

Physics for a better world

An introduction to IOP's
international programmes

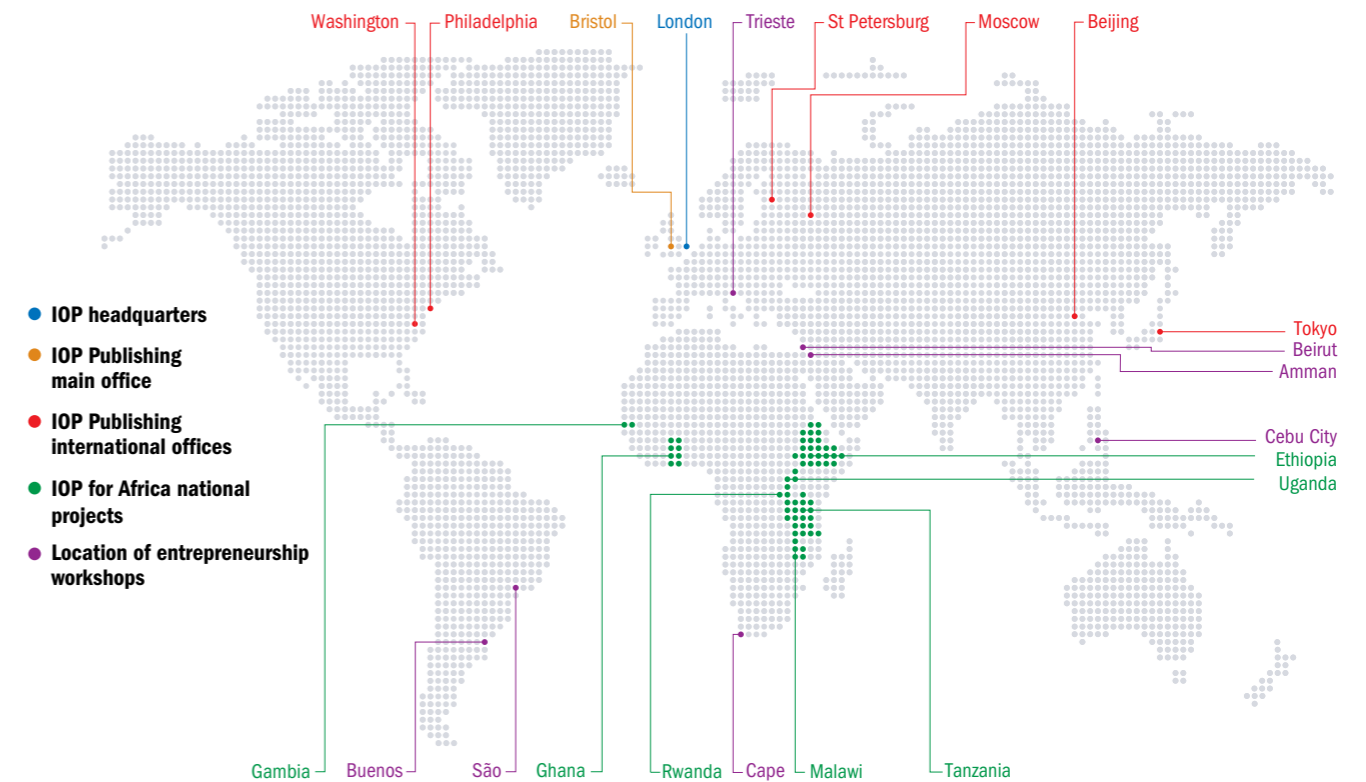


The Institute of Physics is a leading scientific society promoting physics and bringing physicists together for the benefit of all.

It has a worldwide membership of around 40 000 comprising physicists from all sectors, as well as those with an interest in physics. It works to advance physics research, application and education; and engages with policymakers and the public to develop awareness and understanding of physics. Its publishing company, IOP Publishing, is a world leader in professional scientific communications.

IOP is an increasingly international organisation. Our membership includes people from around 100 different countries. IOP Publishing, one of the world's leading scientific publishers, has a considerable worldwide presence, with offices across Europe, the US and Asia. Our mission is to advance physics for the benefit of all.

We are committed to ensuring that the dissemination of knowledge and application of physics bring about lasting progress to countries all over the world, including those with developing economies.





Delegates at IOP's workshop on building entrepreneurial skills in Buenos Aires, Argentina.

IOP's international presence

With an overall number in excess of 40 000, IOP counts physicists from more than 100 countries around the world among its membership.

International links

IOP is an active member of the International Union of Pure and Applied Physics (IUPAP) and the European Physical Society (EPS). We also have bilateral joint agreements with a growing number of national physical societies. These provide a variety of benefits from joint membership and attendance at conferences to joint awards and exchange lecture tours.

An international scientific publisher

IOP Publishing's internationally acclaimed journals, magazines and online resources disseminate scientific research worldwide.

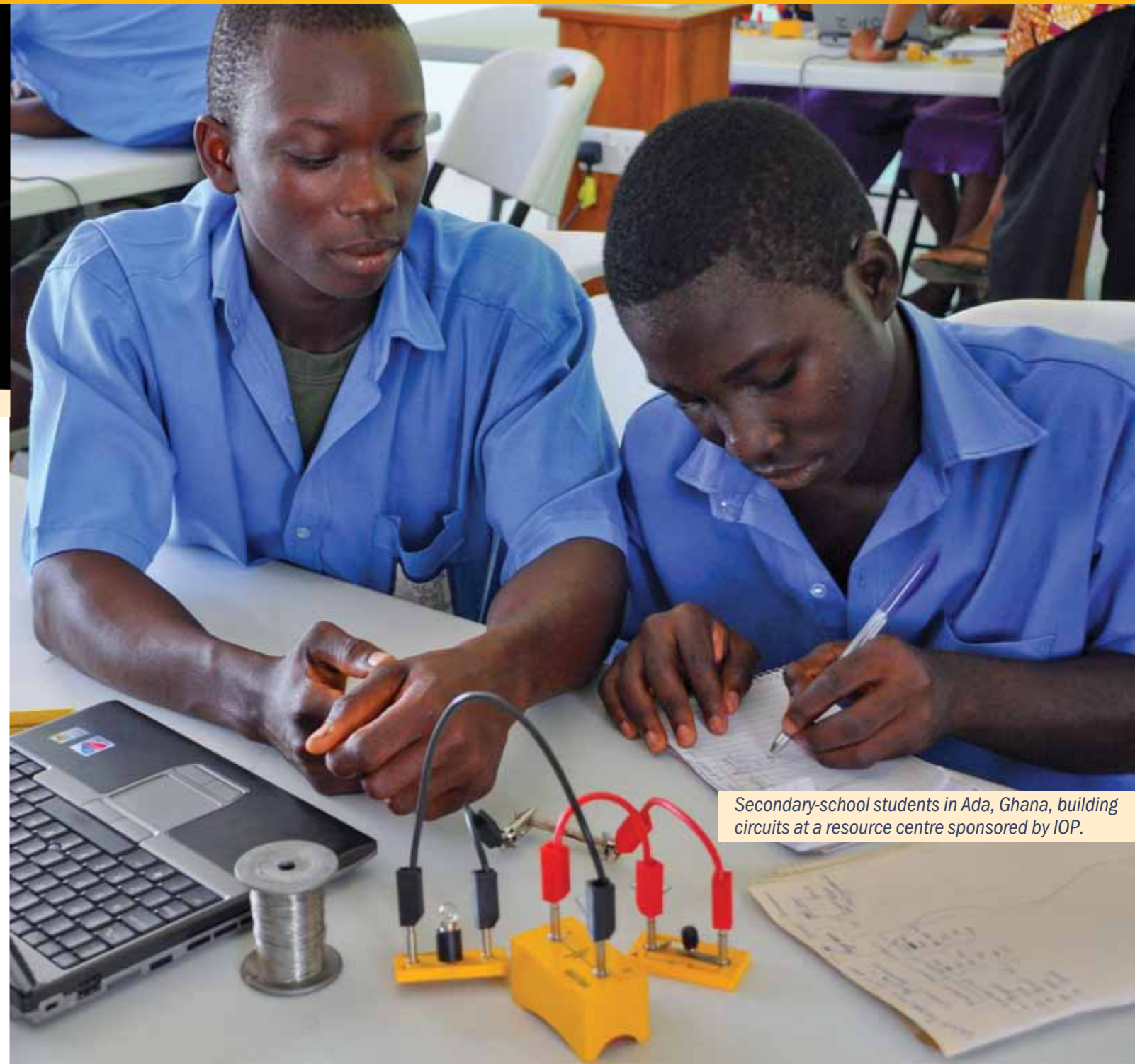
Through several international publishing partnerships, IOP Publishing makes its journals available for free or at a very low cost to more than 70 developing countries.

Promoting physics in the developing world

IOP's Physics for Development programme aims to:

- improve physics education at all levels and support the training and professional development of physics teachers, particularly in sub-Saharan Africa;
- equip qualified physicists in developing countries with relevant business skills to market their physics-based enterprises more effectively.

In general, the programme aims to bring about economic and social progress through the promotion and advancement of physics knowledge and application.



Secondary-school students in Ada, Ghana, building circuits at a resource centre sponsored by IOP.

Promoting entrepreneurship

IOP is committed to stimulating the application of physics in industry and business, and to see scientific innovations contributing to the economy of developing countries around the world.

In 2005, the International Union of Pure and Applied Physics (IUPAP) identified economic development as a priority to be addressed. Since then, IOP and the International Centre for Theoretical Physics (ICTP) have run a series of workshops in entrepreneurial skills, specifically designed to equip physicists and engineers from developing countries with the skills and experience to bring their research and innovations to the global marketplace.

Hundreds of participants from more than 40 countries attend these annual workshops held in Trieste, Italy, and in other, carefully chosen locations around the world, which have included Jordan and South Africa. Another, more advanced entrepreneurship workshop for high-level managers also runs yearly in countries with middle-income economies, which have included India, Argentina and Brazil.

Lack of information and skills is frequently identified as a key barrier to innovation in the developing world in feedback from international delegates. In response to this, IOP developed its entrepreneurship curriculum for scientists from developing countries in 2009, which has



Developing a business plan is an integral part of IOP's entrepreneurship training.

now been adopted in a number of African universities and in other developing countries, including the Philippines.

By stimulating entrepreneurship among physicists at all levels, IOP helps developing economies to capitalise on the skills of their brightest minds.



“The workshop was very useful to understand how to write a business plan and the concepts around intellectual property. I would love to attend the advanced workshop in a year or two.”

Delegate at El Hassan Science City, Jordan



An IOP teacher-training workshop in Tanzania: applications and experiments are at the heart of our courses.

Supporting physics education

Encouraging students to embrace physics and supporting qualified physics teachers is central to IOP's mission. This is particularly true in sub-Saharan Africa, where lack of resources often rules out practical education.

The Physics for Development programme in Africa started in 2005, with a donation of equipment to a school in Kigali, Rwanda, thanks to the efforts of David Richardson, an IOP member and physics teacher visiting the country on a volunteering scheme. Today, the Rwandan project also covers teacher training and a staffed workshop for building and maintaining experimental equipment. Similar projects are also now flourishing in Ghana, Tanzania, Ethiopia, Malawi, Uganda and Gambia.

IOP's aim in Africa is to enhance teachers' subject knowledge and give them the practical skills necessary



A rudimentary microscope made by technicians at the IOP resource centre in Tanzania: building experimental equipment is vital to the self-sustainability of all of IOP's educational projects for the long term.

to show students the myriad of applications that physics can have and the benefits that an education in physics offers.

In promoting and supporting education projects, IOP's aim is to maximise leverage of its resources and to ensure the involvement of local people for a sustainable future.



Ghanaian pupils testing solar energy: encouraging girls to engage with physics is one of IOP's key educational aims.

In 2010, IOP launched its first-ever fundraising campaign, IOP for Africa, to raise funds among IOP members and the wider public to help sustain the projects in sub-Saharan Africa. More information about the campaign can be found at www.iop.org/iopforafrica.

Joining IOP through partner societies

In 2011, IOP introduced a new form of membership – IOP iMember – which provides electronic access to a wide range of services delivered by IOP through its various websites and a wealth of opportunities to engage with other physicists around the world.

IOP has signed partnership agreements with many national physical societies in Asia, Africa and Latin America, offering their members the opportunity to become an **electronic affiliate** of IOP and obtain these benefits at low or no cost.

Membership benefits

As an electronic affiliate member, you can have access to all of IOP's services that are delivered electronically via the web.

Stay connected



Our popular monthly magazine *Physics World*.

- Get online access to the digital version of IOP's popular monthly magazine *Physics World*, giving you all the latest news about cutting-edge physics research and developments, as well as the opportunity to access an electronic version of our members' newspaper, *Interactions*.

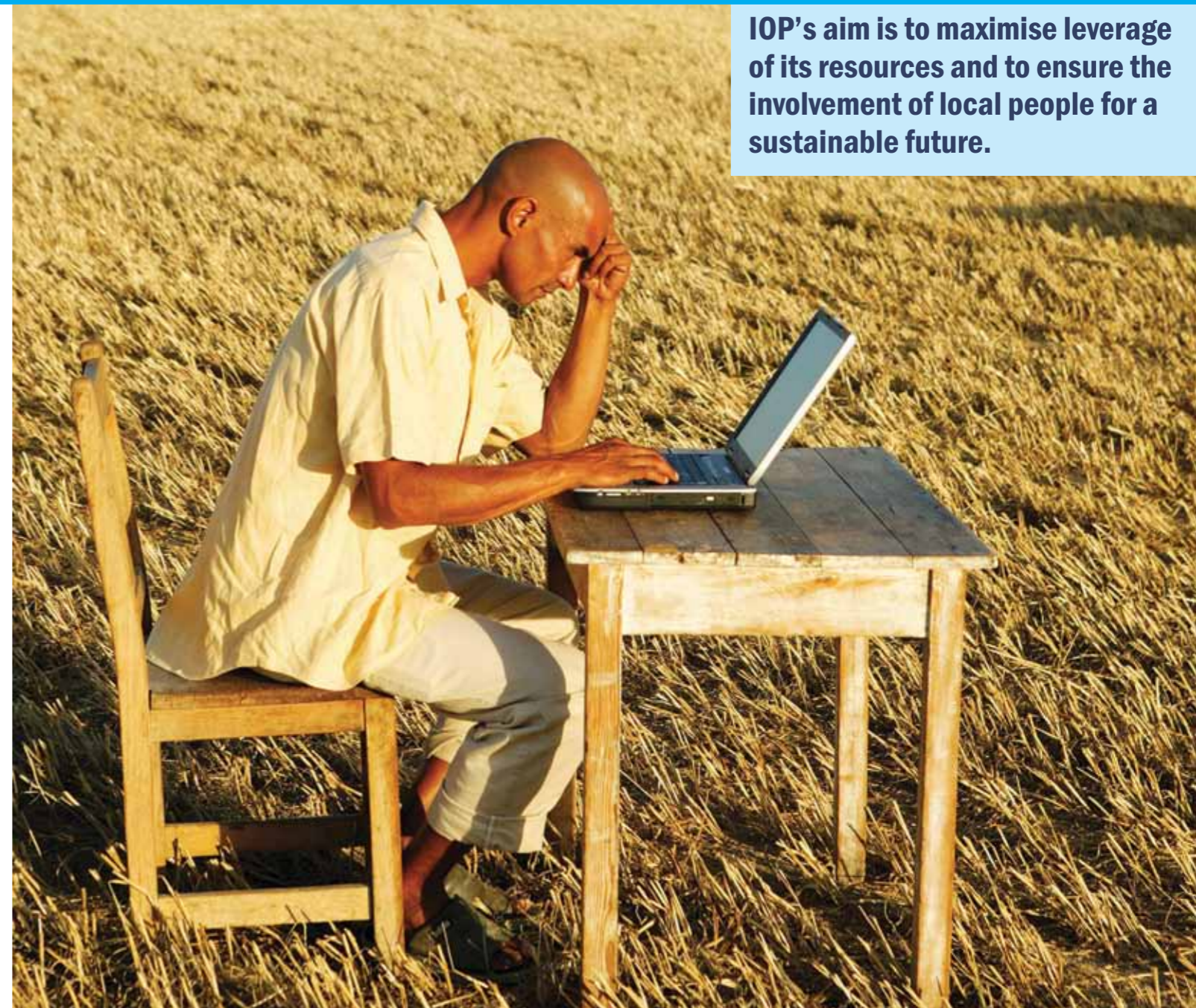
- Join any of 50 specialist groups covering many areas of physics, each with its own events and news.
- Make use of *MyIOP*, our online members network, giving you the opportunity to create your own profile page, interact with other members, blog, post photographs, join groups, read news and hear about the latest events.
- Attend conferences staged regularly throughout the UK at member rates.
- Create your own *PhysMail* address@physics.org, which also works as a forwarding service to your chosen e-mail address.

Plan your future

- Benefit from resources, such as tips for interviews and how to prepare your CV.
- Receive special member rates for professional, online courses.
- Gain access to professional helpsheets on a variety of topics, from our website or by e-mail.

Electronic affiliate membership is offered to members of IOP's partner societies, either entirely free to countries on the World Bank's list of low-income economies, or for £10 per year to those in middle-income economies. You can apply online. Please be sure to read all of the information about this class of membership before applying.

IOP's aim is to maximise leverage of its resources and to ensure the involvement of local people for a sustainable future.



To apply online for electronic affiliation, visit members.iop.org/intlmembership.asp.

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