

Faculty News

UNIVERSITY of
STIRLING 

Faculty of Natural Sciences

23 February 2024



Longer term impact of brain injuries

A study of sports-related concussions has found that people are still experiencing physical symptoms 6 months after the initial traumatic brain injury (TBI). Researcher **Michail Ntikas, Psych**, analysed data of patients who were assessed when attending hospital immediately after their injury, then followed up at three months and six months. He found that those with brain injury in sports who attend hospital still have persisting problems six months later, even those with a mild TBI and a normal brain scan, showing that recovery is poorer than expected. **Profs Lindsay Wilson and Magdalena Letswaart** were co-authors of the study which was published in [JAMA Open Network](#).

[Read the full story here](#)

Also in this issue...

[Autistic Research Priorities](#)

[Chimp Behaviour Study](#)

[Improved blue mussel production](#)

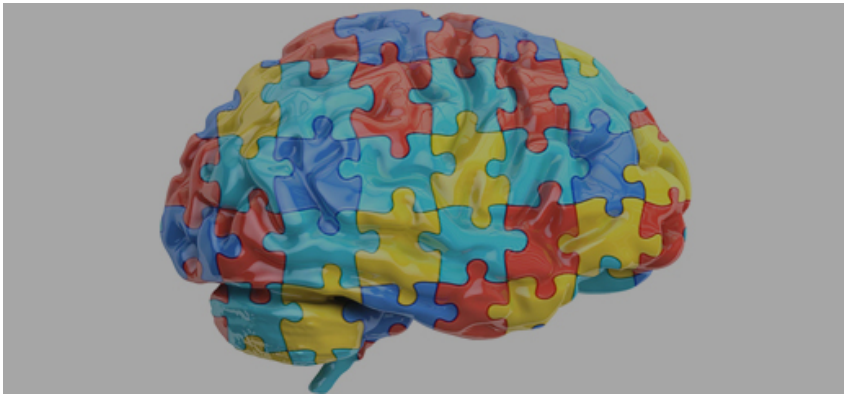
[Transformative power of aquaculture](#)

Other news



Cabinet Secretary endorsement

In the last Newsletter we headlined the ambitious plan to plant millions of trees across the Forth Valley under the Forth Climate Forest project banner. The Cabinet Secretary for Rural Affairs, Mairi Gougeon MSP, visited the university



Autistic people's research priorities study

New research led by **Eilidh Cage and Monique Botha, Psych** has found that autistic people's priorities for research lie in the desire to focus on mental health, post-diagnosis support and social stigma rather than biological studies for treatments or a cure.

This was the largest ever study of its kind with over 200 autistic people surveyed. The aim of the study was to work with autistic people living in Scotland to understand what they want from autism research. Analysis of the results shows they would prefer applied research into diagnosis, mental health, and topics which can enable a good quality of life. The findings were published in [Autism](#).

[Read the full story here](#)

Chimpanzee behaviour study

A study led by **Alejandro Sanchez Amaro, Psych**, has shed new light on the behaviour of our closest living relative the chimpanzee. By using a game technique with animals at Leipzig Zoo, they found that chimpanzees will deploy strategies to maximise their chances of selection by potential cooperative partners.



This research allows better understanding of how our closest relatives resolve social dilemmas and shows that, like humans, chimpanzees are sensitive to others' decisions and how those can affect their chances to benefit the most from social interactions. The paper was published in the journal [Scientific Reports](#).

[Read the full story here](#)

on 6 February to meet some of the team at an event for Forth Climate Forest stakeholders. She stated that the project was a great example of many partners working closely together to help tackle climate change and improve the lives of people across the Forth Valley.

[Read the full story here](#)



WraAs OptiVacc kick-off meeting

The WraAs OptiVacc follow-on project had its kick off meeting on 12 February. This project aims to improve vaccines used to protect ballan wrasse against common diseases before they are deployed as cleaner fish in the Scottish salmon sector. The work is funded by industry partners and the Sustainable Aquaculture Innovation Centre, and is led by **Drs Andrew Desbois and Sean Monaghan at the IoA**

[Read more »](#)



Improved blue mussel production

Blue mussel aquaculture is an important sustainable and eco-friendly way of producing a protein source,

but the industry has been facing challenges resulting in production fluctuations. Mussel farming has a low impact on the environment because they require no food, grow on ropes and, by nature of being bivalves, they even clean the water around them. They also sequester carbon from the atmosphere in their shells.

Research led by **Dr Ana Corrochano-Fraile, IoA**, could help improve mussel farming practices and increase production. They discovered regular genetic mixing changes local populations, which could help mussel farmers with site selection, stocking strategies, and management practices. This could lead to more consistent production and improved profitability for the mussel farming industry and contribute to the overall health and resilience of marine ecosystems in Scotland. The findings were published in the journal [Communications Biology](#).

[Read the full story here](#)



Dean's Award for L&T

A reminder to staff that the Dean's Award for L&T is open for applications from individuals or teams to promote teaching innovation & best practice. The application form is [available here](#). There are 4 awards of £500 towards L&T activity or conference attendance. **Deadline for submission is 5pm on 31 May 2024.**

Water resources in Scotland



A multi-disciplinary team from across 5 faculties at Stirling, including FNS, has been awarded a £5m partnership project funded by UKRI spanning three years studying how water resources in Scotland promote better outcomes for our economy, society and the environment.

Led by Prof Richard Simmons in FSS, the team will work with colleagues at Edinburgh and Heriot Watt Universities, Scotland's Rural University College and the James Hutton Institute. The study will consider water's role in shaping better places to live, improving public health, linking our cultural and natural heritage, and promoting opportunities for businesses in the food and drink, agriculture, tourism, construction, energy and biotechnology sectors.

[Read the full story here](#)



Stepping up to the SDGs

The UoS Centre for Policy, Conflict and Cooperation Research is partnering with [Scotland's International Development Alliance](#) to host a roadshow at the university on Wednesday 13 March 15.00 - 17.30, Lecture Theatre A3, Cottrell. This event will discuss how collaboration is essential to achieve the Sustainable Development Goals (SDGs). Register at the link below.



Transformative power of aquaculture

A study led by **Alexander Kaminski, PhD student, IoA**, has revealed for the

first-time substantial benefits from adopting smallholder aquaculture for Zambian farmers.

The research provides compelling evidence of how fish farming diversifies livelihoods and improves food and nutrition security in rural areas. By integrating fish farming into their agricultural practices, households not only diversified their income sources but also significantly improved their dietary variety and overall food security. The results of this study offer a path forward for policymakers and development agencies looking to improve rural economies and nutrition in developing regions, and underscores the value of looking beyond traditional agricultural methods and embracing more integrated, diversified farming approaches. The paper was published in [Agriculture & Food Security](#).

[Read the full story here](#)



Schloss Dagstuhl Seminar invite

Dr Wen-shin Lee, CSM, has had a proposal accepted to run a seminar at Germany's **Schloss Dagstuhl – Leibniz Center for Informatics**. The week-long invitation-only scientific seminar: *"From Sparse Interpolation to Signal Processing: New Synergies"* will be organised jointly with Prof Annie Cuyt (University of Stirling, UK and University Antwerp, Belgium), Prof Dirk de Villiers (Stellenbosch University, South Africa), Prof Ana Matos (University of Lille, France) and Prof Gerlind Plonka-Hoch (University of Goettingen, Germany).

Schloss Dagstuhl is globally recognised as one of the leading meeting centres for informatics research. Hosting a scientific seminar there will not only contribute to Dagstuhl's mission of advancing world-class research in computer science but also enhance the visibility and reputation of Computing Science and Mathematics at the University of Stirling.

[More info and sign up](#)



ATREE visitor

The University has formalised a partnership with a world leading conservation and education organisation which will lead to joint research projects and staff and student exchange programmes. Ashoka Trust for Research in Ecology & the Environment (ATREE), headquartered in Bangalore, India, is a non-profit organisation that is focused on environmental conservation and sustainable, socially just development.

ATREE senior fellow [Dr Siddappa Setty](#) visited staff at the university earlier this month to discuss the partnership with senior staff. Going forward, there will be collaborations on grant proposals and joint teaching opportunities which will enable students to understand approaches to finding potential solutions to some of the biggest challenges facing our planet.

International Day of Women & Girls in Science

11 February 2024



To mark International Women in Science Day, it is a pleasure to focus on two extraordinary women in FNS. First up is **Dr Heather Price**, Senior Lecturer in Environmental Geography. Her research aims to reduce the harmful health effects of breathing air pollution in the UK and Eastern & Southern Africa. To do this she works across different subject areas, including environmental science, social science, creative arts and psychology. Heather is also UKRI Regional Clean Air Champion for Scotland, bringing together all the different people interested in working to improve air quality in Scotland, from the government to the public, to generate change.

[More info here](#)



And next up is **Dr Sabine Matallana-Surget** an Associate Professor of Environmental Molecular Microbiology. Her research focuses on investigating the molecular responses of marine bacteria, which are the most abundant organisms and play a pivotal role in regulating the climate, to different environmental perturbations and pollutants. In Sabine's opinion the real excitement of science lies in the interdisciplinary nature of STEM, where different disciplines come together to tackle complex challenges. Read more about Sabine's background and research at the link below.

[More info](#)



Aqua food project Bangladesh

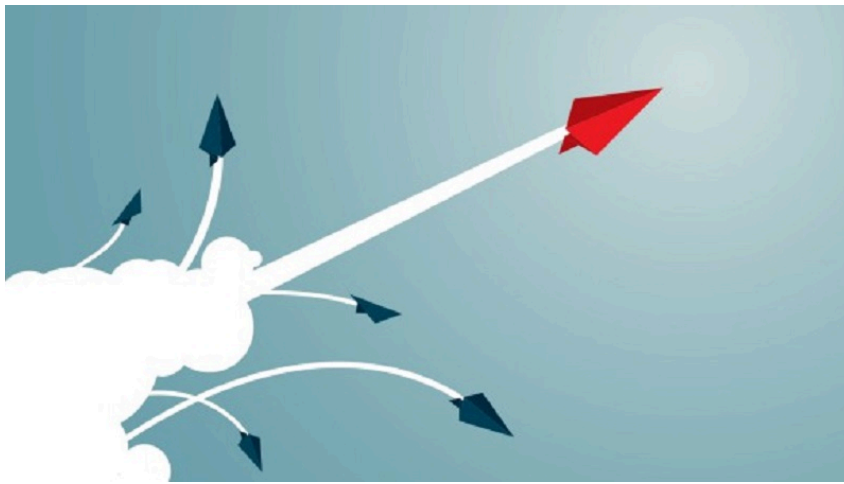
Dave Little and Richard Newton, IoA, participated in the kick-off meetings for the DANIDA funded 'Climate resilient aquatic food systems for healthy lives of young women and girls in Bangladesh project' aka the AQUAFOOD project held in Bangladesh, 2 - 9 Feb 2024. This project builds on the success and outcomes of the Immana funded Aquatic Food for Health and Nutrition (AQN): A metric for assessing the impacts on nutrition and health of agroecosystems producing farmed seafood (MEFANIG).

[Read the full story here](#)



Drop-in tutorials for students

As you may have seen in the Round Up, Student Learning Services has recently introduced face-to-face drop-in tutorials. They're great for quick questions,



Research Events February 2024

There are a number of research training and events coming up from the RIBE team:

Research Leadership Programme

Applications are now open for the next round of the Research Leadership Programme, part of the IAS Researcher Development Programme, which will take place over **April-May-June 2024**.

Research Culture Conversation

The next Research Culture Conversation led by Professor Rachel Norman will be held on **Monday 26 February (1-2pm)**. This month's conversation will discuss the recent [Research Culture Initiatives in the UK report](#) commissioned by UKRI from Shift Insight, UKRN and Vitae.

Teamwork and Trouble: risks and rewards of Interdisciplinary Collaboration Event

13 March (11am-12.30pm, Campus Central/Hybrid) with [Professor John Sutton](#), Emeritus Professor of Philosophy and Cognitive Science (Macquarie University) and Leverhulme Visiting Professor at Stirling.

Intro to PostDoc Management

This workshop delivered by MY Consultants will take place on **Tuesday 19 March (11am-4pm)** and will explore how, as a post-doc, you can be effective in roles where you take on, in some form, management and supervision of other researchers.

For further details on all these events and registration links, click on More Info

[More info here](#)

checking on citations and referencing, last-minute tips, or when our longer one-to-one tutorials are all booked up. Also, remember that SLS has a lot of live and pre-recorded workshops available on most aspects of academic skills, from reading effectively, to writing techniques, to getting organised. We'd love you to encourage students to check out all of these resources. Click on More Info for details and registration links.

[More info here](#)



Professor Iain Docherty (Dean of the Institute for Advanced Studies) and Professor Rachel Norman (Dean of Research Engagement and Performance) are delighted to announce that the Festival of Research will take place on Monday 20 & Tuesday 21 May 2024.

This year's events will see the return of the flagship Research Culture Awards and we look forward to releasing further details on plans for this event and others but for now please save the date!



FNS in the News!

In recent weeks colleagues across the faculty worked with the University Communications Team and the media to promote our research and expertise externally.

- A new study which revealed the [longer term impact of sport-related brain injuries](#), by Professor Lindsay Wilson, Dr Magdalena Letswaart and PhD researcher Michail Ntikas (Psych), was widely covered by mainstream media, including [Independent](#), [Herald](#), [National](#), [MailOnline](#), [Irish News](#), [Irish Examiner](#), Radio Scotland, Central FM.
- [New research](#) by Dr Sabine Matallana-Surget (BES) which could lead to major improvements in marine oil spill cleanup processes was covered by a wide variety of international media outlets, including [Scienmag](#), [OltNews](#); [Science Daily](#); [swifttelecast.com](#); [newswise.com](#); [phys.org](#); [newsconcerns.com](#); [newsleaflets.com](#); [todaynews24](#).
- News that Dr Sean Monaghan (IoA) is to lead [trials of a salmon vaccine](#) that could revolutionise the aquaculture industry was covered by a range of specialist media outlets including [AquaFeed](#), [Hatchery International](#), [aquaasiapac.com](#), [seafoodnews.com](#), We Are Aquaculture.
- A study led by PhD researcher Alexander Kaminski and Professor Dave Little (IoA) which found [adopting aquaculture helps rural Zambian households](#) to diversify income and improve food security status was covered by specialist media including [Undercurrent News](#), [Global Seafood](#), We Are Aquaculture.
- [Research by Dr Ana Corrochano-Fraile](#) (IoA) which could help improve mussel farming practices and lead to increased production was covered by [Fish Farming Expert](#), [We love Stornoway](#), [The Nation \(Sri Lanka\)](#), [Phys.org/Biology News](#), [The Fish Site](#), [We Are Aquaculture](#), [Fish Focus](#).
- PhD student Kristine Gandia (Psych) spoke to the Scottish Sun on Sunday about Yampil, a Ukrainian bear now being monitored for PTSD at Five Sisters Zoo in West Lothian. Kristine said triggers such as loud noises may cause the bear to relive the trauma of the conflict.

Welcome to the Faculty



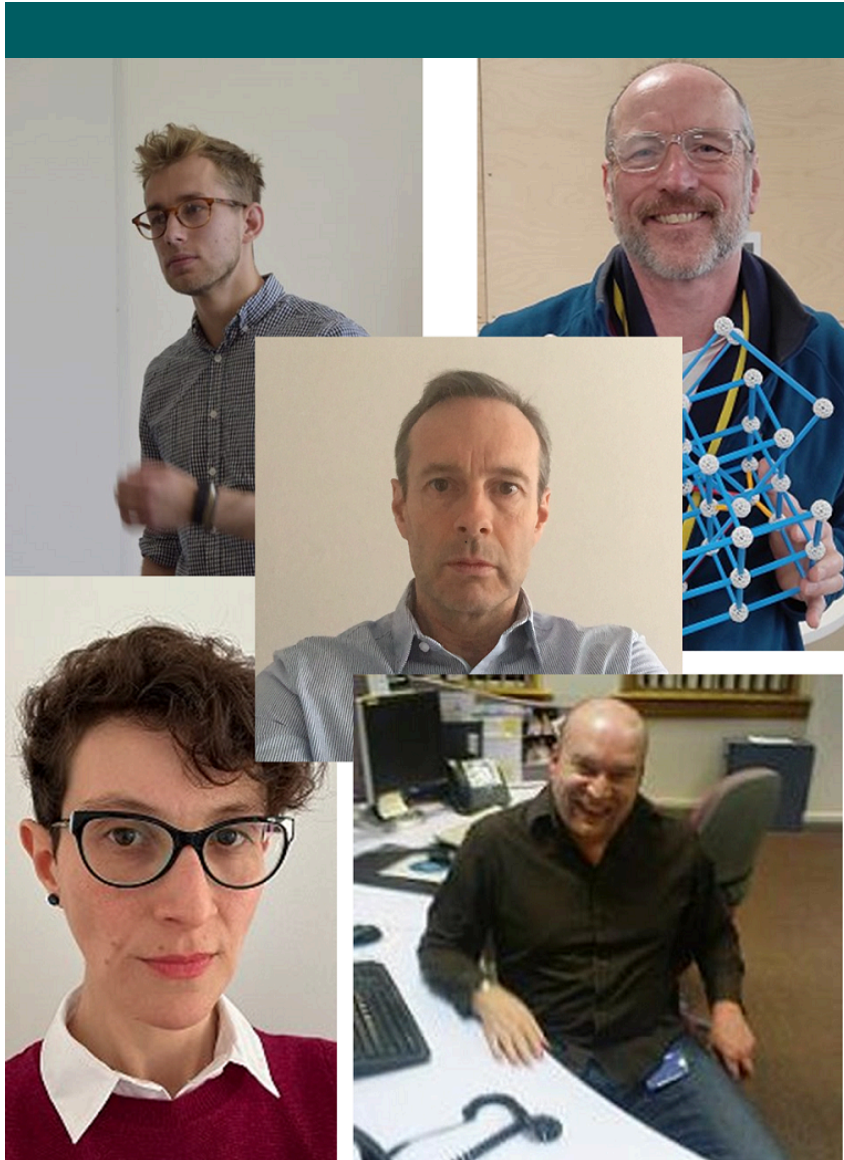
Dr Reuben Nowell has joined BES as an evolutionary biologist with broad interests in the interaction between genome structure and the processes of adaptation, diversification and speciation in non-model eukaryotes. He is particularly interested in the interaction between ecology, life-history and genome structure, the impact of extraordinary molecular mechanisms such as horizontal gene transfer, and the insights to be gained from the genomic peculiarities of non-model organisms.



Dr Noel Juvigny-Khenafou has joined IoA as Lecturer in Aquatic Environmental

- And a [government minister's endorsement](#) of a University-led plan to plant millions of trees across the Forth Valley was covered by [Alloa Advertiser](#), [Stirling Observer](#), Central FM.

If you have a good news story to share – perhaps you've just been awarded funding for a new project or are about to publish a research paper – please get in touch with Faculty of Natural Sciences Communications Officer, [Peter Swindon](#)



New staff in CSM

Several staff joined CSM at the start of the year. So we welcome (clockwise from top L):

- **Dr Paulius Stankaitis**, Lecturer in AI/Data Science;
- **Dr Robin Hankin**, Snr Lecturer in Applied Statistics;
- **Dr Paul McMenemy**, Lecturer in Pure Mathematics whose current research activities are in the mathematical modelling of tree diseases at the landscape level, and modelling of factors that drive the emergency of potato blackleg within the UK;
- **Dr Ana Lucia Garcia Pulido**, Lecturer in Pure Mathematics whose recent research contributes to the classification of Lie algebras and to the understanding

Science. He is a community ecologist focusing primarily on aquatic stressor ecology, trying to understand the gene to ecosystem level responses to environmental changes and human activities in aquatic systems with the aim to improve the management and the conservation of aquatic biodiversity and ecosystem services.



Dr Rose Ruiz Daniels has joined us as Lecturer in Aquaculture Genomics, having previously worked at the Roslin Institute, Edinburgh. Her research focus is deciphering the mechanisms of skin ecology throughout the process of wounding and healing in Salmonids.



Dr Alejandro Sanchez Amaro has

of the metric geometry of the space of optimal partial transport;

- **Dr Ashley McClenaghan**, Lecturer in Software Engineering (centre) whose research focus is software design systems integration, data engineering and applied AI.

Scotland's Flood Resilience Conference

Scotland's International Environment Centre (SIEC) was delighted to attend and exhibit at the newly branded Scotland's Flood Resilience Conference at Dynamic Earth in Edinburgh on the 8th and 9th February 2024. It was a hybrid event that welcomed almost 700 participants across the two days.



The conference provided an ideal opportunity to show case Forth-ERA (Environment Resilience Array) and talk to key stakeholders and decision makers about all of the ways the University currently leads across the theme of adaptation, water policy and placemaking. The event was a brilliant opportunity to discuss the various ways we are able to work together around the collective ambition of more flood resilient Scotland through affecting policy, placemaking and people.

The Business Engagement team within RIBE and SIEC are already planning ways in which we can further the University's contribution to next year's conference. We are keen to promote the knowledge base that is our Faculty of Natural Sciences and its capabilities and achievements in this space. Please feel free to reach out to siec@stir.ac.uk to discuss and get ahead in our planning.

joined us as a Lecturer in Psychology from the Max Planck Institute for Evolutionary Psychology. His work focuses on human and non-human primates resolving social dilemmas, and has recently become interested in how social factors such as bonding and dominance influence cognitive outcomes in great apes. Alejandro has been in the news already with his work on chimpanzees - see elsewhere in the Newsletter

PhD Success!



Very well done to **Dr Amy McCarron** for passing her viva on the 1st February! Amy's PhD was titled "*Co-Developing Strategies To Reduce Exposure To Fine Particulate Matter (PM2.5) In Scotland*" funded through the NERC Iapetus DTP. Amy was supervised by Dr Heather Price (BES), Prof Sean Semple (ISMH), Prof Vivien Swanson (Psych), Dr Christine Braban (UKCEH Edinburgh) and was supported through a CASE partnership with



Graduate news stories please

Ahead of March's graduation celebration on Friday 22 March, the University is looking for interesting and newsworthy stories about our new graduates to share with the media.

Examples of this could be:

- Students who have completed newsworthy research or launched a unique or successful business.
- Students who have graduated 'against all odds' – overcoming major hurdles to achieve their degree.
- Students who are about to embark on a new venture – this could be a high-profile career, unique job or unusual adventure.
- Students who may have an interesting family link – perhaps they're from a long line of relatives to study their subject, are graduating at the same time as relatives, or maybe a relative with a high-profile career inspired them.

These stories will enable the University to highlight our students' achievements and their positive experience at the University of Stirling, raising the profile of their division, faculty and wider University. They may also help to encourage and inspire other students to follow in their footsteps. If you have any suggestions please get in touch with the Faculty of Natural Sciences Communications Officer, [Peter Swindon](#).

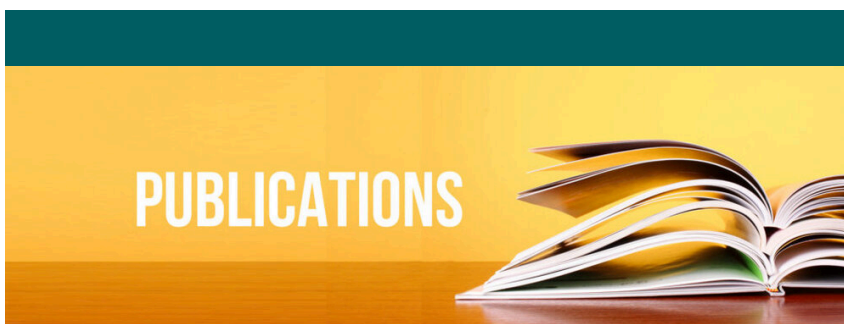
SEPA (Dr Colin Gillespie). Many thanks to the viva committee – external examiner Prof Jo Barnes (UWE), internal examiner Dr Jen Dickie (BES) and chair Dr Dan Chapman (BES). Amy is wearing a hat made by fellow PhD researchers to celebrate the occasion, which includes an asthma inhaler, traffic lights, cars, low emission zone signs and purple air (which represents the Purple Air sensor she used in much of the work!) Amy is now working as Scientific Outreach and Impact Officer for the [Forth-ERA](#) project.

FNS webpage

See the website

FNS staff directory

See the staff directory



Matheson, L., Greaves, C., Duda, J.L., Wells, M., Secher, D., Rhodes, P., Lorenc, A., Jepson, M., **Ozakinci, G.**, et al. (2024) Development of the 'ACT now & check-it-out'

intervention to support patient-initiated follow up for Head and Neck cancer patients. [Patient Education and Counseling](#), 119, 108033

Kay L. Ritchie, Daniel J. Carragher, Josh P. Davis, Katie Read, Ryan E. Jenkins, Eilidh Noyes, Katie L. H. Gray & **Peter J. B. Hancock** Face masks and fake masks: the effect of real and superimposed masks on face matching with super-recognisers, typical observers, and algorithms. [Cognitive Research: Principles and Implications](#) 9-5, 2024

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Contributions for next edition

The next Newsletter will be published on **Friday 29 March 2024**
Please submit contributions at least 3 days in advance to Diane Davidson:
FNSDeanPA@stir.ac.uk