# PhD Open Evening 2017

Sciences Part 1: 5.00pm – 5.45pm

> UNIVERSITY OF SUSSEX

# The PhD journey

Dr Jeremy E. Niven Senior Lecturer in Zoology



# Starting your journey





# Finding the right project

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# NewScientist Science AAAS



#### Lab : School of Li 🗙 🔪



#### Welcome to the Lagnado Lab

We are investigating two neural circuits that are involved in the processing of visual information - the retina and the visual cortex. The question that guides our research is "how do synapses in the visual system contribute to the extraction and transfer the information in a visual stimulus?".

#### A PhD studentship is available now. Apply by 15th July 2017

How do synaptic machines function within neural circuits? We have developed fluorescent reporter proteins by which the electrical activation of synapses and the resulting output - vesicle fusion - can be monitored across hundreds of neurons simultaneously. By applying multiphoton microcopy to transgenic zebrafish and mice expressing these reporters we can observe synaptic activity in vivo as the visual system responds to stimuli. Most of our work has investigated the retina of zebrafish, but we are now also working on the synaptic basis of computations in the visual cortex of mice. Our general aim is to understand how the short-term platicity of synapses contributes to the control of tuning and responsitivity within these circuits. We are particularly interested in "network adaptation" - changes in the way that visual stimuli are processed by the neural circuit according to the recent history of activity

Our approach to investigating these questions involves a combination of techniques, including electrophysiology, molecular biology, multiphoton imaging and computational modelling.





Contact

Prof. Leon Lagnado FMedSc

Professor of Neuroscience

School of Life Sciences University of Sussex Falmer Brighton BN1 9QG

Tel: 01273 877431

e-mail: I.lagnado@sussex.ac.uk

#### Positions

#### Post-doctoral Researchers

Positions are currently available and enquiries are welcome. These positions will be funded by the Wellcome Trust and the BBSRC. If you are interested in the questions we are asking and ha

# Finding the right supervisor

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WWW. PHDCOMICS. COM

- Read publications
- Ask questions
- Talk to current PhD students

# Loving what you do







## Patience & Perseverance





## Hard work is essential...

### ACADEMIA



WWW. PHDCOMICS. COM



# ...but it pays off





## The lab environment





# Along the way...





# End of the journey?





## What next?



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# Funding for PhDs in the Sciences

AMANDA BRITT

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# What do you need to fund a PhD?

- Doctoral fees UK/EU £4,195 pa (2017-18) and overseas £19,200 pa (for 3, 3.5 or 4 years)
- Living costs standard stipend currently £14,553 pa (2017-18)
- Research and training costs e.g. lab consumables, conferences, travel... £1,650 - £5,000 pa



# Who funds Science PhDs?

### UK Research Councils BBSRC, MRC, EPSRC,

NERC, STFC

### **Charities**

Wellcome Trust, CRUK, Alzheimer's Society Company sponsorship Full or part funding

### Universities

School Scholarships, international scholarships

### Self

Part-time work, loans, crowdfunding

•••

**Combination of the above** 



## Who funds PhDs at UK Universities?



# Finding PhD Funding

Apply to the University not the funder

Sussex PhD Scholarship funding:

<u>http://www.sussex.ac.uk/study/phd/fees-and-scholarships/scholarships/browse</u>

### Other key sites: www.findaphd.com

- <u>http://www.postgraduatestudentships.co.uk/</u>
- <u>http://www.jobs.ac.uk/</u>
   <u>http://www.postgraduate-funding.com</u>

Science journals:

<u>http://nature.com/naturejobs/science/</u>

Overseas Scholarships: schemes with China, Mexico, Chile



# Sussex PhD Scholarships

http://www.sussex.ac.uk/study/phd/fees-and-scholarships/scholarships



# Scholarships for 2018-19 start

- School Scholarships from the Schools of:
  - Maths, Physics and Astronomy (late January 2018 deadline)
  - Psychology (Jan 2018 deadline)
  - Engineering and Informatics (deadlines vary)
  - Life Sciences (December 1<sup>st</sup> earliest deadline)
- Sussex Neuroscience 4-year PhD Programme (Jan 8<sup>th</sup> 2018)
- EPSRC scholarships (chemistry, engineering, computing, quantum physics, maths) advertised spring 2018
- STFC scholarships (astronomy and particle physics) + SEPnet data science studentships
- Alzheimer's Society Doctoral Training Centre (psychology and biochemistry)
- Sussex China Scholarships 2<sup>nd</sup> February 2018 in all disciplines.



# **International Students**

- Chancellor's International Research Scholarships 2018
  - Up to 11 PhD scholarships for overseas students

www.sussex.ac.uk/study/phd/fees-and-scholarships/scholarships/view/795

- China Scholarship Council (CSC) / University of Sussex Joint Scholarships (2018)
  - Up to 10 PhD scholarships for Chinese students

www.sussex.ac.uk/study/phd/fees-and-scholarships/scholarships/view/796 Briefing in Jubilee Lecture Theatre 7.10 to 7.30 this evening



# **Employment and Other Funding**

- Talk to your employer and consider:
  - A part-time doctorate (available in certain subjects)
  - A secondment to complete a PhD
  - The Sussex Collaborative Doctoral Scholarships where a company and the University pays 50% each

The **Alternative Guide to Postgraduate Funding** is a searchable database of smaller scholarships with tips for applications.





# Part-time employment

- Many postgraduates take paid employment while pursuing their studies
- University employment opportunities e.g. small amounts of teaching
- With a thriving tourist industry, Brighton is an ideal place to earn extra money to support your studies
- Non-EU students can usually work up to 20 hours each week in term time and fulltime in vacations
- Full-time Research Council students should undertake no more than 180 hours work per annum
- Jobs are regularly posted on our Careers and Employability Centre website:
   www.sussex.ac.uk/careers



# UK PhD loans for 2018

PhD loans of up to £25,000 are now available to self-funded UK students on all types of doctorate at ٠ universities across the UK.

UK PhD Loans -	· updated details
What?	Student loans for PhD-level qualifications lasting up to six years in all subjects.
How much?	Up to £25,000, not means-tested.
Who?	English-resident UK nationals aged 59 or under without Research Council studentships.
Where?	Any UK university.
When?	Available in 2018.
Repayment?	6% of income over £21,000 per year. Combined with Masters loan debt.

ww.findaphd.com/funding/guides/uk-phd-loans-scheme.aspx

Career development loans (up to £10k) for UK-based students are available to pay for courses and training that help with your career or help get you into work • www.gov.uk/career-development-loans





## Email: a.d.britt@sussex.ac.uk



# Applying for PhD study

### Miles Willey Head of Research Student Administration



# When to apply to Sussex

- You can begin your PhD in September, January or May
- The online application system is open all year round
- Make sure you look out for funding deadlines:
  - The main bulk of Research Council 'Doctoral Training Partnerships' are open between October 2017 and January 2018 – however,
  - Individual Studentships are advertised through the year
- If you are an international student, leave at least three months before start dates to apply for your visa to study in the UK.



# Where to apply (1)

## Psychology PhD

Choose to start in September 2018, January 2019 or May 2019

Start in the academic year 2017/18 instead?

Key information	Entry requirements	How to apply	Our supervisors	Funding and fees	EXPLORE OUR RESEARCH

### Key information

Duration: 4 years full time, 6 years part time

Start date: Choose to start in September 2018, January 2019 or May 2019

From crowd behaviour to perception and studies of the brain – you'll work with experts who will guide and support you through your research project.

Sussex is one of the largest and most diverse centres for the study of psychology in the UK. You'll work in an intellectually stimulating and supportive environment, within a community of postgraduate students, postdoctoral researchers and field-leading faculty.



# Where to apply (2)

HOME			UNIVERSITY OF SUSSEX	ACCE	<u>ISSIBILITY</u>   <u>STAFF</u>	<u>CURRENT STUE</u>	<u>JENTS</u>	
STUDY WITH US	ABOUT US	NEWS & EVENTS	INTERNATIONAL	RESEARCH	BUSINESS	ALUMNI	۹	
Home > Study with us	> PhD > How to a	pply for a PhD						

#### Back to previous menu

#### How to apply for a PhD

Entry requirements for UK applicants

Entry requirements for international applicants

Tips for applying for a PhD at Sussex

Your offer and confirming your place

Academic Technology Approval Scheme (ATAS)

Admissions policies for PhD degrees

#### How to apply for a PhD

We are looking for ambitious, talented and motivated students. You'll have the passion to make new discoveries, the drive to test new theories, and the willingness to go above and beyond.



#### How do I apply?

For most of our PhD degrees you apply using our online application service

You can set up an account or log in to start your application.

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## Entry requirements

- Our courses require either a first or upper second class undergraduate honours degree in a relevant subject area
- Many courses also require an MA or an MSc, or evidence of work experience/further study in the subject area
- Specific English language requirements for each course are listed in our prospectus, and University of Sussex doctoral courses online



## What should your application include?

#### Completing the application form

Follow our guidance to help you complete each section of the application form:

Personal details	+
Address	+
Education and qualifications	+
English language	+
Relevant experience	+
Supporting documents and references	×
You must provide:	
<ul> <li>research proposal</li> </ul>	
<ul> <li>degree certificates</li> </ul>	
<ul> <li>transcript of your grades</li> </ul>	
<ul> <li>your English language qualification, if appropriate</li> </ul>	
<ul> <li>two academic references - including one from your most recent university. Or you can provide contact details for your referee and we will email them.</li> </ul>	
Academic interests	+
Submitting the application	+
Monitoring the application	+
Submitting more than one application	+

## Choosing a supervisor



#### Faculty

Explore our research interests and find a potential supervisor.

ATOMIC, MOLECULAR AND OPTICAL PHYSICS	+
EXPERIMENTAL PARTICLE PHYSICS	+
THEORETICAL PARTICLE PHYSICS	+

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However, collaboration and cross-disciplinary research cut across these groups at all levels. Our collaborations extend to other Schools in the University, including the Brighton and Sussex Medical School, and to other Universities and Research Institutes world-wide.

If you are a postdoctoral researcher please refer to the research staff page which Centre for Computational has comprehensive information about all aspects of being a member of research staff at Sussex including information about careers, funding, practical support and policies.

#### Institutional Strategic Support Fund

The Institutional Strategic Support Fund (ISSE) is a joint award by the Wellcome Trust and the University, to support our translational research strategy.

#### Research Centres

- Genome Damage and Stability Centre
- Neuroscience and Robotics
- Sussex Neuroscience
- Sussex Drug Discovery Centre

#### Facilities and Resources

- In Life Sciences we have the following facilities
- Electron Microscopy.
- Mass Spectrometry



## Choosing a supervisor

- Once you have identified a potential supervisor, make contact and discuss your proposed project with them
- Take their advice: they will be part of the decision on whether to offer you a place at Sussex (and you will need to get used to them offering you advice throughout your studies...)
- It is important to build up a relationship with your supervisor as early as possible
- Your supervisors will ultimately be appointed by the relevant School depending on your specific project and their expertise.



# Selection process

- Your academic and English language qualifications as well as your fee status (whether you should be paying Home or Overseas tuition fees) will be assessed by admissions staff
- Your research proposal and personal statement will be assessed by academic staff in the relevant School of study
- You will probably be invited for an interview
- You should expect to hear back from us within 8 weeks of submitting your application.



## What is selection based on?

- Previous qualifications, or professional equivalence
- A topic the University is able to Supervise
- A topic with sufficient depth to produce new knowledge (a Doctorate)
- Background knowledge of the proposed topic and why it should be investigated
- Motivation: why Sussex and why a PhD / Professional Doctorate?





- For technical queries, contact: <u>onlineapplications@sussex.ac.uk</u>
- For queries about your application, contact researchstudentoffice@sussex.ac.uk
- Admissions information desk in Jubilee G32.



## Good luck!

### Miles Willey Head of Research Student Administration <u>m.willey@sussex.ac.uk</u>





# Life as a PhD Student

Mahmoud Bukar Maina







### Mahmoud Bukar Maina Doctor of Philosophy in Neuroscience

### "From the chromatin to protein synthesis: The role of Glutamate, Amyloid beta and Tau in Alzheimer's disease"

# A typical Week as a PhD Student University of Sussex

Experiments
 (Home – Lab – Experiments – Lunch – Experiments – Reading – Home)

Experiments
 (Home – Lab – Reading – Experiments – Lunch – Experiments – Sports – Home)

Experiments
 (Home – Lab – Reading – Lunch – Reading – Social – Home)

# A typical Week as a PhD Student University of Sussex

Experiments
 (Home – Lab – Experiments – Lunch – Experiments – Reading – Home)

Experiments
 (Home – Lab – Reading – Experiments – Lunch – Experiments – Sports – Home)

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 (Home – Lab – Reading – Lunch – Reading – Social – Home)

# A typical Week as a PhD Student University of Sussex

Experiments
 (Home – Lab – Experiments – Lunch – Experiments – Reading – Home)

Experiments
 (Home – Lab – Reading – Experiments – Lunch – Experiments – Sports – Home)

Experiments
 (Home – Lab – Reading – Lunch – Reading – Social – Home)

### **My Research**



**Amyloid Plaques** 



Prepared amyloid





## **Challenges of doing a PhD**



- More independence, unlike bachelor's or master's degree
  - Managing your time
    - Experiments don't always work
      - Can become repetitive and occasionally boring
        - Balancing your work with friends/family
          - Publishing & Reviewers

## **Rewards of doing a PhD**



- Makes you confident in yourself
  - Discovering new things and making contribution to knowledge
    - Meeting and learning from others
      - Attending conferences and meeting top guys in the field
        - Grants, Publishing & Outreach Activities

# **U**niversity of Sussex

## Some Experience



Nigerian Society



# **U**niversity of Sussex



### TRIND Outreach Team





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BIOCHEMICAL SOCIETY

#### Nigeria outreach spree continues!

Our outreach coordinator Mahmoud has been on an outreach spree the pass few weeks, from Lagos to Yobe State, Nigeria. He and his team are inspiring future generation of African Scientists through hands-on activit ranging from protein assays, if y fractionation. DNA modelling to cell modelling. During these events, student from nine (9) secondary schools learned to conduct experiments and present their findings, with quiz competition at the end, for which, the top schools received microscopes as prizes. More to follow soon!



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Uganda 2017

