Equipping the UK Church to engage with contemporary scientific culture

Information for church leaders
The Faraday Institute for Science and Religion is an academic centre with a Christian ethos, based in Cambridge. This document is an introduction to who we are and what we do to serve the UK Church.

Please also see www.faraday-institute.org/churches

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Why Science? About Us and Our Ethos

Everyone is affected by questions about science and faith, no matter who they are or where they come from. For example, we can enjoy the wonders of creation in nature documentaries or amazing scientific stories on social media. Ethical questions are prompted by news stories, new technologies, or visits to the doctor’s surgery. Friends and family might ask questions about scientific ‘proof for God’, and every young person has to study science at school. Engagement with science is not an optional extra for people today! In a recent survey, 30% of non-Christians and 10% of Christians thought the church was ‘not compatible with science’ (World Vision/Barna, 2018, over 2,000 non-Christians and 1,000 Christians surveyed). How do we respond to that?

The Faraday Institute for Science and Religion

was named after Michael Faraday, who invented the electric motor and was Professor of Chemistry at the Royal Institution. He was famed for his outstanding scientific career and brilliant public lectures explaining the latest discoveries, and saw no conflict between his research and his Christian faith.

We are an interdisciplinary research enterprise with a Christian ethos, and our aim is to continue in the footsteps of Faraday, demonstrating that science and Christian faith can work hand in hand, through both academic research and communication to a variety of audiences. Since our founding in 2006, we have provided a steady stream of opportunities for both scientists and the general public to explore contemporary science and faith, around the UK as well as overseas. The Faraday Institute is based in the grounds of Westminster College, Cambridge, and is an associate member of the Cambridge Theological Federation.

Introducing the Faraday Church Engagement Director (CED)

We are very aware that every church juggles competing demands for time and resources, and science cannot always be a top priority. However, we want to give everyone the opportunity to think about how science relates to faith without you having to spend a fortune or invent entire new programmes from scratch.

The Faraday Institute has responded to the challenge of equipping the UK Church in this area by appointing Dr Ruth Bancewicz as its Church Engagement Director. Her aim is to encourage you, drawing on Faraday research and resources and our wider network of speakers to equip you with relevant and readily accessible ways to engage with science as part of your regular activities.

Dr Ruth M. Bancewicz studied Genetics at Aberdeen and Edinburgh Universities. She has been a Postdoctoral Research Fellow at the Wellcome Trust Centre for Cell Biology in Edinburgh, and the Development Officer for the professional group Christians in Science. She joined The Faraday Institute at its founding in 2006, initially to write and develop resources for churches. Her projects have included the Test of FAITH materials (www.testoffaith.com, 2009, published in 7 languages), God in the Lab (Monarch, 2015), and Wonders of the Living world (forthcoming, Lion, 2020). Ruth has also spoken at over 200 events, including churches and universities around the world. She is a member of City Church Cambridge, a trustee of Christians in Science, a Fellow of their US counterpart the American Scientific Affiliation, and a Research Associate of St Edmund’s College, Cambridge. Ruth blogs at www.scienceandbelief.org.
If we do our job well what will we be doing over the next ten years, increasingly joined by others in the Church? Our Aims

Setting people free to choose faith as well as science, and to be confident in their Christian faith.

Supporting people as they become informed and active, engaging with wider society, and studying or working in science if that is their calling.

Setting the tone

Developing theological thinking – delving deeper into the Bible, developing our theology of science, and of creation, and responding to new knowledge and technologies. These are the foundations of our any work on science and Christianity, and they are built through the Faraday Institute’s academic work and regular courses, events and publications – as well as the work of many other organisations and scholars around the world. It may occasionally be necessary to initiate conversations on specific topics where theological resources seem to be lacking.

Praising and glorifying God alongside all of creation – because it is good to revel in the wonder of scientific discoveries and how they enhance our view of God. This is where the church should start and end in its engagement with science (on the basis of a sound theology of science - see above). If we continue any science and religion activity into eternity, I think this will be it!

Engaging with culture

Staying informed – keeping in touch with the stats and surveys, latest information on science and technology, policy updates and legislation, resources available, etc.

Communicating our theology of science – in terms of the gospel. Demonstrating that scientists can worship God and also do good science. Telling stories of scientists who are or were people of faith. Building bridges – the beauty, awe, wonder, creativity and imagination that can bring Christians and non-Christians, scientists and non-scientists together around are shared interest, fuelled by a Christ-centred theology. These, and others like them, should be the dominant narrative threads in our discussions (to support our worship, above). We do need to respond to issues and hot topics, but we should always be proactively setting the tone in this direction.

Doing apologetics – aware of the main questions that people ask about God and science, and how we can answer them. Always setting a positive agenda at the same time (see Foundations, above).

Using science in service of God

Caring for people – sharing information on bioethical issues, Artificial Intelligence, Genetically Modified crops, etc. Thinking how new technologies can be used well, having a voice in society.

Caring for creation – how can our restoration in Christ fuel a return to our original calling to tend and keep creation, making sure that all creation continues to praise and glorify God?

Encouraging practical care for people and all of creation by supporting STEM practitioners, students and teachers as they get involved in research, development of new technologies, and application of both knowledge and technologies in a wide range of professions.
Science and Christianity 101. Our Teaching

To work out our ethos and aims, we would love everyone, whether Christian or not, to know that:

- you don’t have to choose between science and faith, and thousands of scientists around the world have a genuine Christian faith;
- studying God’s creation well, using the tools of science, glorifies God and is an act of worship;
- the results of good scientific research can open our eyes to the wonder of God’s creation and help us to worship him more fully;
- and the Church can have a voice into society on the wise use of scientific knowledge, as well as sharing how science can be part of our work and worship.

We also think that everyone should have the opportunity to explore these topics.

- Stories of Christians in the sciences, and how they live out their faith in the lab.
- The relationship between science and faith, including the question of what is science and how it emerged in the Christian West.
- The wonders of science and the big questions raised by scientific discoveries that point to answers beyond science.
- The areas of science that affect the technologies we use, the way we treat each other and the rest of creation, and the way we see ourselves and our relationship with God. E.g. biomedical science, artificial intelligence and robotics, neuroscience & psychology, climate science & ecology.
- The areas of theology that inform our interactions with science. E.g. the image of God, prayer & miracles, interpretation of the Biblical creation passages, the fall, evil and suffering, creation care, and a theology of science itself.
- The main arguments for and against God in a scientific world, and how a thoughtful Christian might answer them.
Where does science affect the life of your church?

These notes can be used as the basis for a conversation with Dr Bancewicz, or with your leadership team, to help identify the areas in which we might be able to help you. A selection of questions are provided to help start the dialogue - you don’t need to go through them all!

Your own experience

What are your own thoughts and feelings about science? (Do you think other church members are aware of what you think? Might they agree or disagree?)

Have you ever addressed scientific topics in a church context? How did you do this and what happened?

Does anything hold you back from addressing particular scientific topics?

What are the needs in your church?

In which situations does science affect the lives of your church members?

How are these needs being met at the moment?

Which sections of your congregation might feel they are not affected by science or don’t need to think about it? Would they be right?

Which topics do you think would grab the attention of people in your congregation the most? (see topics list on pages 4-5)

What do you think you should be doing in this area?

In which situations is input on scientific topics needed?

What types of activities or resources do you think would help?

Do you have concerns about tackling any of the topics you listed? How might these be addressed?

How many people in your congregation have a scientific background, and how many are in scientific careers? How can you encourage them and use their gifts to serve the church?
In what ways can The Faraday Institute serve you and your church?

Whether working at the level of whole denominations, interdenominational organisations, or individual churches, we can offer:

- An initial conversation about where science affects you, your congregation or organisation, and your wider community (see page 4).
- Talks and training, delivered at your own building or meeting place, by Ruth and other Faraday staff members or specialist speakers from our wider network (see topics list, pages 5-6).
- Advice on running your own events, outreach, workshops, or other activities.
- Priority places for your leadership team on our regional courses for church leaders, which run over two days, or the opportunity to host a course in your area.
- Recommended resources from The Faraday Institute and other organisations, including
  - Sunday service material
  - Sessions for adult small groups
  - Youth & children’s material
  - Websites, articles, audio, video & books for adults, youth & children
  - Hands-on activities, plays, and other creative ideas
  - New material each week on the churches section of the Faraday Institute website (forthcoming – in the meantime, take a look at www.faraday-institute.org/churches)
- Details of our events and courses across the UK via the Faraday monthly e-newsletter (signup form at bottom right hand corner of the page).
- Individual follow-up and support via email, skype, phone, or face-to-face meeting if possible.
- Are there any other ways in which we can serve you?
Where Christianity meets science. Topics for Churches

Talks and training on these subjects can be delivered by the Faraday Church Engagement Director, other Faraday staff, and our wider network of specialist speakers.

There is no set of simple answers to every question about science and faith. There will always be difficult theological or philosophical issues to wrestle with, new technologies to discuss, and emerging fields of science to explore. Our aim is to address theological concerns sensitively, teach the science in an accessible way, and demonstrate that science can enhance faith and vice versa.

Why should a Christian be a scientist? (Or vice versa. Introduction to Science and Christianity)
What is science? How have Christians interacted with it over the centuries? If you had a theology of science, what would it be? It’s also good to look at some of the scientists who have embraced Christian faith – both in the past and present. With this background, we are more likely to avoid myth and misunderstanding when we tackle the more specific issues.

God in the lab (How science enhances faith)
Science reveals the beauty of the world, and scientists often speak of wonder and awe in their work. Creativity and imagination are essential to the practice of science. How do these experiences relate to everyday life, and especially to Christianity? Most important of all – how can a Christian worship God with science?

Wonders of the living world (Natural theology)
Every scientist feels a sense of awe and wonder from time to time in their work, and different people react to those experiences in very different ways. For Christians, these mountain-top moments are not proof of God’s existence, but what they see in the world resonates with their beliefs, turns their attention to the character of God, and reminds them that the world has been made for a purpose.

Who am I? (Neuroscience & Psychology)
What happens in my brain when I pray? What do Christian neurologists think about the idea of a soul? If psychology can explain my religious behaviour, what does that mean for my faith? When a person’s brain is affected through disease or disaster, what happens to the person they once were? Research in neuroscience and psychology raises so many important questions for the way we see ourselves, our faith, and those around us.

Why are we here? (Physics and Cosmology)
What happened at the Big Bang? Is the universe rigged so that life will develop? Could there be life on other planets? Cosmological arguments have often been used for or against God, so it’s good to explore them and see their strengths and weaknesses. Looking at such large scales of space and time expands our horizons and helps us to worship the God who made it all.

What difference do I make? (Creation Care)
The Bible has much to say about the value of creation - how all creation praises God - both now and in eternity, and Christians are called to serve and preserve creation. How can we do that, when so many on the planet need its resources, so many habitats are degraded and seemingly beyond repair, and human-induced climate change might be spinning out of control? How can just
one person’s actions make a difference? With these question in mind, we can explore the current findings of science, and the appropriate responses from the Christian community.

**Should we play God? (Bioethics)**

New technologies come along all the time: genetic testing, gene therapy, stem cells, IVF and manipulation of embryos in a variety of ways, GM crops, and so on. We will increasingly need to make decisions about these technologies. It’s important that we understand the basics about the science, and also the Biblical arguments for and against using these technologies in different circumstances.

**Do we have to choose between God and science? (Creation and Evolutionary Biology)**

What do the Biblical creation narratives say – if anything – about modern science? Did humans evolve, and if so who were Adam and Eve? Are death and physical suffering a result of the fall? In these discussions it’s important to draw on the work of trusted Biblical scholars who can reveal the full richness and depth of the text. It’s also good to understand what the science is actually saying, and learn to distinguish it from the ideology that can be attached to scientific theories. This can be a controversial topic, but if we focus on the primary messages of the creation texts, we can have a constructive and encouraging conversation that helps our faith to grow.

**Who cares if I have a relationship with my phone? (Robotics and Artificial Intelligence)**

New technological developments are happening so quickly these days – smartphones, self-drive cars, intelligent robots, and so on – and they have the potential to change our lives forever. Can we embrace the good uses of these technologies and just ignore the bad, or should we be more intentional about the way they affect our lives? How can we have a voice in society so that vulnerable people are protected against their misuse? With broad Biblical principles and a clear understanding of the technologies, we can start to answer some of these questions for ourselves and our own communities.

**Should a scientist pray for healing? (Miracles)**

Every Christian believes in the ultimate miracle – the resurrection of Jesus Christ. But how can a scientist believe in miracles today? Should we pray for healing? Looking at what the Bible says about signs and wonders, we will look at how Christians can answer these questions.

**Why do bad things happen to good people? (Suffering & Natural Disasters)**

If God exists, why does he let bad things – such as disease or ‘natural disasters’ – happen to ‘good people’? Do we deserve a life free from suffering? What does the fall have to do with it all? What actually causes the disastrous outcomes of events such as earthquakes? These difficult and sensitive issues must be addressed if we are to hold onto and grow in our faith in times of suffering, and support others who are going through difficult times.
Faraday Speakers

In addition to our staff (short biographies below, fuller information at https://faraday-institute.org/Staff.php), the Faraday Institute has a diverse network of over 150 UK-based speakers from a variety of church backgrounds, who specialise in a wide range of topics.

Prof. Robert (Bob) White, FRS, Director
Bob is Professor of Geophysics in the Department of Earth Sciences at Cambridge, where he leads a research group investigating the Earth’s dynamic crust. In 2018 he was awarded a Gold Medal of the Royal Astronomical Society, which is their highest award, in recognition of a lifetime’s achievement in research. His research focus at The Faraday Institute is currently on the ways in which faith affects people’s responses to natural disasters, and other projects include the effects of climate change and sustainability. He has served on the national committee of Christians in Science and the Christian environmental education charity The John Ray Initiative, and is a member of All Saints Church, Little Shelford.

Prof. Keith Fox, Associate Director
Keith is Professor of Biochemistry at the University of Southampton (50% time), where he has previously been Head of the Centre for Biological Sciences. His research is on DNA structure and its recognition, and he is Senior Executive Editor of Nucleic Acids Research. He is a former chairman and trustee of Christians in Science, Editor of their journal Science & Christian Belief, and an honorary vice-president of Southampton University Christian Union. He regularly speaks on topics such as general science-faith interactions, creation-evolution, bioethics, and genes and behaviour. His research focus at the Faraday Institute is on the ethics of gene editing technologies. He is a member of Highfield Church, Southampton, and a licensed lay minister in the Church of England.

Prof. Hugh Rollinson, Course Director
Hugh is Emeritus Professor of Earth Sciences at the University of Derby, where he used geochemistry to interrogate the most ancient rocks on Earth. After graduating from Oxford Hugh worked for the Geological Survey of Sierra Leone, followed by a PhD at the University of Leicester and research at the University of Leeds. He joined the University of Gloucestershire for 20 years, taking 3 years leave to work as Associate Professor of Geology and Head of Department in the University of Zimbabwe. He was then Professor of Earth Sciences and Department Head at Sultan Qaboos University in Oman for 6 years. Hugh has served the local church wherever he has lived, and is currently a member of Holy Trinity Church, Cambridge. He regularly speaks on climate change, the origins of the universe and life on earth.

Dr Ruth Bancewicz, Church Engagement Director (See pages 2 & 11 for bio & short CV). Ruth regularly speaks on Why should a Christian be a scientist?, God in the lab, and Wonders of the living world (see p 6).

Dr Denis Alexander, Emeritus Director
Denis was previously Chairman of the Molecular Immunology Programme and Head of the Laboratory of Lymphocyte Signalling and Development at The Babraham Institute, Cambridge. Prior to that he was at the Imperial Cancer Research Laboratories in London, and spent 15 years developing university departments and laboratories overseas. He studied at Oxford where he was president of OICCU (the student Christian Union), before obtaining a PhD in Neurochemistry at the Institute of Psychiatry in London. He was Editor of the Christians in Science journal Science & Christian Belief from 1992-2013. His research foci at the Faraday Institute have included the impact of Christianity on science, the creation/evolution dialogue, genetics, and genetic determinism. He regularly speaks on the relationship between science and faith, a historical look at that relationship, ethical issues, genetics and free-will, creation and evolution, and miracles. He is a member of Eden Baptist Church, Cambridge.
Revd Dr Rodney Holder, Emeritus Course Director

Rodney studied mathematics at Trinity College, Cambridge, and astrophysics at Christ Church, Oxford. Following 14 years working for the UK Ministry of Defence, he returned to Oxford to study theology and was ordained in the Church of England. After several years of parish ministry he was appointed Course Director of the Faraday Institute from its inception until his retirement in 2013. He is a member of the Society of Ordained Scientists, and from 2006-2017 he was Reviews Editor of *Science and Christian Belief* and on the national committee of Christians in Science. Rodney’s main research focus in science and religion is cosmology, and he regularly speaks on the Big Bang, design in the universe, the multiverse, natural theology, and the relationship between science and faith, as well as miracles/prayer, evidence for the resurrection, and the possibility of life on other planets. He is a member of Great St Mary’s Church, Cambridge.

Revd Dr Roger Abbott, Senior Research Associate

Roger researches ‘Natural’ Disasters (though he is persuaded there are no disasters that are actually natural, just human). He has carried out projects in Haiti, New Orleans, the Philippines and Somerset, exploring the influence of faith beliefs on survivors’ relationships with God, their community, and the natural environment. Following over 30 years of pastoral ministry, Roger gained his PhD in a practical theology of disaster response from the University of Wales, Trinity & St. David. He has taught a University of Chester validated MA module in the pastoral response to trauma, run a consultancy on pastoral care of trauma, and been an active responder to traumatic incidents in the UK since 1989. He regularly speaks on the theological and human aspects of disasters and our response to them.

Youth and Schools

The Faraday Institute Youth and Schools team are committed to providing high quality events and resources that equip and encourage young people of all backgrounds to explore the interactions of science and religious faith in exciting and engaging ways. Through more than 800 sessions, the team have seen over 22,000 children and young people respond enthusiastically to the combination of hands-on science with honest, dynamic and thought-provoking discussion about science, faith and their interactions.

Steph Bryant, Youth and Schools Programme Co-Director

Steph studied at Cambridge University specialising in Conservation Science, Ecology, Physiology and Evolutionary and Behavioural Biology. She has been involved in a number of international conservation and communication projects since graduating, and is especially passionate about encouraging consideration of the roles and responsibilities that faith groups have in caring for the natural world. Steph has contributed widely to a number of science-faith communication initiatives including spending three years coordinating the 'God and the Big Bang' project, a Church of England science and faith communication project for schools. She frequently contributes to training and resource development programmes. Steph is a member of C3 Church, Cambridge.

Lizzie Henderson, Youth and Schools Programme Co-Director

Lizzie studied Natural Sciences at the University of Cambridge, specialising in Evolutionary and Behavioural Biology, Geology and the History and Philosophy of Science. She has been involved in and advised on a number of collaborative science-faith projects for schools and young people at both national and international levels, including developing a variety of teaching resources and delivering training and advice to practitioners. Lizzie is also Co-Investigator and Grant Manager of a project developing materials which communicate positive science-faith interactions to children aged 2-12. She is particularly passionate about helping people to see positive interactions between scientific understandings of the development of life on Earth and the Christian faith. Lizzie is a member of C3 Church, Cambridge.
Church Engagement Director: Background and Experience

Dr Ruth M. Bancewicz, Faraday Church Engagement Director since Sept 2018

Leader of three resource-production projects at The Faraday Institute, Feb 2006-Aug 2018

- April 2015-August 2018. Engaging the International Christian Community with Narratives of Purpose in Biology. Helping people of faith enjoy the wonders of the living world, and begin to discuss the deeper questions raised by this research. Outputs: illustrated book, online videos & articles, material for adult small groups & secondary schools, public speaking.


Previous Employment & Education


Oct 2003 - Jan 2006 Post-doctoral Research Fellow (full time maternity cover, then part time) Wellcome Trust Centre for Cell Biology, University of Edinburgh.

Sep 2000 – Sep 2003 PhD, Genetics, University of Edinburgh. 2 resulting papers published

Sep 1999 – July 2000 MSc by Research in the Life Sciences, with Distinction, University of Edinburgh

Sep 1995 – June 1999 B.Sc. (Hons) Genetics, 1st class, University of Aberdeen

Books & book chapters

Wonders of the Living World (Lion Hudson, forthcoming, 2020)

‘The Scientist-Believer: Following Christ as we uncover the wonders of the living world’ in Christ and the Created Order: Perspectives from Theology, Philosophy and Science, Volume 2, Andrew B. Torrance & Thomas H. McCall (eds.) (Zondervan Academic, 2018)

God in the Lab: How Science Enhances Faith (Monarch, Jan 2015 (UK); March 2015 (US))

Test of FAITH: Spiritual Journeys with Scientists (Paternoster, 2009. Editions in USA, Brazil, Spain & Portugal)

Public Speaking

Over 200 events including Word Alive, Greenbelt, New Wine, Spring Harvest, Soul Survivor, churches, cathedrals, theological colleges, retreat centres, science festivals, student events, schools & universities. Lecture tours in USA, Brazil, & Spain.

TV, Radio, & print media

Including Channel 4, BBC Radio, and Christian radio and TV stations.
FAQ about The Faraday Institute

How is your Christian Ethos worked out?
The senior leadership team of the Faraday Institute are Christians who sign a basis of faith. The main focus of our research work is on the relationship between science and the Christian faith, and we emphasise the education of the Christian community in issues of science and faith. All the staff and speakers involved in Church-based projects accept the historical creeds of the Christian Church (i.e. the Nicene and Apostles creed).

Where do you stand theologically?
We accept the Bible as the word of God, and the Gospel as the focus of our lives, beliefs and worship. We are aware of and respect denominational differences, but choose to focus on the central doctrines that we all share in common.

How do you handle controversial or sensitive topics?
We realise that different people interpret certain Biblical passages (most notably the creation narratives) in different ways. The Faraday Institute exists to help our audiences engage with and understand mainstream contemporary science and its relationship to Christianity, sharing the message that you don’t have to choose between science and Christian faith. We focus on the basic truths that Christians believe - the Gospel message – aiming to build unity in the Church. We believe the Bible is God’s word, and seek to interpret it to the very best of our ability. We teach the current scientific understanding, enabling people to get to grips with it whether they have a scientific background or not. We encourage thoughtful engagement with the implications of both the Bible and science for our lives. In this way we hope to enable a healthy conversation in the Church where people can listen to each other’s views in a loving and respectful way.

What are the costs/how do you fund you work?
As active members of local churches ourselves, we are well aware that finances are often hard-pressed. We won’t be seeking to recover the full running costs of meetings, training and other events every time – especially from individual churches. All we ask for is a reasonable donation, as well as travel costs (car mileage or second class fares) and accommodation if needed. You could make a one-off donation or a regular payment over several years, if you plan to call on our help regularly or want to support our work in general.

What is expected of host organisations or churches?
When we visit you for meetings, training or events, we ask that you take responsibility for any advertising, bookings, communication with participants ahead of time, refreshments or other practical arrangements that may be needed.

How do you decide who to spend time with?
Every church leader knows that ministry is busy and there’s always far too much to do, and The Faraday Institute is no exception to that rule. We will try to reach out as widely as possible by prioritising inter-church, denominational or interdenominational events, and we also expect to visit a number of individual churches each year.

Can we visit The Faraday Institute?
You are very welcome to visit us and see our offices in the grounds of Westminster College, Cambridge, chat to any staff who may be available on the day, and join us for a coffee or lunch. You would also be most welcome to come as a delegate to one of our Faraday courses held in Cambridge and other cities in the UK (details at www.faraday-institute.org/Courses.php). Our summer course is held in Cambridge in early July and specialised courses for church leaders are also held each year.