot fulfill the proclaimed potential of democratized production until we do not start changing the economic system of work and industrial production more actively.

In her presentation *Perceptions on Intercultural Competence Development in PhD Programs,* **María Cruz Cuevas Álvarez** (Universidad Juárez Autónoma de Tabasco [UJAT]), drew on the observation that globalization forced changes related to cultural, economic & social politics, making economy dependent on scientific innovations, knowledge generation & transference which led to the internationalization of Higher Education. Internationalization on its part had an impact on Higher Education Institutions. HEI changed from a rigid curriculum to a competence approach one, where technology, foreign languages learning, 2-way mobility & an internationalized curriculum were included. As an outcome of internationalization, an Intercultural Competence is required in order to in order to effectively & appropriately interact in this globalized world. However, High quality PhD programs belonging to CONACyT — Mexican National Council of Science & Technology — demands that future researchers who want to be part of their elite groups must collaborate & cooperate in multidisciplinary research networks and have international production preferently. A question arises, how is the intercultural competence developed on PhD programs? From different authors it is inferred that in order to interact in an intercultural or multicultural environment you must become an active observant, understand there are intercultural differences which if they are neither analyzed nor evaluated, a cultural difference or cultural shock may arise Hall, 1990; Geertz, 1973, Hofstede, 1991). A competence is needed in order to interact in a multicultural set, Intercultural Sensitivity (Bennet, 1993), Intercultural Communication Competence (Byram, Nichols & Stevens, 2001) and Intercultural Competence (Deardoff, 2004). This study selected this latter model for being more suitable to the author's belief that people's learning is a cycle and it is in constant motion, therefore one never tops learning about intercultural knowledge as well as from experiences.

Faculty, coordinators & students agree that there is no Intercultural Competence Development as there are no conditions yet, and they do not even know how to foster it: no presence of foreign faculty or students, little or no foreign literature, economic problems, as well as domestic mobility mostly. Students from the Marketing and Health majors showed Intercultural Competence [IC] in basic knowledge: currency, language recognition, geographical location & landmarks, & attitudes: openness, empathy, tolerance & respect, compared to their peers in the Biological & Environment area. Participants agree on three needs: 1) IC is inherent to the Marketing & Health area, but it must be developed at a university level; 2) that a subject on IC must be implemented as the international dimension in curriculum is not an option but a must, if they are to insert themselves into the scientific world, and 3) other initiatives or strategies must be implemented due to financial problems or funding nationwide. Last but not least, being in contact with another cultures helps to its development.

The author suggests that Intercultural Competence is not developed by implementing isolated internationalization strategies but with an integral one supported by the Competence & the Organizational Structure approach.

The author proposed the following approaches:

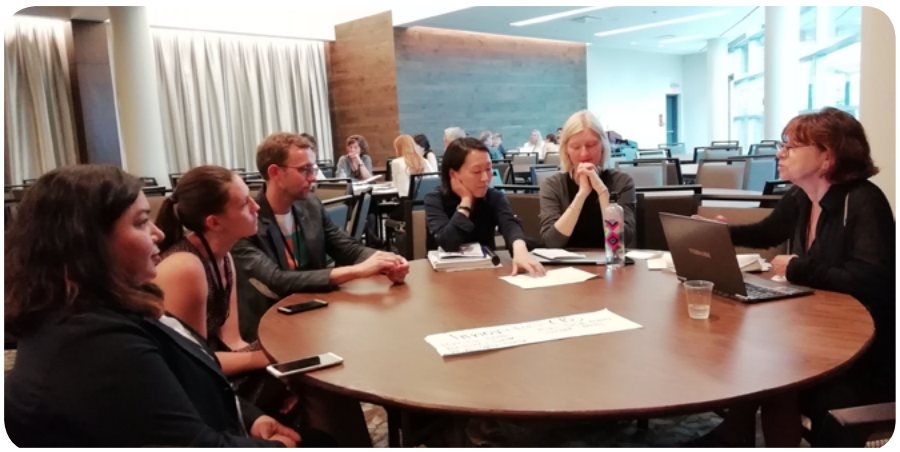
1. **Competence Approach:**
Intercultural Competence to be included at a university level.

2. **International Program Approach:**
Internationalized curriculum: more than 20% of literature in a second language and authors form different cultural backgrounds in order to understand how others solve problems and to include a subject from Laureate to PhD curricula as an added value to the university programs.

3. **Virtual mobility:** congresses, courses & diplomates online to solve the economic issue in order to be in contact with people from other cultures.

4. **Organizational Structure Approach:**
Internationalization at home: to invite students to attend to reading & speaking clubs, cultural weeks, the international book fair, and international conferences which are held every semester all over campus as extracurricular and mandatory activities and part of their formal education in order to be in contact with other cultures and give an integral as well as a holistic education.

The discussions at the roundtables have formed a basis for future collaborations between the participants.

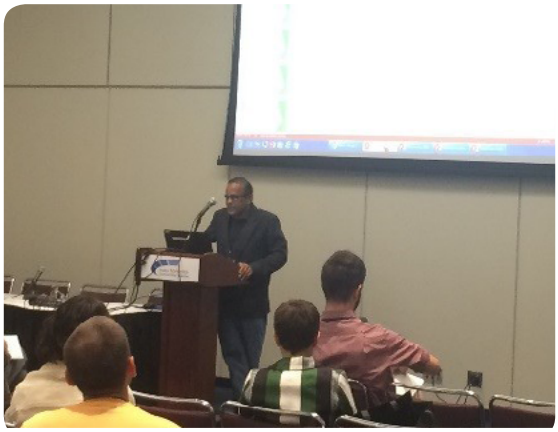


RC23 Session
Exploring Parallels Between Technoscientific and Social Scientific Knowledge Production

The session was organized by **Danny Otto** and **Jing-Mao Ho**.

Set on the last day of the conference at 8 o'clock in the morning, not long after the farewell reception night, our expectations for the turnout was rather bleak. However, the very interesting presentations and the commitment of about 30 attendees resulted in a session with diverse insights into the sociological study of social knowledge production and inspiring discussions.

The first presentation entitled *Attempts at Indigenizing Sociology. Achievements and Impediments* by **Mohammad Hossein Panahi** was focused on the attempts to overcome a hierarchical world social science system. After discussing different levels of indigenization (reaching from the subject of investigation to theoretical framing and data analysis) he evaluated achievements, impediments and prospects of indigenizing sociology and proposed strategies to overcome some of the impediments.



In our second presentation, *International Mobility of Scientists and the Structuration of the Semi-Peripheral Sociological Field*, **Edmar Braga Filho** discussed the relationship between the international mobility of Brazilian sociologists and the structure of the sociological field in Brazil. He thereby addressed the asymmetry of international production and circulation of sociological knowledge and connected the Brazilian sociological field to transnational dynamics based on the quantitative analysis of professorial CVs.

Then **Radhamany Sooryamoorthy** shifted the attention to the *Production of Science in Africa* in the third presentation of the session. He focused on decisive indicators (such as research and development, gross domestic expenditure on research and development and gross domestic product) for the production of scientific publications and points towards the dominance of few countries (South Africa and Egypt) as well as to regional and global disparities.

The fourth presentation by **Natalia Besedovsky** was *The Case of Social Neuroscience to understand How Non-Sociologists Study the Social*. Since the "hard" sciences (like natural and life sciences) show an increased interest in the study of phenomenon traditionally placed within sociology, Besedovsky asked how these "hard" disciplines conceptualize "the social." Based on interviews with leading scientists and participant observation of graduate-level courses in neuroscience she argues that the concepts of "the social" mainly stem from philosophical and not sociological thought.

Matthias Duller and **Christian Fleck** explored *Patterns of Shaping Disciplines* in the last presentation of this session. Taking a historical approach to social sciences and humanities (SSH) they compared the development of seven SSH disciplines (anthropology, economics, literature, philosophy, political science, psychology, and sociology) in different countries (seven European plus Argentina) for 70 plus years. They found remarkable increases of the number of faculties, graduates and output which could be linked to different rhythms of institutionalization and de-institutionalization in the respective political and academic settings.

This session aimed to bring together new developments in the sociological study of social sciences and we were very happy that it completed the mission! With a broad array of perspectives from different regions of the world and a diverse roster of themes, it witnesses that there is not only an increase of scholarly interests in this field but also a promising future of this sociological inquiry.

THE ROBERT K. MERTON AWARD FOR DISTINGUISHED CONTRIBUTIONS TO THE SOCIOLOGY OF SCIENCE AND TECHNOLOGY

Purpose

In honour and memory of Robert K. Merton, the social scientist known for founding the sociology of science and co-founder and first President of the Research Committee on Sociology of Science and Technology (RC23), the RC23 Committee has established The Robert K. Merton Award for Distinguished Contributions to the Sociology of Science and Technology. The award is intended to recognize and showcase the outstanding, long-term achievements of an individual scholar to the field rather than the excellence of specific papers or books.

Eligibility

The award will be granted every four years to a living scholar who is internationally recognized for significant contributions to the sociology of science and technology that have been made over a period of at least two decades.

Currently serving members of the RC23 Board or the Award Committee are not eligible to receive the award.

Recognition

The award is non-remunerated and consists of an honorary citation and lifetime membership in RC23. The award will be announced at the next World Congress of Sociology and the recipient will be asked to deliver a speech related to her/his work or to any topic in S&T, in an RC23 sponsored event at the World Congress. RC23 will report the recipient's name to the ISA Executive Committee and announce it in the RC23 Newsletter.

RC23 is not responsible for the travel and accommodation costs of the award recipient.

Nominations

Nominations can be made by any member of ISA (excluding members of the Award Committee) and must be supported by at least two other members of RC23 and/or ISA in good standing. Nominations must include the name of the nominee, a CV, the list of publications on which the nomination is based, and a cover letter that provides a rationale for the nomination.

The Award Committee will actively solicit nominations and will encourage RC23 members and other ISA members to nominate scholars. Award Committee members may not nominate, support, or solicit specific candidates.

Selection process

The Award Committee will be responsible for the selection of the award recipient. Every four years, at the Business Meeting held at the corresponding World Congress of Sociology, the newly elected Board of RC23 will establish an Award Committee. The Award Committee will consist of five recognized scholars nominated by the RC23 Board,

preferably representing different regions of the world. The Chairperson of the Award Committee must be a member of the Board of RC23.

Nominations will be sought and accepted until the Business Meeting at the interim meeting of RC23, at least two years prior to the next World Congress of Sociology. All nominations will be reviewed by the Award Committee, which will inform the RC23 Board of its decision in a report sent at least 8 months before the World Congress of Sociology takes place. The selection process will be completed in time for the winner to undertake early registration for the World Congress.

The Board of RC23 must approve the winner of the Award but will consider only the adequacy of the procedures and their conformity with ISA and RC23 policies. A summary of the Award Committee report will be available on the RC23 website and published in its Newsletter.

CALL FOR NOMINATIONS FOR THE 2022 AWARD

Research Committee 23 (Sociology of Science and Technology) of the International Sociological Association is seeking nominations for The Robert K. Merton Award for Distinguished Contributions to the Sociology of Science and Technology to be awarded at the XX ISA World Congress of Sociology in Melbourne, Australia, July 24-31, 2022.

Eligibility

The award will be granted to a living scholar who is internationally recognized for significant contributions to the Sociology of Science and Technology that have been made over a period of at least two decades. Thus, the award is intended to recognize and showcase the outstanding, long-term achievements of an individual scholar to the field rather than the excellence of specific papers or books.

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Nominations must include the name of the nominee, a CV, the list of publications on which the nomination is based, and a cover letter that provides a rationale for the nomination.

Nominations should be sent by May 31st, 2020 to the Chair of the Awards Committee, Jaime Jiménez Guzmán, at jjimen@unam.mx.

Award Committee

Jaime Jiménez Guzmán — Chair
Alice Abreu
Gary Bowden
Ralph Matthews
Antonio Brandão Moniz

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