NOTTINGHAM TRENT UNIVERSITY

Department of Psychology

Scholarship Projects for Undergraduate Researchers 2022

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Psychology SPURs

What are SPURs?

SPURs (scholarship projects for undergraduate researchers) are a fantastic opportunity for year 2 psychologists to get involved in the research that is going on in the Department of Psychology. The projects take place over the summer period between years 2 and 3. They enable you to learn about research, gain all sorts of transferable skills, get a head start on next year's work and sharpen up your CV.

Who are they aimed at?

The scholarships are aimed at students coming to the end of their second year and going into their third year who are interested in doing research in psychology. Places will be competitive and you will likely be interviewed.

When do they take place?

The scholarships take place during the summer. The exact start date varies between projects but typically they start toward the end of term 3 and the beginning of the summer holiday. A SPUR is typically full time (although this can be negotiable) and lasts for 8-10 weeks depending on the project. Each SPUR offers a maximum of £1,857 for the full 10 weeks to assist with living costs, although some projects may be shorter and the payment adjusted accordingly.

Why should I do one?

If you enjoy research then a SPUR offers a great opportunity for you to be involved in cutting edge research in the Department of Psychology. We place great importance on your training during the project, so you should expect to be learning new skills under the supervision of staff in the Department. As such, you will become a better researcher after completing a SPUR project, having great experience to add to your CV and setting you up well for beginning your final year project. After completion of projects, there is a SPUR conference where you will present your findings as a poster presentation. In addition, depending on the outcome of the work you may present the work at conferences and in some cases the research can lead to publication.

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How do I apply?

This year there are a large number of exciting SPURs across a range of topics, all listed within this document. If you are interested in any of them, the first thing to do is to contact the principal investigator for the SPUR (the first staff member listed) for more details. For each SPUR there will be a competitive application process (normally including interview). The principal investigator for each SPUR can provide you with the necessary details.

Past scholarship students say…

"I was tasked with creating a survey to distribute to academics as well as doing provisional literature reviews. I do recommend it, especially if your desire is to go into a specific field of research. You gain many transferable skills from each individual SPUR project "

Brandon Fuller – SPUR 2021

"As part of the SPUR project I was asked to compile research, help with the design of the study, create and help distribute a qualtrics questionnaire and recruit participants. I found the experience to be massively beneficial, it did wonders for my academic confidence. It gave me additional research experience that was beneficial to my research methods and stats module."

Caitlin Davies SPUR 2018

"I assisted on a SPUR research project assessing the link between attention and expressed emotion in individuals high (or low) in schizotypy. This experience exposed me to applied research, which had potential clinical implications, despite using a non-clinical sample. Of even greater importance, it exposed me to the task of recruiting participants from a relatively small population base, with unique traits; allowing me to establish connections with external organisations and to consolidate my research skills. Finally, through my use of EEG, and through the independent nature of a SPUR study, I developed valuable research skills, which allowed me to become an autonomous, initiative-driven researcher"

Liam Cahill – SPUR 2017

"The main task I was given was completing a literature review, then I helped put together the online questionnaire on qualtrics and tested it out. I did find it really beneficial, completing a literature review of a topic I had little experience in was a great practise, and has really set me up for starting my research project. Learning qualtrics at this point as well also meant I got my own study for 3rd year up and running quickly and smoothly "

Mia Davis – SPUR 2018

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Past SPUR successes

Every SPUR helps explore new avenues of research. Sometimes the findings lead to presentations at national and international conferences and publication in peer reviewed journals. Below are some recent examples (the SPUR student is in bold).

Publications

Buglass, S.L. , Abell, L. , Betts, L.R. , Hill, R. and **Saunders, J**., 2019. Banter vs bullying: a student perspective. In: World Anti-Bullying Forum, Dublin, Ireland, 4 June 2019.

Wood, C., Clark, C., Teravainen-Goff, A., **Rudkin, G**. and Vardy, E., 2020. Exploring the literacy related behaviours and feelings of pupils eligible for free school meals in relation to their use of, and access to, school libraries. School Library Research, 23. ISSN 1523-4320

Hill, R., Betts, L. R., & **Gardner, S. E**. 2015. Empowerment and enablement through digital technology in the generation of the digital age. Computers in Human Behaviour, 48, 415–423.

Karanika-Murray, M., **Duncan, N**., Pontes, H. & Griffiths, M.D. 2015. Organizational identification, work engagement, and job satisfaction. Journal of Managerial Psychology, 30, 1019-1033.

Howard, C, J., Boulton, H., **Brown, E.,** Arnold, C, P, A., Belmonte, M., & Mitra, S. 2018, Engagement of the motor system in position monitoring: Reduced distractor suppression and effects of internal representation quality on motor kinematics. Experimental Brain Research

McKinney, A., Hotson, K.L., **Ahmed**, **Z.B**., Días, C., Ben Shalom, D., Weisblatt, E.J.L., Foster, J., Villar, S.S., Murphy, S., & Belmonte, M.K. 2021. Overcoming Hurdles to Intervention Studies with Autistic Children with Profound Communication Difficulties and their Families.

Conference Presentations

Betts, L. R., & **Metwally, S.** (September, 2015). Examining perceptions of risk online: The role of the third person effect, optimism, and knowledge. In L. R. Betts Risk and protective factors associated with digital technology use: Novel directions for research. Symposium conducted at the British Psychological Society's Developmental Section and Social Section Annual Conference, Manchester.

Belmonte, M.K., Weisblatt, E.J.L., McKinney, A., Hotson, K.L., **Ahmed, Z.B**., Días, C., Ben Shalom, D., Foster, J., Villar, S.S., Murphy, S., Jatkar, A., Langhorne, S. (July 2021) Touchscreen Training of Fine Motor Skills in Autistic Children with Impaired Speech and Motor Function but Spared Receptive Language. Experimental Psychology Society.

Gleeson, H., Guest, D., Howard, C., & Brown, L (August 2013). Effects of ageing on the rate of visual information processing; a time-accuracy function analysis. Poster presented at the Joint Annual Conference of the British Psychological Society Cognitive and Developmental Psychology Sections, Reading.

Stevenson, J., Thurston, L., Young, A., & Sergeant, M.J.T. (2016). Statistics Anxiety in Psychology Students. Oral presentation at the British Conference of Undergraduate Research, Manchester, UK, 22nd March.

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2022 SPURs in Psychology

Please contact one or more of the listed members of the research team to notify them of your interest in a project. The deadline for project applications is Wed 20th April unless otherwise stated.

Sleep Research

Research Team: Professor John Groeger

Start Date: 6 June 2022

NTU Psychology has its own dedicated sleep laboratory- and we will be re-opening it shortly after closing through the COVID pandemic. As part of this we will be carrying out a major study, which will involve overnight sleep deprivation, extensive sleep EEG collection, measurement of hormonal activity and cognitive performance. If you are interested in being trained to be a research assistant on this project, and acquiring these skills, please read on.

This is a real opportunity to develop strong laboratory skills and will be especially useful to those with interests in the biological, neuroscience or quantitative side of psychology. Preference will be given to candidates hoping to do a Sleep-related Final Year project.

Consistent with the standard SPUR terms you will be paid at a total of £1,857 for approximately 10 weeks from as early as possible through to July (taking account of exam time etc). The roles will be full-time, but flexible in terms of worktimes, because overnight work is inevitable in sleep research!!

Apply with letter of application, which reflects your interest in psychology, sleep, and any other relevant information, together with a Curriculum Vitae to me (John.groeger@ntu.ac.uk) before Monday 4th April 2022.

Understanding student collaborative engagement in face-to-face and online sessions

Research Team: Dr Moon Halder, Dr Caroline Ford and Dr Lucy Justice

Start Date: 6 June 2022

As part of the ongoing drive to promote student engagement, the NTU Psychology department are undertaking research into Scholarship of online teaching and learning, in particular in the use of collaborative engagement, e.g., interactions with peers, collaborative group work and groups discussions.

We are looking for interested students with experience of qualitative research. Your role will involve conducting a literature review on the topic, conducting semi-structured interviews (online) that will last between 30-40 minutes and in the data analysis process (coding of interview transcripts).

If successful, you will become part of an excellent research team. Members of the research team have excellent research skills and would help guide and support you through his process. Being involved in this study would help you gain important research skills and would help guide and support you through this process. Being involved in this study would help you gain important research skills and knowledge that will help you in your future research activity.

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If interested contact any of the members from the research team:

Dr Moon Halder (moon.halder@ntu.ac.uk), Dr Caroline Ford (caroline.ford@ntu.ac.uk) or Dr Lucy Justice (lucy.justice@ntu.ac.uk).

What belongs together comes together: Using eye tracking to understand how people learn sequences

Research Team: Dr Jens Roeser, Dr Lai-Sang Iao and Dr Mark Torrance

Start Date: 6 June 2022

People are great at learning the sequences of things that are likely to happen one after another. This is essential to making predictions about what will happen next. But more fundamentally, this is how we learn to speak and to understand language. Given how important sequence learning is to our lives, it's surprisingly poorly understood. This is because it is difficult to determine how a sequence has been learnt in real time. One way of doing this is to use eye tracking. This project will use a novel implicit learning method to investigate prediction for adjacent and nonadjacent sequences. Data collected so far (https://rpubs.com/jensroes/862437) suggest that nonadjacent regularities inhibit learning of adjacent regularities when presented at the same time. This result challenges existing theories of statistical learning.

The aim of the SPUR project is to add to these findings by increasing sample size, and adding one new experiment, to bring the research up to a high standard. The successful SPUR student will be instructed to operate a high speed eye-tracking device to collect data from implicit learning behaviour under the supervision of experts in the field. The main responsibility of the SPUR student will be data collection. The student will be familiarised with the analysis techniques and the interpretation of results in the context of the data. Further the student will have the opportunity to present the results in a meeting of NTU's "Language, Literacy, and Psycholinguistics" research group and will have the opportunity to be involved in the wider dissemination of this work at the "International Conference on Interdisciplinary Advances in Statistical Learning" and submission to the "Journal of Memory and Language". These opportunities are key for future prospects such as postgraduate studentships and academic as well as non-academic jobs.

Motion and position perception in those with migraine

Research Team: Dr Christina Howard and Dr Louise O'Hare

Start Date: 6 June 2022

Migraine is a debilitating, but common neurological disorder. Those with migraine experience hallucinations prior to the onset of the headache, called migraine aura. They also have particular aversion to light and sound during an attack. Between attacks they also show differences in tasks involving visual perception, specifically motion perception and flicker perception. Motion perception has real-world implications in terms of being able to track and attend to moving stimuli, for example in driving, sport and computer gaming. This project will investigate motion perception in migraine,

specifically where things are when they disappear, and see how this might be different from controls . To do this, we will use lab-based experiments involving EEG recording equipment to help us understand the brain mechanisms behind motion perception and attending to moving stimuli. If we can understand how the visual brain is different in those with migraine, we may one day be able to help contribute to a prevention.

Individual differences in personality “Dark” and emotional intelligence traits and their impact on attitudes towards crime and punishment.

Research Team: Dr Emanuele Fino and the Affect, Personality and the Embodied Brain Research Group

Start Date: 6 June 2022

Do individuals differ in their attitudes towards crime and punishment? What is the role of "dark" personality traits, such as Machiavellianism, narcissism, sadism, and psychopathy, in influencing attitudes towards how and the extent to which crime should be punished? How do "dark" traits and Emotional Intelligence combine, in their relationship with social dominance, authoritarianism, and such punitive attitudes? In this project, you will have the opportunity to collaborate to a ground-breaking psychometric project, drawing upon contemporary personality and individual differences theory, develop your research interest and advance your theoretical and methodological knowledge and skills, preparing you for a postgraduate research training and career. An interest in psychometric research methods and applications is required, as well as in personality psychology.

Developing and validating a knowledge-based and attention-based test that relates to driver crash risk

Research Team: Dr Victoria Kroll and Professor David Crundall

Start Date: 6 June 2022

The successful student will work with staff who straddle both NTU and Esitu Solutions, a spin-out company from the university. Esitu is dedicated to the development of digital assessment and training tools for drivers. Working from the Esitu office in the Dryden Enterprise Centre, the student will work with the team to create a new test of driver knowledge and attention, combining questions with real video footage of driving. The student will assist in recording video from moving vehicles, and will then edit the footage into suitable clips for the test. Once the test is complete, the student will collect data from drivers who sit the test, and will analyse the data to assess how well it predicts crash risk (or a surrogate variable for crash risk). There will be the opportunity to write a blog for the Esitu website and to contribute to a potential journal article based on the results. Other duties may include assisting with clients, and helping the team with corporate events, both of which will provide insight into the commercialisation of applied psychology.

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Co-production of an online sexual safety resource

Research Team: Dr Sarah Seymour-Smith, Dr Lucy Betts, Dr Sarah Buglass, Dr Mhairi Bowe, Dr Juliet Wakefield, Dr Beth Jones, Dr Rose Kitson-Boyce, Dr Martin Brock, Dr Georgina McLocklin and An

Start Date: 6 June 2022

We plan to develop an online safety resource by using focus groups to collect psychology students' perceptions of online sexual abuse (e.g., sexting/sending nudes; revenge porn; upskirting) on social media platforms (e.g., WhatsApp, Twitter, TikTok), and what they currently do to cope. We also aim to seek students' advice on how we should present the online resource to maximise uptake and impact. The project is a 5-week commitment.

Student Development
Successful student will review current online safety advice; conduct two focus groups; advise us on how to present the resource, thus developing skills relevant to their final year project, as well as wider transferable skills. Students will be trained in data collection (focus groups) and will have the opportunity to assist with dissemination activities such as presentations (e.g., SPUR conference).

To apply, provide a CV (one side of A4) and a cover letter (max 250 words) summarising what you would bring to the project.

CV must include:

- Name
- Student ID
- Course
- Breakdown of second year grades thus far
- Breakdown of first year grades
- Anything else of direct relevance to your application

Please send to Sarah Seymour-Smith (sarah.seymour-smith@ntu.ac.uk)

Understanding NTU students' anxiety when studying statistics

Research Team: Dr Caroline Ford, Dr Lucy Justice and Dr Richard Remedios

Start Date: 13 June 2022

Remember studying for your statistics classes? How did you feel before, during and after the classes? How did your friends feel?
Evidence suggests that students worry more about their statistics classes more than any other class in Psychology. As psychologists, we need to find out why and try to find which types of students are most vulnerable to worrying, and what types of interventions are most useful in helping students have a positive experience when studying statistics.
In this project, you will be asked to complete three tasks.
For task 1, you will be required to set up a Qualtrics survey and using your contacts, recruit a sample of approximately 200 students who have completed statistics classes at NTU.
For task 2, you will be required to complete a review to identify studies that have examined parental Statistics Anxiety in the last fifteen years across all age groups. You will be required to report on sample sizes, samples used (e.g., primary, secondary, university), questionnaires used, types of

questions asked (for qualitative research), and key findings across all studies. You will tabulate your findings in an excel or word (excel/word) file.
For task 3, you will be required to prepare an executive summary of the findings outlining the key take-aways from the review followed by a short explanation of the key finding and gaps in the literature. Do not worry, we will help you out with the format. The summary will only be about 500 words.
For all tasks, you will be supported via weekly meetings and teams conversations and when you need them from your supervision team. The project should be fun and help you develop skills that will be useful to you for your dissertation project and be highly transferable for your future employment.

Assessing the communicative function of yawns in rhesus macaques

Research Team: Dr Clare Kimock, Kerensa Rees, Olivia O'Callaghan, Dr Jamie Whitehouse and Professor Bridget Waller

Start Date: 20 June 2022

Facial expressions are an important part of our communication system. Our closest living relatives, non-human primates, also use facial expressions to communicate. In some nonhuman primate species, males yawn before or during fights, but the role of these yawns is not well understood. We are trying to uncover why male monkeys might yawn when they interact aggressively with each other. To do this, we are using non-invasive field experiments to measure rhesus macaques' attention to yawns. The idea behind these experiments is that if the macaques pay attention to images of other macaques yawning, then we can infer that they might be using yawns to communicate. We are searching for a SPUR student to assist us with coding video footage of our experiments. You will be part of the FACEDIFF project team, a large, interdisciplinary, externally funded group working on a range of projects (www.facediff.co.uk). You will gain skills in behavioural data coding and in data management, and you will learn about rhesus macaque behaviour in the process.

Individual differences in facial expressivity

Research Team: Jasmine Rollings, Dr Eithne Kavanagh, Alisa Balabanova and Professor Bridget Waller

Start Date: 6 June 2022

How expressive is your face? Does being more expressive lead to better social outcomes? In a series of projects this research team aims to answer whether individual differences in facial expressivity relate to social outcomes. You will join the FACEDIFF team (www.facediff.co.uk) as a research assistant, taking part in several ongoing experimental studies. For example, one project will examine how expressive individuals are perceived by others during initial social interactions online: are they rated as more friendly and likable? Do others trust them more? Do they want to spend more time with them? This is an exciting opportunity to gain valuable experience conducting experimental psychological research and contribute to a diverse interdisciplinary project. You will learn how to collect data, use analysis software, as well as how to utilise observational techniques. You will also act as a confederate during experiments with participants. During this project, you will acquire practical empirical skills and understanding of the research process development that would be

particularly helpful for any future academic or practical (work) opportunities you might want to pursue.

Utilising multi-layered, complex data: Movement patterns and communication quality in video calls

Research Team: Dr Jens Binder, Dr Mike Vernon and Professor Suvo Mitra

Start Date: 6 June 2022

Background

Behavioural research in psychology often requires detailed analysis and integration of different data sources before the actual results can be obtained. This is the case for an ongoing research project utilising the specialist equipment in the movement analysis laboratory. The project addresses how the physical engagement with communication technologies are related to the content and outcomes of video calls. In our research, real-time data from body movement are synchronised with video/audio recordings and self-report measures.

Main Tasks

The successful candidate will predominantly work on data integration and coding of recordings with the aim of producing, and potentially analysing, a high-quality comprehensive data set. The core aim gives rise to several distinct tasks:

- Gaining familiarity with the equipment used for movement capture and experiment procedure behind different data sources
- Several data recording devices and digital data formats
- Receiving training in event logging and content coding of video recordings
- Building comprehensive data sets in Excel, for use in R and/or SPSS and related software
- Running basic analyses and plausibility checks to ensure data quality

These tasks build on the more general training in research methods delivered in year 1 and year 2 of the Psychology UG curriculum but go markedly beyond regular teaching.

Requirements

Applicants will need to have prior experience with research methods and statistics equivalent to the UG Psychology curriculum (single honours or combined honours) at that stage. They will further need to bring an interest in laboratory-based work, preferably with a focus on cognitive and/or social psychology.

Support and Training

The research team will provide an induction to the laboratory equipment, the theory behind the research and the procedure that has led to the data sources to be processed. Step-by-step instructions will be developed in discussion with the successful candidate and ongoing support will be provided throughout the SPUR activities.

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Evaluation of a service-provider online intervention toolkit (SPOT) for children from domestic violence background

Research Team: Dr Nadja Heym, Dr Alex Sumich and Nikki Stevenson

Start Date: 6 June 2022

Witnessing domestic violence at a young age, has a detrimental effect on children's mental health and wellbeing and can have long-term effects in terms of future mental health in adulthood. This is a collaborative project between NTU Divisions of Psychology and Living Without Abuse - a specialist voluntary organisation in Leicestershire offering family and child support services for individuals who have suffered or witnessed domestic violence. In response to the recent pandemic, we created highly successful interventions using a trauma-stage recovery model which has been rolled out in the organisation alongside NTU data collection. We wish to evaluate the effectiveness of the intervention in improving children's and parent's mental health and wellbeing. We also wish to establish whether some children with neurodiverse traits would require more tailored interventions (e.g., those with autistic-traits, ADHD).

The successful candidate will work with LWA and the NTU team to support the team to collate existing data from LWA in order to evaluate and further develop the current intervention tools (in particular for children those with neurodivergent traits). The candidate will collate and analyse, under guidance of the supervisory team, colelcted data regarding general effectiveness of the interventions across the cohort of service users and more specifically for those with neurodivergent traits to establish their effectiveness. The candidate will conduct a literature review for effective intervention strategies for neurodiversity (across child-age ranges) and help to disseminate the findings to academics and relevant stakeholders across our national network of agencies. This information will be evaluated in light of the wider literature and empirical findings, in order to provide recommendations to LWA and other agencies regarding the effectiveness of these interventions.

Impact of receiving phone notifications on the ability to predict hazards while driving

Research Team: Dr Angela Young and Dr Petya Ventsislavova

Start Date: 6 June 2022

It's widely understood that using a mobile phone while driving can negatively affect driver safety and hazard perception. More recently, evidence has shown that even hands-free phone use is problematic because the mental overload involved in telephone conversations affect attention. While mobile phone use while driving is now banned the UK, both handheld and handsfree, many drivers use their phones as navigation devices on their dashboard, This SPUR project will investigate the possible consequences of this for hazard perception. How does just having the phone there affect our attention? What if we see a notification but can't read any further?

This SPUR project will involve developing materials and then collecting data to answer these questions. The project is especially well suited to students with an interest in video editing – a highly prized skill in the jobs market – and will involve learning how to master Adobe Premier Pro to develop hazard perception videos. It is also suited to students interested in applied cognitive research and comfortable with quantitative methods. During the SPUR project you will be well supported to

improve your skills in Premier Pro and experiment delivery software. If you have any questions, don't hesitate to contact the research team.

Understanding NTU Psychology student decision making in relation to placements

Research Team: Dr Angela Young, Dr Bryony Harper and Dr Janet Vousden

Start Date: 6 June 2022

In this exciting SPUR project, we look to better understand the experiences of sandwich year placement students, particularly those who ultimately choose not to complete a placement. Research shows that students who complete a work placement are more likely to secure a professional role after completion of their degree than those who do not, making this an important area for us to understand. The research team have designed a week-by-week plan of work and will support you to develop your skills in a number of areas that are highly prized by employers, particularly interview skills and using data to inform practice.

The project will involve 3 main areas of activity:

1. Conducting interviews with NTU Psychology students
2. Analysing qualitative data to draw evidenced conclusions about student decision making
3. Developing a questionnaire and ethics application based on outcomes from step 2

This is a clear, well-organised and self-contained SPUR project and will particularly suit candidates who are interested in a career involving interviews in any capacity as well as those interested in higher education, decision making and careers. Please feel free to contact the research team if you would like to know more about the project.