

From the Chief Editor

Science has revolutionised our lives, transforming civilisation in the Industrial Revolution and now renovating it once more in a digital revolution that promises to change our lifestyles seemingly beyond recognition from those of our grandparents. In parallel with this, medical advances continue to extend life and improve its quality, while fundamental physics explores realms that would have been unthinkable a century ago. In the backdrop of this scientific age, one of the most exciting phenomena is young people engaging in these developments and considering how we can shape the future.

Restructuring

In accordance with our firm commitment to supporting all these young scientists, over the last few months we have been radically altering our structure to make the whole organisation more efficient and hopefully more helpful to young scientists. As such, the students who work on the journal are now divided up into four teams – Technical, Commissioning, Editorial and Publicity – which co-ordinate their respective areas under the management of team leaders. The Technical Team primarily administers the website and has recently been working hard to update and refine it. The site now has a new look, featuring multimedia, blogs and latest news, while our article submissions process has been vastly simplified with additional support for new authors. If you are thinking of submitting an article, you may wish to contact a member of the Commissioning Team, whose job it is to encourage and support prospective authors, while the Editorial Team takes over after the submission of an article to check and enhance it, ensuring that it undergoes a rigorous peer-review process. All these activities work hand-in-hand with those of the Publicity Team, which aims to highlight the work we are doing and encourage readership and partnerships with other organisations.

If you are interested in joining the team, either as a student or as a member of the International Advisory Board, visit <http://www.butrousfoundation.com/ysjournal/?q=node/33> and get in touch.

Content

In terms of the content that we publish, we have been considering how best to present some of the most exciting developments in complex science while ensuring that we remain accessible and engaging. Starting one's articles at a scientific level considerably above that of the majority of readers is a perennial problem in many scientific publications, severely impairing the reader's benefit and enjoyment. It is, however, by no means an insuperable barrier with publications such as *New Scientist* and the many scientific articles and sections in the mass media designed for lay people succeeding in educating readers with little or no specialist knowledge in a particular field. Primarily this is done by condensing the subject matter through leaving out complex details if they add little to the article's main thrust. Moreover, it is possible to explain complicated facets of an argument by analogy to a process that a reader already understands, as with David Miller's now famous explanation of the Higgs Boson in terms that even politicians can understand (see <http://www.phy.uct.ac.za/courses/phy400w/particle/higgs3.htm>). Also, it may be necessary to explain some of the basic science behind the research for the new material to be intelligible to most readers. (Note here that we are not advocating that we become a journal that merely publishes pithy résumés of current science with little scope for original research, but rather that we further our commitment to helping young scientists develop by providing them with interesting new advances in terms that they can readily understand.)

Moreover, too often scientific articles can be sterile and dull, written in monotonous prose devoid of varied constructions or interesting literary techniques. Young people of today's generation are used to and deserve a more attractive way of writing, so this pitfall must surely be avoided. It is definitely possible to produce a much more engaging style of writing without compromising rigorous scientific accuracy, merely by using more diverse conjunctions, adjectives and turns of phrase.

This Issue

In this issue, we are particularly pleased to be able to introduce a very varied selection of articles, continuing our commitment to publishing original research while including other formats such as a book review, opinion and reviews. It is also encouraging to see articles covering such a large range of disciplines from fascinating research into human breast cancer cells by Ana Victoria Colón to Jaspreet Khaira's eye-opening discussion of tiling and tessellation and their use in architecture. Environmental concerns are as ever pressing with Kartik Madiraju's article insightfully investigating the possibilities of microbial fuel cells, while Otana Jakpor's research poignantly demonstrates the dangers of ozone-emitting air purifiers for asthmatics. Other important areas of current concern have been addressed with an article covering a significant aspect of bacterial antibiotic resistance by Katherine Cheng, Daniel Anderson and Andrei Dan, and Nelson Bridgford's article gives an interesting stance on the ever-present controversies surrounding creation and evolution. If reading all these isn't enough for the aspiring scientist, Chris Barry gives an excellent review of João Magueijo's *Faster than the Speed of Light*. Finally, we now have a new category of submissions for brief articles demonstrating engaging scientific phenomena, beginning with an interesting delve into square numbers by Rittik Gautam.

The Future

We sincerely hope you enjoy reading the articles in this edition of *Young Scientists Journal*. If you like it, why not consider getting involved by writing an article or posting on the online forums?

It has been a great privilege to work on this issue over the past few months and I would like to thank all students on the team for their commitment and dedication and the International Advisory Board for their tireless energy and invaluable advice. Special thanks must go to Aaron Hakim, who did a superlative job as Acting Chief Editor for a few weeks in my absence over the summer. It is with great pleasure and anticipation that I now hand over the role of Chief Editor to Malcolm Morgan, one of our most experienced and accomplished members, whose tenure shall run to April 2010.



Jonathan Rogers
Chief Editor (July – October 2009)