Spring Edition – Term 1

Bournemouth School's Student

NEWSPAPER

Current Affairs | Science | Maths| Humanities | Languages

CCF sleepout raises over £1300

Over 30 cadets participated to raise money for Royal Britsh Legion

On Friday 2nd March, 38 cadets accompanied by 6 adult volunteers slept out in the copse in order to raise money and awareness for the Royal British Legion who use money raised to provide safe, warm housing for the homeless and help ensure everyone has a fair opportunity to gain employment.

Led by the older NCOs the Year 9 cadets set up camp which comprised of a basha, roll mat and sleeping bag. The cadets then partook in a range of activities, including night patrolling and laser tag.

In all, £1330 has been raised for the cause with over 80 supporters kindly contributing.

The cadets pictured playing laser tag on the field.
To donate to the cause please visit:
Great Tommy Sleep Out Fundraiser

FRENCH

Macron to “give the Mona Lisa back to the Parisians” by burying it underground and charging a fee to see it

On the 28th of January earlier this year, Emmanuel Macron announced the €800,000,000 plans for his new project dubbed as the “Louvre Nouvelle Renaissance”, or in English, the ‘Louvre New Rebirth’. The 10-year plan involves a revamp of the internationally famous museum, creating both a new visitor entrance and a new dedicated exhibition space to display the da Vinci masterpiece.

The reform came after a leaked letter from one of the Louvre presidents, Mrs. des Cars, described the conditions in the Louvre as “poor” and “structurally unable to cope” with the 30,000 daily visitors. The general visitor gets, on average, a measly 50 seconds to observe the Mona Lisa and take pictures, leading the president to bring into question the Louvre’s ability to actually fulfil its purpose of allowing people to appreciate the beauty of art. Furthermore, the relocation of the Mona Lisa would allow the museum to present it properly, bringing attention to other “too often overlooked” masterpieces.

The new entranceway will provide immediate access to the new underground exhibition spaces and supposedly reduce traffic in the Louvre. The tickets to this new exhibition will be available separately from tickets to the normal Louvre.

To fund this project, Macron will rely upon private philanthropic donations as well as the revenue generated by the soon-to-be-introduced tariffs for non-EU residents.

In my opinion, I think that this redesign will have an overwhelming impact on the circulation issues in the Louvre, so overwhelming that 80% of traffic will be gone. It’s estimated that a shocking 4/5 people who go to the Louvre go with the intention of seeing exclusively the Mona Lisa. If the new space that houses it is not substantially bigger, the average 50 seconds of viewing time may well be cut down to 5 seconds due to lengthy queues. This would leave the Louvre practically empty and the new exhibition practically full of disgruntled tourists.

by Daniel Hipkiss

Protesters voice their views on the Mona Lisa with cans of soup

RELIGIOUS STUDIES

Gen Z becomes the most religious generation in the UK

How many times have you been told that religion is on a decline in the UK? Doesn't it feel a lot like religion is a dying species and will soon be replaced by rampant secularism? The 2021 census revealed a plethora of shocking insights concerning the religious affiliation of Britons, with Christianity no longer being a majority religion, and non-religiosity skyrocketing in popularity. While the figures seemed to suggest that secularisation had taken a foothold, and it was only a matter of time before traditional religion faded out of Western society, the situation is actually surprisingly more nuanced. A recent OnePoll survey involving 10,000 participants found that Gen Z is the most likely generation to be religious in the UK. In fact, teens and young adults are half as likely to identify as atheists than their parents, a quarter of whom call themselves atheists. Atheism is so unpopular among 18–24-year-olds, with only 1 in 10 young people rejecting the belief in God or a Supreme Being. For the first time, men are more religious than women, with many young women claiming 'spiritual' beliefs, such as crystals and astrology. Yet it is also true that belief in traditional religion, such as Christianity and Islam, hasn't seen much increase amongst young people, but the number of those who call themselves 'nones' is dwindling fast. No one really knows the future religious landscape of our nation, but if the trajectory continues as it is, the populace will swing sharply to the other direction. Religion isn't going any time soon, and it appears that God is making a comeback.

By Luca Dante Gallicchio.

SPANISH

Trump vows to deport hundreds of thousands of Hispanics from the US

Since Trump's inauguration on January 20th, he has already signed executive orders to deport thousands of illegal immigrants. 9 days after gaining power for the second time, the president called for TPS to be cancelled, even though Biden had extended it at the end of December 2024. TPS allowed people who had fled unsafe countries (due to wars, natural disasters, or humanitarian reasons) to reside in the United States for safety. As a result of its cancellation, hundreds of thousands of people from Latin and South America will be deported very soon, as their protection in the U.S. will have come to an end. Many come to the US fleeing from gang-infested Venezuela, Honduras and Nicaragua, and they fear for their lives if they are forced to return. The Trump administration is saying that it must protect the population from illegal aliens who threaten the safety of citizens. Florida Democrats have pleaded that Trump have mercy on the Venezuelan refugees who will struggle to survive if they go back home, but, from the 7th of April, these Hispanics will be kicked out of the United States.

By Luca Dante Gallicchio.

PHYSICAL EDUCATION

UK and EU urged to follow US and block funding for World Anti-Doping Agency

The US government has declined to pay its $3.6m (£2.9m) 2024 contribution to Wada and looks unlikely to pay in the future under the administration of Donald Trump after it emerged last year that Wada had cleared 23 Chinese swimmers to compete at the Tokyo Olympic Games in 2021, even though they had tested positive for the banned heart drug -trimetazidine. Wada accepted the Chinese Anti-Doping Agency explanation that a kitchen at a team hotel could have contaminated all 23 samples.

An independent report into the China case, published last year, criticised Wada's "disorganisation" and found that China's anti-doping agency "had deviated significantly and fundamentally from … procedure" but cleared Wada of bias. However, the scientific basis for clearing the Chinese athletes has not been fully revealed and critics now want those documents published.

What does the EU think?

Helleland, who has tabled questions in the Norwegian parliament on future funding, said: "We have a global anti-doping organisation stripped of integrity and failing to fulfil its duties. Its role is to combat doping and ensure fair competition among athletes, yet it now appears more focused on protecting the interests of the dark forces undermining sports.

https://www.bbc.co.uk/news/articles/ce4qp5ny0eeo
- Chinese swimming scandal

"As long as Wada fails to operate independently and transparently and shows no willingness for internal reform and change, Norwegian taxpayers should not contribute to the organisation. The government should follow the US lead and withhold our funding. Failing to support the Americans would mean siding with Wada and China.

What does WADA say?

A Wada spokesperson said: "Annual contributions by governments to Wada are not conditional upon demands such as these. Beyond this, it wouldn't make sense to choose to weaken the global anti-doping system for athletes in this way given that Wada was deemed to have properly handled the contamination cases involving the Chinese swimmers.

"An independent investigation of Wada's handling of this matter … determined that Wada showed no bias towards China, that its decision not to appeal the cases to the court of arbitration for sport was 'indis-putably reasonable', and that it followed the rules at all times.

"Accordingly, during Wada's December executive committee meeting, a range of -recommendations was unanimously approved."

By Laras Mckenna

CHEMISTRY

New Superconductor Aims to Revolutionise Technology

In a ground-breaking discovery, researchers have confirmed a new form of superconductivity in transition metal dichalcogenides (TMDs), materials that could revolutionize energy transmission and computing. Scientists at Columbia University and Cornell University have independently demonstrated superconductivity in these materials, but in different and unexpected ways.

Superconductors are materials that can conduct electricity without resistance. At normal temperatures, electrons move in somewhat erratic paths, colliding with nuclei of the material obstructing the flow causing resistance and the material to heat up. However, in superconductors the nuclei of all the atoms are constantly vibrating, so instead of moving around randomly, the moving electrons get passed from atom to atom in such a way that the keep in sync with the vibration of the nuclei. This coordinated movement produces no collisions and therefore no resistance and no heat. Making them highly valuable for energy efficiency. Traditional superconductors require extreme cooling and specific conditions, limiting their practical applications. However, the latest findings suggest that TMDs might offer new, more accessible pathways to superconductivity.

The Columbia University team discovered superconductivity in TMDs by tweaking the number of electrons in a layered structure of these materials. By adding electrons, they noticed that the material transitioned into a superconducting state at a specific electron density.
Meanwhile, the Cornell University team found superconductivity in the same type of material but without adding any extra electrons. Instead, they adjusted the strength of an applied electric field, which caused the material to become superconducting. This behaviour doesn't fit existing theories of superconductivity, suggesting a completely new mechanism at play.

This discovery points to new ways of achieving superconductivity without extreme conditions. If scientists can further understand and control this behaviour, it could lead to energy-efficient electronics, lossless power grids, and even advancements in quantum computing.
Superconductivity has long been a dream for researchers aiming to reduce energy waste. While traditional superconductors require ultra-low temperatures, this new class of superconductors could operate under more practical conditions, bringing us closer to real-world applications.

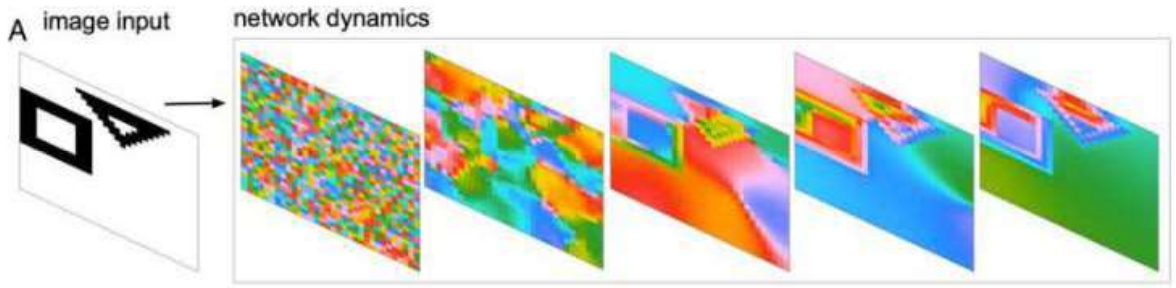
The researchers now aim to explore the fundamental physics behind this phenomenon. Further studies will determine if this new superconducting state can be replicated in other materials and at higher temperatures.
With this discovery, the field of superconductivity is entering an exciting new era—one that could redefine how we generate, transmit, and use electricity in the future.

By Sami Babiker-Moore

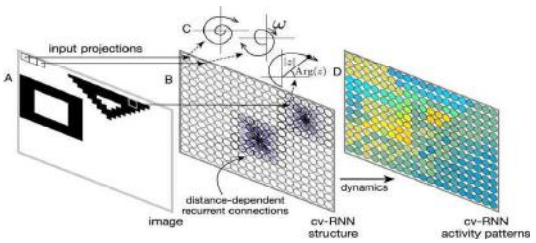
How maths can open the ‘blackbox’ of AI decision making

Artificial intelligence or AI for short is intelligence exhibited by machines that can perceive their environment and use learning and intelligence to help them better achieve a set goal. Simply put, AI is computer systems that can learn and better themselves. Many of today’s technologies are powered by some form of machine learning. However, researchers are now creating neural networks – models based on the human brain.

A western team of researchers demonstrated the new advancement on image segmentation – a process where machines divide images into distinct parts (like many separate images that combine to make the image).



The team then used a mathematical approach to understand how each step of the computation occurred, and then used the system to segment natural images. Through simplifying the process to apply it to maths, they were able to construct a more flexible network and Muller, a member of the Western Institute of neuroscience stated it “performed well on new inputs it had never seen”. This therefore has implications beyond simply image processing, as other researchers have even successfully connected their network to a living brain cell thus creating a hybrid system that bridges artificial and biological neural networks which offers a promising future for the use of AI in biological and mathematical research.



By Aden De Silva

^ schematic representation of cv-RNN where the activity of each node is described by a phase -arg(z\- and an amplitude- (mod(z)- in the complex plane.

Spending on the NHS continues to rise

Spending on heath predicted to rise to over 10% of GDP before 2050

With the ageing UK population and a strong demand for new medicines and treatments spending on the NHS is continuing to rise with the new labour government. Following the NHS's founding in 1948, by Clement Atlee and Aneurin Bevin, in a time of social reform for the UK following the war, it was estimated that £17bn was spent on healthcare. However, by 2023-24 it had grown to £226bn. Although initially this seems excessive, advancements in sanitation, vaccinations and treatment for a variety of new diseases that have only been a product of greater life expectancy have resulted into continued investment into the sector.

The office for budget responsibility (OBR) projects that UK public healthcare spending will rise by 3% yearly (after inflation) resulting in an extra 1% of GDP spent on healthcare ever 10 years. Due to this, many politicians argue that this is in part due to low productivity levels from the health service. The OBR estimates that if NHS productivity grew that the overall rise in health spending could be limited to 11% of GDP (rather than 14.5%) but current data implies that productivity levels are unlike to grow.

However, despite this an independent economic research institute (institute for fiscal studies) observed recent improvement in productivity following the pandemic, displaying that improvement is possible.

By Aden De Silva

How blockchain could revolutionise UPI

Unified Payments Interface (UPI) is a real-time mobile payment system developed by the National Payments Corporation of India (NPCI) and regulated by the Reserve Bank of India (RBI). It allows for instant peer-to-peer interbank transfers using a single identifier, eliminating the need for sensitive banking details or physical cards. UPI integrates with multiple banks and financial institutions, enabling users to link their bank accounts to apps such as Google Pay, PhonePe, or Paytm. With secure two-factor authentication, including OTP or biometric verification, UPI supports various payment types, such as bill payments, barcode payments, and recurring transactions. This promotes cashless transactions and digital banking in India. By utilising existing systems like IMPS and AEPS, UPI ensures seamless and efficient transfers, enhancing its accessibility and scalability.

Unlike NFC-based payment systems like Apple Pay, UPI links your bank account directly to a Virtual Payment Address (VPA), bypassing the need for credit or debit cards. UPI also offers real-time, instant payments, making it quicker than NFC systems, which may take longer to process. Furthermore, UPI is more cost-effective than card networks, typically charging no transaction fees for users and very low fees for merchants. UPI's inclusivity is another advantage, as it allows individuals without credit cards or NFC-enabled devices to make digital payments via smartphones, thus promoting financial inclusion.

In terms of security, UPI provides several advantages over NFC-based payment systems. Both UPI and NFC payments implement two-factor authentication (2FA) and encryption, but UPI goes a step further by linking bank accounts to a Virtual Payment Address (VPA), which serves as an alias for the user's bank account number. This reduces the risk of exposing sensitive information during transactions.

However, UPI still operates within a centralised banking system, which has led to growing public distrust. Since all data is stored centrally, it becomes more vulnerable to breaches. This centralisation is one of the reasons that led to the development of blockchain by Satoshi Nakamoto in 2008—a decentralised, peer-to-peer electronic cash system.

Blockchain, while often associated with cryptocurrencies, has far broader applications across industries such as supply chain management, healthcare, and voting systems. Put simply, blockchain is like a digital ledger, shared and open to many people simultaneously. Once something is recorded in the ledger, it cannot be altered. Each set of recorded transactions is called a block, and as new blocks are filled, they are added to the previous ones, forming a chain. This open and immutable ledger allows everyone to access, verify, and trust the information recorded. Transactions are verified by solving complex mathematical equations in a process known as mining. Once verified, the block is added to the chain. Blockchain operates without the need for a central authority, making it more secure and resistant to tampering as the ledger is distributed across many computers. Furthermore, the use of encryption with public and private keys protects participants' privacy and ensures the integrity of the data. The decentralisation, transparency, and cryptographic security of blockchain make it a trusted and efficient method for recording transactions in a wide range of industries.

So, how can blockchain enhance UPI? The integration of blockchain with UPI could bring four key benefits: enhanced fraud protection, automation through smart contracts, decentralisation, and faster cross-border payments.

Blockchain's cryptographic features, such as hashing and public-private keys, could provide further security to UPI transactions, making it almost impossible for hackers to alter transaction data once recorded. This would significantly reduce the risk of fraud or data manipulation. In addition, blockchain enables the use of smart contracts—self-executing agreements where the terms are written directly into the code. For UPI, this could streamline processes such as automating refunds or providing real-time confirmation of payments once specific conditions are met.

Integrating blockchain into UPI would also promote decentralisation, shifting away from a centralised system controlled by a single entity. This transition would reduce the risks associated with centralised databases, such as data breaches or system failures. Lastly, while UPI currently handles mostly domestic transactions within India, blockchain could facilitate faster and more cost-effective cross-border payments. By removing intermediaries, blockchain could enable near-instantaneous global transactions, lowering the high fees usually associated with international transfers.

While integrating blockchain into UPI offers numerous benefits, it also presents several challenges. One major concern is scalability, as blockchain networks—especially public ones like Ethereum—can struggle to handle large volumes of transactions simultaneously. Given UPI's daily transaction load, any blockchain solution would need to be highly scalable to meet demand. Additionally, transitioning from a centralised to a decentralised payment system would require significant regulatory and infrastructural changes, posing adoption barriers for both financial institutions and government bodies. Another challenge is the energy consumption of certain blockchain networks, particularly those using proof-of-work protocols like Bitcoin, which can consume vast amounts of energy. This could pose sustainability issues for the large-scale use of blockchain in UPI.

UPI has made digital payments easy, but could blockchain make them even safer and faster? If the future of money is digital, should we trust banks or technology to handle our transactions?

A shopkeeper in India processes a digital payment via UPI.

ENGLISH LITERATURE

‘The price of passion in literature’

Dostoyevsky portrayed love as anything but a simple, joyful experience. Rather, it emerges as a perilous aspect of the human condition and is deeply intertwined with guilt, obsession and suffering. Dostoyevsky’s characters aren’t just **in** love, they’re consumed by it, to the point that it becomes a burden. But is this bleak depiction of love a universal truth, or is it a reflection of his own struggles?

In *Crime and Punishment*, Raskolnikov is torn between the desire to redeem himself through love and the belief that his actions are justified by a higher moral calling. Love, for him, becomes a force that traps him in his own torment, unable to reach redemption until he accepts the full weight of his guilt.

Similarly, in *The Brothers Karamazov*, Dmitri's love is both redemptive and corrosive. He seeks solace in Grushenka’s affection, but his obsession with her exacerbates his inner chaos and contributes to his moral and spiritual decline.

However, the idea of love presented in his books is not entirely without hope. Despite the overwhelming suffering his characters endure, there is an underlying belief that through love - whether through acceptance, repentance, or spiritual awakening - there lies the potential for redemption.

Dostoyevsky shows that to love deeply, we must open ourselves up to pain and vulnerability. Many of his characters, like Prince Myshkin in *The Idiot*, suffer because they choose to love openly, even when they know the risks. In real life, we often guard ourselves from the fear of being hurt or betrayed. But true love requires us to take risks, expose ourselves emotionally and trust others with our hearts. It’s not always easy, but it’s through this vulnerability that we experience the truest, deepest connections with others.

The pain that comes with love is the cost of truly experiencing it. Dostoyevsky shows us that love often leads to suffering—whether it's unreturned feelings, guilt, or obsession. But this pain is part of what makes us human. It’s in those painful moments that we understand love’s true depth.

- Ebaad Adnan

"I loved her, and I loved her with a love that was more than mere affection. I loved her with my soul. I lived for her."

DESIGN TECHNOLOGY

My Experience in Design Technology

My experiences of product design at Bournemouth school range from year 7 at 11 years old up to now, currently in the first year of my product design A-level nearly 6 years later; it has been and is still my favourite subject I have taken out of both my GCSEs and current A-levels. The design technology curriculum involves a lot more than just facts and theory work, we have an extensive practical regime in which all students can get hands on in one of our well-equipped workshops.

Projects within our A-level began with sketching and technical drawings such as isometric, 3rd angle orthographic and 1,2,3+ perspective drawings so all students had a good grasp of the basics. After this, we dived into a miniature NEA (Non-Examined Assessment) in which we all got to design, develop and create our own personalised model chair. This involved the use of our prior learnt sketching skills and CAD (Computer-Aided Design), with the schools very own laser cutter, and finally displaying the work on mounting boards.

Currently, we are now simultaneously completing two new projects that have never been done before within this school - an infinity mirror and joints box. The joints box is a neat and tidy way for all the students to develop our woodworking skills further so we are ready when our actual NEAs come around. The infinity mirror does develop basic wood working skills but also introduces students to working with electrics, soldering and plastics, however is mainly a fun product that students can take home after completion to use at home.

Modelling process -

By Beau Plowsmen

FPAN (Food Tech)

Robots step into the kitchen at the Consumer Electronics Show

This year's Consumer Electronics Show (CES) was held from the 7th of January 2025-10th in Las Vegas, Nevada where new technology was unveiled and presented to the world. This year did not disappoint, with boots that can help sore feet recover, an eco-friendly paper battery and even a solar-powered car! A huge proportion of this show, however, was all related to smart home cooking.

The 'Apecoo/Roti and Tortilla Robot Baker' measures, mixes, kneads, flattens and then cooks dough, crafting it beautiful flatbreads such as tortillas, chapati and dosa. The next one is a bit of an odd one: the 'Nékojita FuFu'. Why is it odd? It is a robot that attaches to drinks of food and then mimics human breath to cool them down… an interesting creation.

The main attraction of all the food robots though, was the 'Brisk-It'. This AI infused grill allows you to create recipes or generate them by simply taking photos of ingredients using the Brisk-It app. This app is also useful as it will give you a prompt when it's time to do something with your food like probing it. The app is an essential part of the Brisk-It grill, however, the focus of the Brisk-It is the grill itself. Using an AI program, it can automatically change the temperature of your food to keep it just right, and, if you miss a prompt, it will adjust the temperature to ensure your food is not ruined. Truly a remarkable piece of technology, although it's $850 price point means this product will only find itself owned by 'hard-core' grillers.

AI and robots seem to be becoming a lot more frequent in modern society, so, who knows what might be next? Robot artists becoming normalised? Robots taking the wheel on the road? The use of AI becoming a daily occurrence? Who knows, but, while all these smart cooking robots are a start, chefs don't need to be overly concerned yet, as it appears it will be a while before we see any robots dominating our kitchens!

By Arlo Garlinge

The new AI grill, Brisk-It, being presented at CES 2025

Monumental Gravitational-wave Data Released by LIGO

The Nobel-Prize-winning observatory strikes gold with fascinating discovery

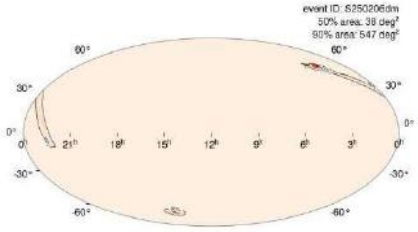
Astrophysics has hit the ground running this year with an enticing discovery from the prestigious Laser Interferometer Gravitational-wave Observatory (LIGO) team. The observatory, which consists of two major sites in Hanford, Washington and Livingston, Louisiana, is equipped with the extraordinary task of detecting the largest and most energetic events in the cosmos, and an event reported on the 6th of February 2025 looks to be the most significant yet.

But what are gravitational waves? First proposed by Heaviside and Poincaré in 1893 and 1905 respectively; later described by Einstein in 1916 as a prediction from his Theory of General Relativity the year prior, they are the gravitational equivalent of the waves that transmit electromagnetic radiation, such as visible light. Einstein, who described the universe as made of four-dimensional space-time, suggested that gravitational waves exist as ripples in the fabric of space-time itself. Think of them as the periodic stretching and contracting of the universe that results from enormous gravitational anomalies, such as the merger of a binary black hole system.

Despite Einstein's mathematical predictions of the phenomenon, gravitational waves were only discovered in 2015, a century after the theory that legitimised their existence. Following this initial success, LIGO has gathered much more data from recent events, together with its European and Japanese counterparts VIRGO and KAGRA. But just this February, one stood out. Despite researchers' ability to detect such events, determining the source is extremely challenging, which makes the 'S250206dm' event all the more exciting, as new information may enable researchers to do just that.

Pictured: the Hanford and Livingston observatories. Credit: LIGO/Caltech/MIT

At 21:25:44 UTC, gravitational waves travelling through the cosmos at the speed of light arrived at the Hanford and Livingston sites. Each site's two 4km-long arms, with an overall span of 1120km and capable of measuring a motion 10,000 times smaller than an atomic nucleus, detected a disturbance: a rapidly increasing strain (extension divided by the original length) that reached a peak amplitude before settling down just as soon as it appeared. Having two sites not only corroborates the data by reassuring researchers that the event was not a false positive but also helps to identify the location of the source.



The estimated source location of the anomaly, thought to be caused by a neutron star merge. Credit: gracedb.ligo.org

On the other side of the globe at the IceCube neutrino observatory, a streak of Cherenkov photons characteristic of a neutrino signature pierced through the Antarctic ice, just five minutes later. This burst of neutrinos - very weakly interacting particles that pass through our bodies every second - was indicative of a large-scale and violent cosmic event, and, sure enough, the possible source locations were consistent with the LIGO data. But that's not all, as only one minute after the LIGO detection, the Canadian Hydrogen Intensity Mapping Experiment (CHIME) also measured a fast radio burst, albeit with only a 0.1% chance that it coincides with the correct spatial direction.

Nonetheless, with the joining together of data from all corners of physics: from relativity to particle physics to electromagnetism, it is likely that future research will hinge on such 'multi-messenger' astronomy. This international collaboration between scientists is exactly the mindset that won Weiss, Thorne and Barish the Nobel Prize in Physics for their work on LIGO in 2017, and it may facilitate the ground-breaking science that keeps our optimism alive amidst our unpredictable and busy lives.

By *Rory Sims*

An overview of Da Vinci and his rise to greatness

Da Vinci is one of history's most well renowned creatives, and a hugely innovative figure - but how did he rise to that point and what were some major steps in his journey to greatness? In this article we will take a brief look at his life and accomplishments.

Da Vinci was born on the 15th April, 1452 in Italy. He grew up with his father Vinci, having plenty of access to scholarly texts and being prompted to paint by his father.
After discovering an aptitude for painting, Da Vinci took an apprenticeship at the Workshop of Andrea del Verrocchio in Florence. Even at a young age, he displayed such incredible talent that his master allegedly decided to give up painting, because he was so clearly superior. He continued to improve his painting skills, and trained in mechanical arts. Noticing his talent, the painter's guild of Florence offered him membership, but he rejected them, and became an independent master in 1478.

As an independent master, he began to work on his first commissioned art in 1482 - "The Adoration of the Magi", a piece for a Scopeto monastery. However, he did not finish this work, as he moved to Milan to work for Duke Sforza there, for 17 years.
The nature of his work for the Duke was extremely varied: some days he could be designing sculptures or court festivals, whereas other days he would be designing weapons and machinery, even studying anatomy. His hugely varied work demonstrated his undying passion for innovation and his creativity.

But considering Da Vinci was a man of many interests, he often got distracted by other, more interesting projects, to the point that he left many works unfinished. He only completed 6 works in the 17 years under the Duke. Among these works were some of his most famous, such as "The Last Supper". One darker side of his work was his anatomical study, where he would have to cut up corpses to learn about the facets of the human body - a gross yet necessary step towards greater knowledge.

The Duke eventually fell from power, and Da Vinci was forced to find a new patron and direction for his work/research. He spent the next 16 years travelling around Italy, managing to design a bridge for Constantinople, paint “The Battle of Anghiari” and work for Cesare Borgia’s army during this time. But all of this work was leading to something greater – the Mona Lisa (which he would begin work on in 1503)

He worked under the pope for a while, not allowed to take apart corpses anymore due to the Pope’s forbiddance. After working for the Pope, Da Vinci worked for Francis I in France. As his career slowed down, Da Vinci taught, and produced anatomical studies.

In the end, Da Vinci died in 1519, having produced some of the most legendary pieces of art and innovation ever. He had managed to live a long, productive life (although most of his work remained unfinished).

(“The Last Supper” below)

By *Sam Norry*

Researchers for the first time find inanimate objects that can form synthetic worms.

Scientists at the University of Bristol has made a breakthrough on new “life-like” synthetic materials called ‘Active matter.’

Researchers at the university of Bristol has made a significant breakthrough in the development of synthetic materials that can move independently, as they resemble the movement and behaviour of worms. This new material falls under the novel umbrella term of “active matter.”

Unlike inanimate objects like wood or plastic, active matter consists of elements driven out of equilibrium by internal energy sources, enabling them to move autonomously. This research was done in collaboration with scientists from Paris and Leiden, they focused on special micron sized particles (one millionth of a metre) known as “Janus Colloids.” These were suspended in liquid and then subjected to an electromagnetic field, resulting in the formation of wormlike structures.

These fascinating results make researchers and scientists all over the world excited, as there are many applications for this new ‘active matter.’ This includes everything in the range between drug delivery and self – healing materials. In the future due to the fact that this material can move independently, it is possible to design swarms of particles that can be used for specific cell targeted medicines and treatments. Although this application may lie far in the future, it still shines a bright beam of light in the field of biology and medicine.

By *(Risinu Samaraweera)*

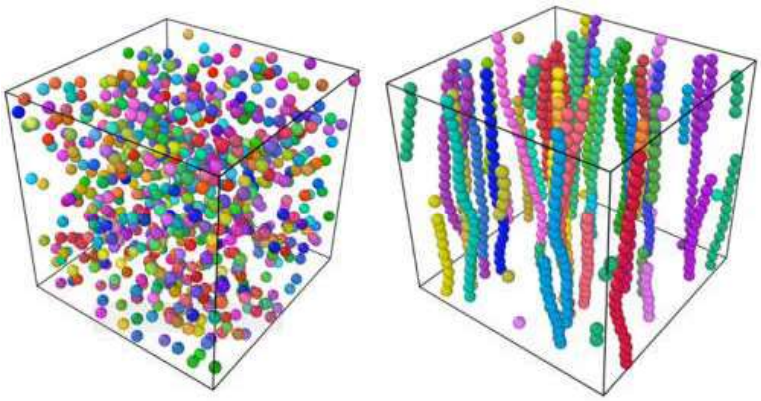


Image of Colloid particles moving independently under an electromagnetic field.

PREFECTS

New Senior Prefect Team introduced

As of February, half-term a new senior prefect team has begun to take over from the current year 13's, following the 'Dragons' Den' selection process from earlier this academic year.

The new team consists of both house and school senior prefects, both of which have been extended due to the increased year group size. In addition to this, each house has a team of prefects dedicated to different roles (sport, mentoring, communications etc.) that aim to have an increasing role in the school community with over 30 prefects scheduled to mentor younger students later this year.

School Captain – Luca Gallicchio

Hi I'm Luca, and I'm honoured to be Bournemouth School's School Captain, having been at Bournemouth School since Year 7. I am currently studying French, Spanish, RS, and an EPQ, and I thoroughly enjoy every moment of it. Besides from school, I love tennis, gardening, and snorkelling - although not in the frosty winter months. I think that success in school and life in general is vital, and I am always willing to help anyone who would like support in their studies or anything else.

Deputy School Captains - Will Olive, Kate Rosenorn-Lanng, Aden De Silva, Megan Pedley, Kimaya Pickering

Hi, my name is Will Olive, and I have been given the role as one of the deputy school captains. I take biology, chemistry, and maths as I love all 3 subjects. I am the head of education mentoring, and I'm excited to help the younger students perfect their skills to be ready for GCSEs, and get the top grades, with help from my eager mentors.

Hi, my name is Megan and I'm deputy school captain, overseeing year 7 and 8 along with Aden as well as pastoral mentoring. I'm currently studying biology, geography, psychology and core maths. In my free time I enjoy keeping active, cooking and I'm also completing my gold DofE. I hope to help and encourage the younger years through my role.

Hi, my name is Aden, and I have been given the role as one of the deputy school captains, overseeing years 7 and 8 alongside Megan. For A levels, I study maths, further maths, economics and history, and I am hoping to study economics at university. In my free time, I enjoy playing table tennis and the drums, and I hope to help encourage younger years to pursue their passions and engage in house events.

Hi, my name is Kimaya, I'm one of the Deputy School Captains for this year and will be overseeing years 11-13. Alongside Kate, I will be overlooking school council and all things to do with student voice. I'm currently studying Maths, Further Maths, Spanish and Psychology and in my free time I make sure I maintain a healthy work-life balance by seeing my friends regularly and keeping up with my hobbies. I'm looking forward to working with the rest of our team over the next year.

Hi, my name is Kate and I'm a deputy school captain and I am overseeing year 9 and 10 alongside Will Olive. In this role, I aim to make sure the voices of the lower school are heard and I'm here to listen so feel free to come to me to raise concerns or with ideas for improvements. I will also be an English

mentor, which will go alongside the 'masterclass' I run for year 11s. I love working with people and in my free time, I enjoy collaborating with and leading others in the Army Cadet Force.

Head and Deputy Head of Turner – Noah Sant and Bartosz Wegrzycki

Hi Bournemouth School, My name is Noah, and I am the new Head of Turner alongside my Deputy, Bartosz. As an external student, I'm super excited to join this amazing sixth form and give my all to the role. I can assure you I am absolutely committed to helping others and fostering growth, my career aspirations aiming at medicine would hopefully point towards that. My subjects include, Biology, Chemistry, Maths, and EPQ; but I promise that isn't my only focus, contrary to some of my friend's beliefs, I love hikes and the Beatles, as well as well-designed book covers. I am always open to questions and feedback, so reach out to me or Bartosz with anything Turner related.

Hi Bournemouth School, my name is Bartosz, and I am the Deputy Head of Turner, alongside the Head of Turner Noah. I have been at Bournemouth School since 2019, and I came from Jewell Academy. For subjects I have went heavily into STEM, with Maths, Physics, Further Maths, and computing, for each of which I participate in relevant societies and talks. I also take part in CCF and specifically I am in in the Royal Navy section, so I'm happy to talk about any of those matters.

Head and Deputy Head of Darwin – Matthew Jarvis and Adam Loader

Hello, my name is Matthew Jarvis and I am the new Darwin House Captain. It is a great privilege for me to be able to say that, as I have been in Darwin since I first joined in Year Seven and am very proud to be able to represent my house around the school. For my A-Levels, I am taking Biology, Psychology and Economics, with the hope of becoming a psychologist when I am older, as being able to help people and make a difference is something I am very passionate about. Outside of school, some of my interests are music and playing the guitar, along with doing sports, whether it be football or running. I am really excited about my new role and having the opportunity to give back to the school that has supported me so much since I joined all those years ago. I will make sure to always do my best and set a positive example, with the aim of hopefully inspiring the younger students to do the same.

I'm Adam, and I'm the deputy head of Darwin house. I take French, economics, and psychology and I aim to study economics at uni. I'm honoured to have this role and hope I can help Darwin be successful in all parts of school life.

Head and Deputy Head of Newton – Risinu Samaraweera and Laras Mckenna

I'm Risinu the new Newton house captain, I am extremely grateful to be in this position, and I intend to continue to work hard to make the school a better place. I have a deep passion for the sport of basketball, and I am very interested in biology - especially the field of medicine.

Hi, I'm Laras the new deputy house captain of Newton, I am indebted to have received this role and be able to work alongside such great people, I am a dedicated athlete representing both my club Bournemouth and the county Dorset competition to national standards. I take biology, PE, and psychology A levels in which I hope to study Sport science at university in order to pursue a career in the sport industry.

Head and Deputy Head of Scott – Aaryan Bidad and Ben Willis-Owen

Hi, my name is Aaryan Bidad and I'm the Head of Scott House. I am currently studying Biology, Chemistry, Design Technology, and Core Maths; with the idea to hopefully study Dentistry in the future. In my free time I enjoy training in martial arts, and currently I compete for England in Karate. I hope to better the Scott house and invoke motivation in our Form groups to win us the House Cup!

Hi everyone, my name is Ben Willis-Owen and I'm the Deputy Head of Scott House and I study A-Level Maths, Further Maths, Physics, and Computer Science. In my free time I enjoy competing in chess, judo and speed cubing, as well as long distance running. I hope to pursue aerodynamics in motorsport as a career and one of my future goals is to complete an Ironman Triathlon.

Head and Deputy Head of Moore – Archie Grogan and Ethan Chivers

Hi, my name is Archie and I'm the new Moore House captain. I'm studying English, History and Politics with the hope of studying law and becoming the next Harvey Specter. My biggest passion is surfing which I am an instructor in. It's an honour to be given this role and I hope I can help anyone who needs it.

Hi, my name's Ethan and I am currently taking A level PE history and Biology. I joined as an external student from Oak Academy and spend most of my time in the Great Outdoors, hiking, camping and even white-water kayaking.

Head and Deputy Head of Elgar – Fred Stow and Sai Sanikommu

Hey, I'm Fred and I'm thrilled to be house captain of Elgar this year. I am currently taking maths, further maths, physics and computer science at A level as well as being a keen sportsman outside of school. I aim to make Elgar a fun and inclusive house which students are proud to be a part of. I am also supported by an amazing prefect team who would love to hear from the students of Elgar as we believe every voice is valued. I look forward to seeing Elgar house thrive over the next year.

Hi, I'm Sai Sanikommu and I am the Deputy Head prefect of Elgar. It is a privilege to have this role. I enjoy playing rugby, representing the school with our first XV. I take Biology, Chemistry, Maths and EPQ as I aspire to be a doctor. I look forward to working with Fred our Head of House to bring a competitive and nurturing atmosphere in our house. We strive to make Elgar a better community for the younger years.

CREDITS

Thanks to all the students that have contributed to this paper and the teachers that made it possible:

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PE – Laras McKenna

To get involved in the next edition of the school newspaper (open to any year group) please contact: 19desilvaade@student.bournemouth-school.org