

IMPERIAL

Abdus Salam Centre for Theoretical Physics



Autumn 2026



News

New appointments and promotions

We are happy to welcome **Shota Komatsu**, who joins the Centre as Associate Professor, and to congratulate **Shai Chester** on his promotion to Associate Professor.



New Salam and Kibble Fellows

The Centre has also welcomed a new cohort of Fellows through the Salam New Horizon Programme. Our new Kibble Fellows are **Bobby Acharya**, **Christophe Galfard** and **Arshia Momeni**, who bring expertise spanning fundamental physics, science communication and quantitative finance. **Tasneem Zehra Husain** continues her work as a Salam Fellow, contributing in particular to the Centre's international engagement and outreach activities.

Highlights and Recognition

Several members of the Centre have also received significant recognition. **Claudia de Rham** was appointed an inaugural Fellow of the National Academy for Mathematical Sciences, received the Swiss Talent Award. **João Magueijo's** recent work received prominent coverage in New Scientist, while **Andrew Tolley** was interviewed by Science Magazine. Among the Centre's students, **Ray Isichei** received an honourable mention from the Gravity Research Foundation for his essay From ∞ & Beyond: Aspects of Gravitational Thermodynamics at Finite Radius. **Shai Chester** got a important grant from Anthropic AI for Science to support the work of his group.

New members

We are delighted to welcome several new members to the Abdus Salam Centre. Shota Komatsu joins as Associate Professor, **Matthew Heydeman** as a URF Fellow, and **Peter Zongzhe Du**, **Alessandro Piazza**, **Evangelos Tsolakidis** and **David Wright** as Research Associates. We also welcome a new cohort of PhD students: **Michael Fine**, supervised by João Magueijo; **Julia Hallgren**, with Chris Hull; **Pawel Kazmierski**, with Arttu Rajantie; **Eric Lizalde**, with Carlo Contaldi and Andrea Mitridate; and **Pedro Navarro**, also with Carlo Contaldi and Andrea Mitridate. Joining the Centre as visiting PhD students for the year are **Anders Wallberg**, working with Shota Komatsu, and **Zhuo-Hui Wang**, working with Claudia de Rham and Andrew Tolley.

Moving on to new positions

Several members of the group are leaving for exciting new roles. **Guillermo Arias Tamargo** moves to IFT Madrid, **Mariana Carrillo Gonzalez** takes up a permanent position in Southampton, **Sebastian Céspedes** a permanent position in Universidad de Chile, **Sadra Jazayeri** moves to Edinburgh, **Elli Heyes** to California, and **Ben Elder** remains in London for a new position in the City.

We also extend our warm thanks to **Karapet Mkrtchyan** for his teaching support and his many contributions to the group over the past many years.



Words from the Director



This is my first year leading the community, and looking back, it has been quite unlike any other. Definitely challenging in all possible ways, exciting in many, difficult in others - and one that none will forget. It is perhaps in years like that that we are reminded what makes the Salam Centre and Salam's vision worth caring about so deeply.

The scientific life at the Centre has just been phenomenal as we welcomed so many new colleagues, celebrated well-deserved promotions, new grants, prizes and awards, and heard our members speak at some of the most prominent events in the world. Huge congratulations to now Drs Kinga Gawrych, Yusheng Jiao, Guhesh Kumaran and Max Velasquez Cotini Hutt for successfully defending their thesis, and congratulations to all postdocs who have moved on to exciting new positions - a sign, I think, of the quality of the environment we work hard to cultivate. Our outreach and engagement work continues to be featured at all levels, and the small peek of research which is highlighted in these pages this time on string theory in curved spacetime, open quantum systems in cosmology, S-matrices, dualities in gravity and black holes, gives only but a tiny taste of the incredible breadth, quality and depth of the questions being explored.

But this year has also been a difficult one. We sadly said goodbye to Kelly Stelle, who had been part of this group since 1982 and who, in many ways, helped shape what it became. Over more than four decades, he made contributions to supersymmetry, supergravity, quantum gravity and M-theory, introduced what we all now know as Stelle gravity, a framework and a way of thinking which will carry on for generations. Yet, those who knew Kelly of course know that theoretical physics, remarkable as it is, tells only ever part of any story. He was a true polymath - as comfortable discussing Russian literature or Italian politics as he was on papers on supergravity. He had a unique yet universal sense of humour, an inexhaustible store of stories, and a warmth that made everyone around him feel welcome. He inspired generations of students through the QFFF MSc programme, which he directed for nearly two decades.

In March, the Centre held a one-day meeting to celebrate his scientific life and legacy, where family, colleagues, friends and former students met to reflect together, in the best possible way. Kelly is greatly missed. And as we carry him with us, a memorial website has also been created where anyone is warmly invited to share memories, photographs, and reflections on Kelly's life and work: www.online-tribute.com/KellyStelle.



It would also be wrong not to mention the unprecedented public funding challenges that fundamental research has witnessed throughout the past year. The effects are real, and the uncertainty they create has been felt at all levels. Yet it is perhaps in moments like this that it matters more than ever that we support one another, positively, within the Centre and beyond, across the UK, but also as part of a genuinely global scientific endeavour across borders and across subfields. The scientific meetings we've hosted, the visits from members that genuinely care about the Centre, its people and its research, and the countless number of public engagement initiatives we drove are not incidental. They are, in a real sense, what brings fundamental physics to life and what brings meaning to what we do.

So I look forward to a year ahead that is equally surprising, but perhaps a little kinder - just as groundbreaking in our physics, just as inspiring in our engagement with the world, and of course, one that is simply fun for all our members, new, young and younger.

Featured Research

This time, we feature new research led by members of the group across a wide range of topics. These snapshots offer a glimpse of some of the questions, ideas and results currently being explored at the Centre.

Building Fully Consistent S-Matrices

[arXiv:2607.24922](#)

In recent work, **Claudia de Rham** and **Andrew Tolley**, together with former Salam Centre member **Shuang-Yong Zhou** and future member **Zhuo-Hui Wang**, constructed the first explicit class of fully unitary dual-resonance S-matrices.

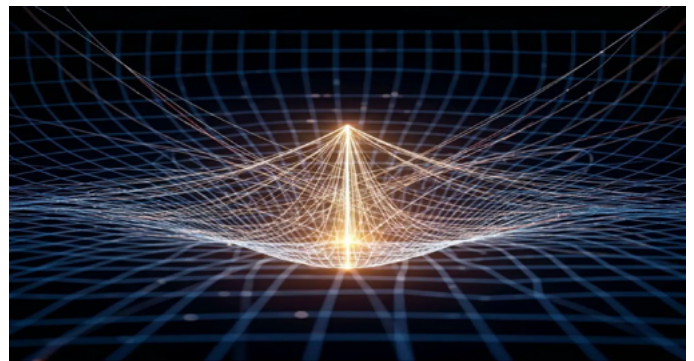
Their work sets the foundations for a systematic dual-resonance bootstrap programme and leading to new classes of models with potential phenomenological applications.



String Theory in Curved Spacetime

[arXiv:2609.19266](#)

Along-standing challenge in string theory is understanding how strings propagate and scatter in curved spacetime. Recent work by **Shai Chester**, **Kiarash Naderi** and **Deliang Zhong** has made significant progress on this problem in AdS, computing for the first time the scaling dimensions of string states at strong coupling and showing how string field theory can extend these results to arbitrary flux backgrounds. These results provide new quantitative information about string theory in regimes where conventional perturbative methods are difficult to apply. They also help clarify how the familiar picture of strings in flat spacetime is modified by curvature and flux, and



offer new tools for probing the non-perturbative structure of quantum gravity through holography. This significant breakthrough was a highlight of the **Strings 2026** conference in Shanghai where Shai was invited to give one of the keynote plenary talks.



The Early Universe as an Open System

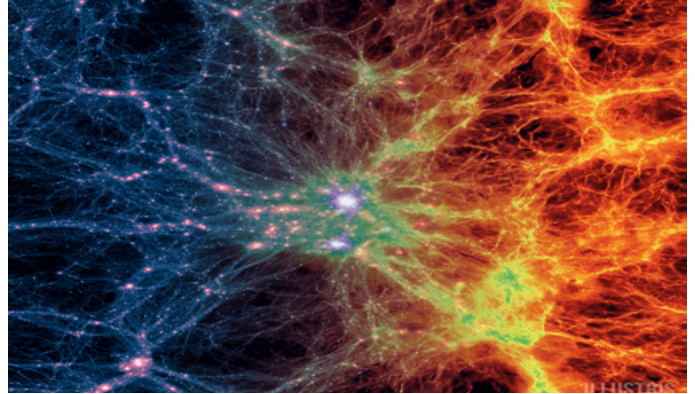
arXiv:2605.11096

During inflation, tiny quantum fluctuations were stretched across enormous distances and eventually became the seeds of the large-scale structure we observe today. On very large scales, their evolution can often be described as a kind of random motion, an idea known as stochastic inflation.

In recent work, Centre member **Sebastian Cespedes**, together with collaborators, revisited the origin of this stochastic behaviour by importing techniques from the theory of open quantum systems, where one studies how a system evolves when part of its environment is not observed directly. Here, the long-wavelength fluctuations play the role of the system, while shorter-wavelength modes act as an environment whose influence builds up over time.

The key step is to combine this open-system viewpoint with the renormalization group, which tracks how a physical description changes as shorter distance scales are progressively removed.

This makes it possible to derive the stochastic evolution directly from the underlying quantum field theory, rather than introducing random noise as an independent assumption.



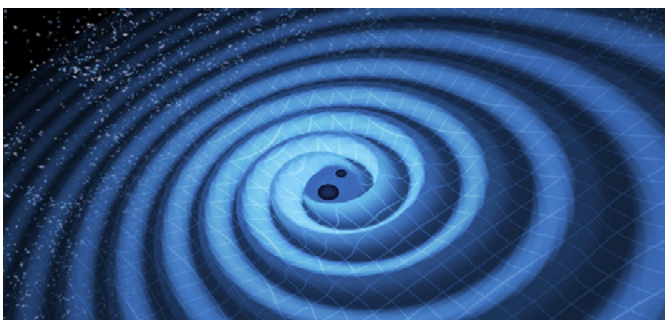
These ideas may also have applications beyond inflation. Similar mechanism can different models including fields relevant for models of dark matter, making the framework potentially useful for understanding how such degrees of freedom are produced and evolve in the early Universe.

Linearised gravity as edge modes

arXiv:2606.29625

Special relativity requires the laws of physics to take the same form for all inertial observers. A formulation that makes this symmetry explicit is called Lorentz covariant.

Gravitational waves also possess a second symmetry. Their curvature can be separated into two parts, analogous to the electric and magnetic fields in electromagnetism. The equations are unchanged when these two parts are exchanged,



a property known as electric-magnetic duality.

The challenge is to formulate gravity so that both symmetries are manifest at the same time. Earlier approaches made the duality explicit only after choosing a preferred time direction, thereby hiding Lorentz covariance.

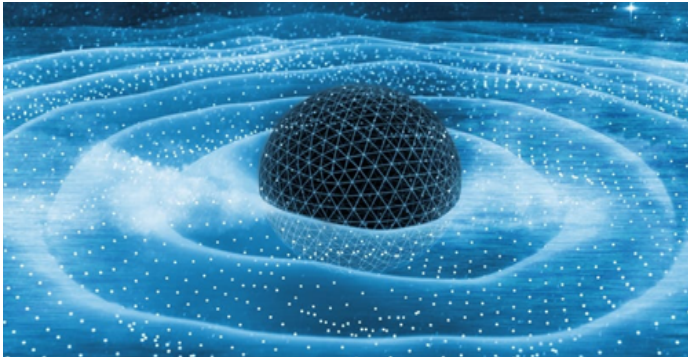
A recent work led by **Karapet Mkrtchyan** solves that problem by starting from a five-dimensional topological theory whose physical degrees of freedom live on a four-dimensional boundary. In this higher-dimensional description, Lorentz symmetry and electric-magnetic duality arise within the same geometric framework.

The construction may also provide a useful starting point for studying more general theories of gravity and higher-spin fields.

Reducing Gravity, Understanding Black Holes

arXiv:2603.06786, 2602.16773, 2604.24101, 2608.02908

Black holes are usually described by Einstein's theory in four or more spacetime dimensions, where the equations governing their geometry can be highly complicated. However, when enough



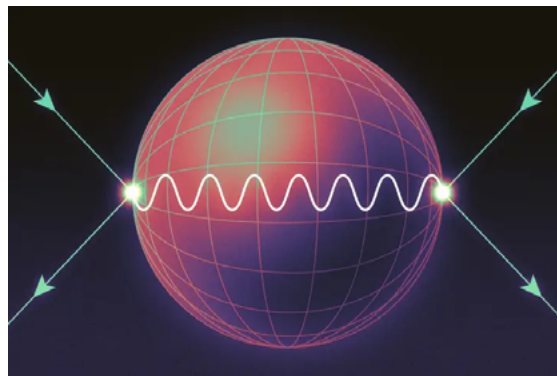
symmetry is present, much of this complexity can be encoded in an effectively two-dimensional theory involving a metric and a scalar field. In recent work led by Research Associate **Johanna Borissova**, these reduced theories were studied as a powerful framework for understanding both static black holes and dynamical gravitational collapse, leading to a generalized version of Birkhoff's theorem. The same formalism also provides a unified description of black-hole thermodynamics, including in anti-de Sitter black holes.

Double Copy in Curved Spacetime

arXiv:2608.23686

A recent invited review by **Mariana Carrillo González** explores the “double copy”, a striking connection between gauge theory and gravity that can turn difficult gravitational calculations into simpler ones in gauge theory. Extending this idea beyond flat spacetime, to cosmology, anti-de Sitter space and black-hole backgrounds, is a rapidly growing area of research. Mariana has been closely involved in this development and has contributed to several important advances in

the subject. The review brings together recent progress, from curved-space scattering observables and boundary correlators to classical and self-dual constructions, while emphasising both the structures that survive from flat space and the new obstacles introduced by spacetime curvature. These ideas are especially promising for cosmology and gravitational-wave physics, where direct calculations in gravity can become particularly challenging.



For more about Abdus Salam Centre research, including access to preprints, check our website:

imperial.ac.uk/theoretical-physics/research/

Welcome back to Dr. Bobby Acharya



It is of course no coincidence that we chose this issue, dedicated to Tom Kibble, to celebrate our **first Kibble Fellow: Bobby Acharya**. Bobby learnt all the mysteries of Advanced Quantum Field Theory from none other than Tom Kibble in 1993–94. But while the Salam Centre and Kibble's legacy hold a special place in Bobby's journey, his story is so rich that it spans continents, cultures, fields and even spacetime dimensions.

Bobby was born in Uganda, though as a child he was among the many Ugandan Asians who sought refuge in London during the Idi Amin dictatorship. Whether London has become, or will become, a second home to him is for us to find out, but it is there that theoretical physics managed to get hold of him.

Driven by his passion, he completed his QFFF MSc at Imperial before moving to QMUL for his PhD, where he worked on Joyce compactifications of string and M-theory with Chris Hull, and met many members of the theory group who later moved together to Imperial.



Now a Professor and Senior Research Scientist at ICTP, where he has been based since 2004, there is a certain symmetry to the ICTP–Imperial duality: the two centres of theoretical physics founded by Abdus Salam have both played defining roles in Bobby's life.

Bobby's research lies at the frontier of M-theory and mathematical physics. He pioneered the study of G2-manifolds and special holonomy spaces, work that has deepened our understanding of confinement and the nature of chiral fermions, while opening new directions in geometry and topology. He was a PI and executive committee member of

the Simons Collaboration on Special Holonomy in Geometry, Analysis and Physics, supported by a \$14M Simons Foundation grant. At the same time, as founder of the ICTP ATLAS group, he has led significant contributions to measurements of the top quark and Higgs boson at the LHC—a unique and distinguished combination of mathematical depth and experimental application.

But perhaps equally remarkable is his commitment to building physics beyond the traditional centres of the field. He founded and developed several projects aimed at fostering science, education and research in low- and middle-income countries, including the African School of Fundamental Physics and Applications, which has taken place across the continent—from South Africa to Ghana, Senegal, Rwanda, Namibia, Morocco and, most

recently, Kenya—and has been a driving force behind the ICTP Physics Without Frontiers programme. In recognition of these efforts, he was awarded the Lawrence Bragg Gold Medal and Prize by the Institute of Physics in 2018.

In addition to collaborating with members of the Centre and conducting groundbreaking research,

as a Kibble Fellow Bobby will help strengthen the connection between ICTP and the Salam Centre at Imperial, particularly through the Salam Fellow programme and new opportunities for ICTP students. We very much look forward to collaborating with him.

When asked about re-joining Salam's Centre at Imperial, Bobby reflected, in the most modest and yet profound way: "It's nice that the two centres of theoretical physics founded by Salam have played a key role in my life." But that doesn't even begin to capture just how lucky theoretical physics is to have found Bobby.

Abdus Salam Centre Activities

Conferences and Workshops

The Abdus Salam Centre hosted several major meetings at Imperial during 2026, reflecting the breadth of activity across the Centre and its strong links with both the UK and international theoretical physics communities. In the past 6 months alone, more than half a thousand theoretical physics experts from across the World visited the Salam Centre for a dedicated event.

In March, in addition to Kelly's memorial conference, the UK Cosmology Meeting, organised

by **Sebastian Céspedes**, **Sadra Jazayeri** and **Claudia de Rham** brought together researchers from across the country and beyond for a lively exchange on current questions in cosmology and provided an important platform for younger researchers to present their work.

In July, Imperial hosted **Holography at Finite N** organised by members **Jesse van Muiden**, **Carlos Barredo** and colleagues. The meeting focused on understanding quantum gravity beyond the semiclassical limit, bringing together researchers interested in how holography can be extended into regimes where quantum corrections become essential.

This was followed in August by the large international **Bootstrap 2026** conference, organised by **Shai Chester** and colleagues. The meeting attracted a strong international audience and featured a number of prominent international speakers from across the field.

Members of the Salam Centre were also involved in the organization of the **Yerevan Workshop on Higher Spins** in Armenia.



Seminars and Colloquia

All of these activities took place alongside the Centre's regular seminar series, which had a particularly strong and varied programme this year. Speakers ranged from leading figures in observational cosmology, such as Hiranya Peiris, to prominent condensed-matter theorists including Andrei Bernevig.

For information about future conferences, workshops, summer schools and seminars, please visit the Abdus Salam Centre website.



UK Cosmo at Imperial



A national meeting bringing together the UK cosmology community and celebrating Tom Kibble's legacy.



The Abdus Salam Centre hosted the 2026 UK Cosmology Meeting on 25 March, bringing together more than 100 researchers from universities and institutes across the UK. The annual meeting provides a national forum for exchanging ideas across theoretical and observational cosmology, with a strong emphasis on early-career researchers. For several PhD students, UK Cosmo was their first opportunity to present their work at a national conference.

A lot has changed since the first UK Cosmo in 1989, which was a small blackboard meeting with a few people in Tom Kibble's office, when cosmology was not yet recognised as a field in itself. 25 years later, UK Cosmo counted 120 participants from all over the UK, covering topics ranging from cosmic strings and CMB to novel discoveries, such as gravitational waves and hints of

dynamical dark energy. There were 10 brilliant whiteboard talks from early-career researchers and an active poster session (advertised in 22 2-minute pitches!). These were complemented by the recollections of Anne-Christine Davis and Ed Copeland, who gave a warm and personal portrait of Tom Kibble, his contributions to physics and the history of UK Cosmo. Danièle Steer's plenary showed how, 50 years after Tom Kibble's paper on cosmic strings, research in this area remains active: cosmic strings loops produce short repeated GW bursts, forming a quasi-periodic signal that might be detected in future GW detectors such as LISA.

to cosmology today. In keeping with the tradition he established, all contributed talks were given at the blackboard rather than with slides, preserving the informal style of the original meetings and encouraging direct discussion between speakers and the audience.



Black Holes at the Great Exhibition Road Festival



Members of the Abdus Salam Centre brought black-hole physics to visitors of all ages.

The Abdus Salam Centre for Theoretical Physics took part in this year's Great Exhibition Road Festival with an exhibit centred on the physics of black holes. Led by Professor **Toby Wiseman**, students and staff spent the weekend talking with visitors about what black holes are, how we detect them, and why Hawking radiation makes them much stranger than the name suggests.

This year, the Centre's stand was paired with an arts-and-crafts activity led by PomegranART, where visitors made colourful black-hole ornaments while learning about the science behind them. The stand was particularly popular with families and children, and prompted many conversations about black holes, one of the Centre's active areas of research.

The format worked especially well because it gave the team plenty of opportunities to move from simple questions about gravity to deeper ideas about spacetime and quantum physics.

The Festival is one of the Centre's main public-engagement events of the year and gives researchers a valuable opportunity to speak directly with people who may not otherwise encounter theoretical physics. It takes place each summer across Imperial and the neighbouring institutions on Exhibition Road.

The next Festival will take place on 19–20 June 2027.

Engagement and Outreach

Public talks and media

Since March 2026, members of the Abdus Salam Centre have taken part in a wide range of public talks, interviews and science communication activities.

Shai Chester spoke at the Royal Society's Meeting of Minds conference on Conformal Field Theory: from boiling water to the fabric of spacetime, later appearing at Strings 2026 in Shanghai. He was also featured on a podcast interview.



Claudia de Rham featured on the BBC podcast Unexpected Elements, contributed to the HowTheLightGetsIn festival, gave public lectures at the Royal Albert Hall, at the Palais des Papes in Avignon, at the Orkney International Festival, at Nepal ScholarPath and at the London International Youth Science Forum. She also delivered the Millis Lecture at Case Western Reserve University and took part in several podcasts and interviews on gravity and cosmology, including the World Science Festival with **Brian Greene**. **Antoni Valentini** discussed foundational questions in quantum mechanics on BBC Radio Wales, recorded a movie on quantum mechanics with Jim Al-Khalili and wrote a book reconsidering reconsidering the crucial 1927 Solvay conference in the context of current research in the foundations of quantum theory. **Fay Dowker** appeared on the I, Science Radio podcast and wrote a popular article on the role of time in quantum gravity while **Toby Wiseman** took part in the BrightThink event Our Incomplete Universe. **Arttu Rajantie** also gave a public talk on magnetic monopoles in ICTS in India, reviewing how these elusive particles are searched for in astrophysical observations, cosmic rays and collider experiments, including recent searches at the LHC.

Schools and education



Engagement with schools and teachers has also been an important part of the Centre's activity. **Shai Chester** and **Jerome Gauntlett** gave outreach lectures at St Paul's Girls' School, with Gauntlett speaking on string theory, black holes and quantum spacetime. **João Magueijo** gave invited talks for high-school physics teachers in Porto and Lisbon, contributing to broader discussions around physics education. **Arttu Rajantie** also gave a Friends of Imperial lecture to a full audience, including several school groups. Several members of the group, lead by **Toby Wiseman**, participated in the Great Exhibition Road Festival with a stand on black holes.

Remembering Tom Kibble

Ten years after his passing, Professor Arttu Rajantie looks back at Tom Kibble's scientific legacy and the continuing importance of his ideas.

It is ten years since Tom Kibble passed away, and I would like to share some of my recollections of him and his legacy.

Tom was, of course, best known for his work on spontaneous breaking of gauge symmetries. Together with Hagen and Guralnik, he published a paper in 1964 showing that it gives a massive vector boson but no massless Goldstone scalars, which is now known as the Higgs mechanism. It was also discovered independently by Higgs and by Brout and Englert. Only Higgs pointed out that it also leaves behind a massive neutral scalar, the particle that is now known as the Higgs boson.

However, all these papers were about Abelian symmetries, and the key step of generalising the mechanism to non-Abelian gauge theories was taken by Tom in 1967, as those who have been to my Unification lectures know very well. This was the basis on which Weinberg and Salam built their theory of electroweak unification a year later. As Weinberg put it, Higgs and others showed why weak gauge bosons are massive, but Tom showed why the photon is massless. In 1972, 't Hooft and Veltman showed that these theories are renormalizable, referring to this as the Higgs-Kibble mechanism in their paper.

After the Higgs boson was discovered at CERN in 2012, the Nobel prize was awarded to Higgs and Englert. Under the Nobel rules, a prize can be shared by at most three people, and while Brout had passed away, it was not possible to include all authors of Tom's 1964 paper. Many people – including Higgs himself – have said that the Nobel committee could have included only Tom based on his non-Abelian paper, but sadly they chose

not to. I remember how after the announcement I walked down to Tom's office. I am sure he was disappointed, but in a characteristic way, he did not show that. Instead, he said that it would not have been fair to give it to him and not to his collaborators, and that he was happy for Higgs and Englert.

So, even though he never received the prize himself, his work underpinned three Nobel prizes: Weinberg and Salam in 1979, 't Hooft and Veltman in 1999, and Higgs and Englert in 2013.

Tom's other major contribution came in 1976 when he showed that when a symmetry breaking phase transition happens in real time, like in the early



Artwork courtesy of Elisa Quevedo

Universe, then it can produce topological defects such as domain walls, cosmic strings or monopoles, depending on the symmetry breaking pattern. This is because the order parameter does not have time to align over large distances, leading to a domain structure and defects at the boundaries between domains.

Especially cosmic strings were very exciting, because they were once considered a promising explanation for the origin of cosmic structure. Although observations of the cosmic microwave background later showed that they cannot be the primary source of the observed density perturbations, cosmic strings could still exist, and one of the science goals of the LISA gravitational wave observatory is to search for their signatures.



This phenomenon of defect formation is known as the Kibble mechanism, and it is not limited to cosmology. There are symmetry breaking phase transitions in many condensed matter systems, and if the topology is right, they produce topological defects, too. In fact, perhaps the most familiar example of it is ice cream. If you just put custard in the freezer, you get a big solid block of frozen custard. But if you freeze it fast enough, the Kibble mechanism means that you get only small crystals, and therefore nice and soft ice cream. In practice, one also stirs the mixture to ensure this happens, but rapid freezing is the essential idea.

Indeed, in the 1990s, Tom used this connection with condensed matter physics to pioneer the idea of cosmology in the laboratory, working with low-temperature physicists to test the Kibble mechanism and other aspects of fundamental physics through analogies like this. This is still an active area of research.

This interdisciplinary endeavour is also the reason I got to know Tom and ultimately ended up here at Imperial. I did my PhD in Finland, on finite-temperature field theory, and in January 1998 I

was applying for postdocs. At that time, Tom was working with low-temperature physicists at the Helsinki University of Technology on liquid helium tests of the Kibble mechanism, and they organised a workshop at a remote biological research station in Finland. It is a beautiful place in summer, but in January it is just cold and isolated. But it was great because Tom was there, and I could talk with him about defect formation. In particular, I had been thinking about how it would have to work differently in the case of gauge symmetries.

I was struck by how approachable Tom was for someone with his achievements. He was quiet and modest and preferred to stay out of the limelight, and he was happy to discuss physics with a young researcher like me. After that workshop, I was so excited about this area of research that I chose to accept a postdoc offer from Sussex rather than some better-known places, because Sussex was close to Imperial and because there were two of Tom's

young collaborators, Mark Hindmarsh and Ed Copeland, there. After Sussex, I ended up going to Cambridge for five years, and then here to Imperial.

Altogether, I ended up writing four papers with Tom, two of which were on defect formation in gauge field theories. It was characteristic of Tom that he did not have a problem with the idea that the Kibble mechanism needs to be modified in the case of gauge symmetries. Some referees certainly did – even when one of the authors was Kibble himself. Therefore, it took a long time to get one of these papers published.

Ultimately, the most remarkable thing about Tom was not just his mathematical ability, which allowed him to calculate what happens when gauge symmetries break and how particle spectra or topological defects depend on the symmetry breaking pattern. It was his deep physical intuition, which guided his work and enabled genuine breakthroughs rather than incremental advances. Combined with his modesty, generosity and willingness to engage seriously with younger researchers, that is what made him such an exceptional scientist and colleague.

Returning Home, Looking Forward

Former Centre member Sebastian Cespedes reflects on returning to Chile and on a scientific connection with Imperial that reaches back more than sixty years.

A few months ago, I left Imperial and moved back home, where I started a new position as Assistant Professor. The transition has not been completely easy. There are many new responsibilities that come with starting a permanent academic job, from teaching and supervising students to getting used to a different university system. At the same time, it has been very rewarding to return and feel that I can contribute directly to the community where I first studied physics.

The theoretical cosmology community has grown steadily over the last few years, and this felt like a good moment to come back. There is now a very active group of researchers working on cosmology and related areas, with strong international connections. I wanted to be part of that growth, not only through research, but also by helping to train younger researchers and future physics teachers. More broadly, the country has developed an increasingly visible role in science across Latin America, and it feels important to contribute to strengthening that position from within.

One thing I found particularly interesting after returning is that there is actually a long history connecting Imperial with the Chilean physics community. One of the key figures in the early development of modern physics in Chile was Igor Saavedra, who worked as a postdoctoral researcher at Imperial in the late 1950s, during the early days of Abdus Salam's group.

There is a story that Saavedra was offered the possibility of staying at Imperial in a permanent position, but decided instead to return to Chile. Whatever the exact details, what followed is clear: he became one of the most important figures in

the development of physics in the country and helped establish the Department of Physics that I have now joined.

His contribution went far beyond one department. Saavedra was part of the generation that helped build much of the scientific structure that Chile has today. He contributed to the creation of institutions, to the training of new scientists, and to establishing a culture in which research could develop more strongly. That work helped Chile become one of the most important scientific hubs in Latin America, particularly in areas such as astronomy and physics, and created opportunities that have benefited researchers well beyond the country itself.



I find that connection quite striking. More than sixty years later, I have followed a similar path, returning from Imperial to the same department that Saavedra helped build. The circumstances are very different, but the underlying idea of bringing experience back home and helping strengthen the local scientific community feels unexpectedly familiar.

Future Activities



Outreach and Engagement

Claudia de Rham will take part in several major public and scientific events this autumn. On 25 October 2026, she will give a public lecture with Kip Thorne following the 30th Solvay Conference on Physics, where she will also participate as a plenary speaker.



On 22 November, she will appear at Bach, the Universe & Everything with the Orchestra of the Age of Enlightenment at King's Place in London, an event combining music with ideas from cosmology and fundamental physics.

She will also give a public lecture at the London International Youth Science Forum, speaking to around 400 students aged 16–21 from across the world.

Keep in your calendar

Bootstrapping String Theory

Shai Chester, will be giving a four-part course at the London Institute for Mathematical Sciences, 21 Albemarle Street. 12, 19 & 26 October and 2 November · 10:30am

Public Talk on Science Communication

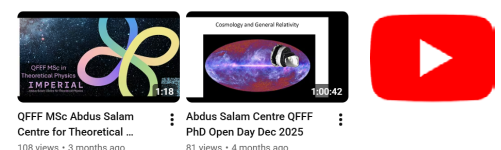
Kibble Fellow **Christophe Galfard** will give a special lecture open to all to learn how to engage scientifically with the public in an impactful way. Join us at Imperial in LT1 on **9 December**.

Salam @101

A celebration marking 101 years since the birth of Abdus Salam, organised by the Salam Centre **29 January 2027**.



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