Welcome to the Department

A very warm welcome to our new Director of Undergraduate Studies, Dr Gillian Forrester, who joined us in September from the University of Westminster.

Well done Dr Iroise Dumontheil for her performance in the online event “I’m a Scientist - Get me out of here!” on 7-18th November 2016. Iroise only narrowly missed the winning spot, coming second out of 5 talented neuroscientists, in this event where school students have the opportunity to interact with scientists, challenge them over online text-based live chats, and then vote to evict them.

Dr Belinda Brooks-Gordon was invited to attend the House of Lords launch of 'Rehabilitation by Design' on 10th October 2016, where she discussed research on prison design to improve prisoners’ behaviour with the main author of the research, Professor Yvonne Jewkes, and General Lord David Ramsbottom.
On 24-26th October, London hosted the 2016 Bill and Melinda Gates Foundation Grand Challenges Meeting, with speakers including Bill Gates and Sir Richard Branson. The focus of the Foundation is to ensure children across the globe thrive rather than just survive. Back in 2012 Professor Clare Elwell, Dr Sarah Lloyd-Fox and colleagues were awarded a grant from the Foundation to take functional Near Infrared Spectroscopy (fNIRS) to The Gambia, where they had their first fNIRS infant participant in Africa.

Now, through extended funding from the Foundation, the Brain Imaging for Global Health (BRIGHT) project is using fNIRS to understand the consequences of early life risk factors, such as under-nutrition, on infants’ brain development in The Gambia, and it was this work that featured in an inspiring Spotlight talk given by Clare Elwell during the closing session of the Grand Challenges Meeting.

Congratulations to Prof. Fred Dick, who was appointed Director of the Birkbeck-UCL Centre for Neuroimaging (BUCNI) on 25th July.
Dr Belinda Brooks-Gordon was quoted in an article in The Daily Mirror on 13th June 2016, about a pensioner prescribed a prostitute by his GP: [http://www.mirror.co.uk/news/uk-news/pensioner-defending-brothels-prescribed-prostitute-8182729](http://www.mirror.co.uk/news/uk-news/pensioner-defending-brothels-prescribed-prostitute-8182729). Belinda also appeared on CNN India on 6th September and in a series of interviews transmitted on 8th and 9th September about her research on clients of commercial sexual activity, following the revelations about Keith Vaz MP.

The Babylab featured on BBC1’s “Inside Out” on 26th September. The programme, in which an undercover reporter exposed a number of bogus autism “cures” being offered to vulnerable families in the UK, held up the Babylab’s BASIS project as an example of “good” autism research.

A clip from the programme, including an interview with Dr Emily Jones can be viewed here: [http://www.bbc.co.uk/programmes/p049y420](http://www.bbc.co.uk/programmes/p049y420).

In October, the Birkbeck-UCL Centre for Neuroimaging (BUCNI) had a special visitor in the form of singer-songwriter and political activist, Billy Bragg. The singer was taking part in an experiment designed by BUCNI scientists, including Birkbeck Psychology’s alumna Dr Saloni Krishnan, using functional MRI to look at the effect of music on the brain. The results were featured in a video on The Guardian’s website on 17th October: [https://www.theguardian.com/lifeandstyle/video/2016/oct/17/billy-braggs-brain-scan-the-americana-anthem-that-cured-my-fear-of-flying-video](https://www.theguardian.com/lifeandstyle/video/2016/oct/17/billy-braggs-brain-scan-the-americana-anthem-that-cured-my-fear-of-flying-video).
The neuroscience-inspired theatre production for babies, “Shake, Rattle and Roll”, which was co-created by PhD students from the Birkbeck Babylab, Rosy Edey and Sinead Rocha-Thomas with the Polka Theatre company, was reviewed in The Psychologist magazine on the 28th September. For more about the show and how it was made, see page 6.

On the 8th November 2016, the Evening Standard reported on a new study from Birkbeck’s Babylab, which has shown that babies of shy parents show the same brain responses in social situations as babies who later develop autism. I think we can all agree, however, that the true stars of the piece were Dr Emily Jones’ extremely photogenic children, Ariadne and Arthur!

Dr Tim Smith was quoted in Day Nurseries on the 17th November, on the importance of introducing guidelines for how much and in what ways children should be using tablets and smartphones.

Dr Angelica Ronald was quoted in an article in The Atlantic on the 17th November, about the valuable contribution grandmothers can make to autism research.

Dr Gillian Forester discussed the neuroscience of stage fright in the BBC Radio 4’s Archive on 4 on the 5th November. The episode is available to listen to on i-Player: http://www.bbc.co.uk/programmes/b081jnp1. Gillian also took part in BBC Radio 3’s Sunday Feature: Whatever Happened to the Avant-Garde?, which is due to air on 11th December: http://www.bbc.co.uk/programmes/b084vqg6
Professor Jacqueline Barnes gave an invited talk in Birmingham on the 16th September at the 2nd Early Years Educator National Conference - Early Years Pupil Premium: Innovation and Impact. The title of her talk was “Investing in staff training: existing evidence and the potential for on-going evaluation”.

Dr Iroise Dumontheil gave a talk entitled “Mindfulness meditation training during adolescence” at the following:
- the INSTILL Yoga, Education and Well-being conference, 9 July, in London;
- the Mind & Life Europe European Summer Research Institute, 26 August, in Chiemsee, Germany; and
- the Centre for Educational Neuroscience seminar, 20 October, in London.

On 6-8 October, the CBCD hosted the The Centre for Educational Neuroscience's 2nd Neurocuriosity workshop on “Information-seeking, curiosity and attention”. The workshop brought together over 100 experts in neuroscience, psychology, developmental psychology, computational modelling and education, interested in the role of curiosity in learning.

For those of you who were sad to miss it, many of the talks can be viewed here: https://www.youtube.com/playlist?list=PL9T800j7sJC01LPqBdCE8tPkRRAJzdQ
Sinead Rocha-Thomas and Rosy Edey, both PhD students at the Babylab, and Birkbeck psychology alumnus Dr Caspar Addyman, teamed up with the Polka Theatre company earlier this year to co-create a theatre production specifically aimed at babies. The show, called “Shake, Rattle and Roll”, ran between September and October at the Polka Theatre in Wimbledon, and was part of the Brain Waves Theatre Festival.

The project began with Polka Theatre director, Sarah Argent, visiting the Babylab in order to gain a deeper understanding of the research and how experiments were conducted with babies. Throughout the development stage Sinead, Rosy and Caspar were invited to observe rehearsals, helping the creative team to interpret babies’ reactions to the different elements and to refine the design for the final show.

Sarah Argent explained how helpful the process was: “The music that Sinead uses in the BabyLab as part of her exploration of rhythm was not music that either myself or our composer would have instinctively been drawn to in creating a theatre piece for babies but ... it has led us to realise that babies respond to much more upbeat and rhythmic music than we had previously imagined”.

A still from the show (©Polka Theatre)
As part of the Birkbeck Institute for the Moving Image (BIMI) Science and Film Series, **Dr Tim Smith** and **Dr Teodora Gliga** held a Halloween screening of Alfred Hitchcock’s “The Birds”, which was followed by a lively discussion about animal intelligence with the zoologist and behavioural ecologist, Professor Alex Kacelnik of Oxford University.

**Professor Matthew Longo** gave a presentation on “The Perception of Touch and Body Image” at the London Borough of Haringey Enterprise Centre, October 12, as part of the Birkbeck’s Big Ideas series.

In July 2016, **Professor Michael Thomas** was invited to give oral evidence to a joint meeting of the Work and Pensions and Education Select Committees. The purpose of the Joint Select Committee was to investigate the Government’s “Life Chances” strategy, which had been launched back in January by the then Prime Minister, David Cameron, and which proposed targeting investment to help deprived children and their parents. Michael was invited as Director of the Centre for Educational Neuroscience, to present evidence from the neuroscience perspective on the importance of early years investment.

You can read a copy of the report from the Joint Select Committee Meeting here: [http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/education-committee/foundation-years-and-the-uk-governments-life-chances-strategy/oral/35282.html](http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/education-committee/foundation-years-and-the-uk-governments-life-chances-strategy/oral/35282.html)
RESEARCH HIGHLIGHTS

Toddlers and Touchscreens

Family ownership of touchscreen devices in the UK has increased from 7% in 2011 to 71% in 2014, and some parents and policymakers have raised concerns about the potential impact such devices might have on children’s development. Indeed, the American Academy of Pediatrics advises that children should not (with the exception of video-chatting) be exposed to any screens, including touchscreens, before the age of 18 months: http://pediatrics.aappublications.org/content/138/5/e20162591.

Dr Tim Smith and colleagues at the CBCD, in collaboration with researchers at King’s College’s Institute of Psychiatry, Psychology and Neuroscience, have been investigating the early use of touchscreen devices, in an attempt to understand the potential impact such devices might have on children’s cognitive development. As part of their project, they asked UK parents to fill in an online survey, which asked questions about their children's touchscreen use and their children’s development (e.g. the age that they first stacked blocks).

Results have shown that most toddlers in the UK have daily exposure to touchscreen devices (around 51% at ages 6-11 months, rising to over 92% by 19-36 months old), and that early touchscreen use, in particular actively scrolling the screen, correlates with increased fine motor control in toddlers. It is not yet known if this correlation indicates that using touchscreens can enhance fine motor skills, or if children with fine motor skills are more likely to use touchscreens earlier. Tim and his team are now conducting further work to determine the precise nature of this association and whether touchscreen use is associated with other developmental factors such as attention control, self-regulation and sleep.
<table>
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<th>Name</th>
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<td>Angelica Ronald</td>
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<td>Mark Johnson</td>
<td>Novel Approaches to Early Detection and Treatment of ASD</td>
<td>Brain Canada Foundation</td>
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<td>Fred Dick</td>
<td>INTERLEARN: Individualised Interventions in Learning: Bridging Advanced Learning Science and 21st Century Technology</td>
<td>European Commission</td>
<td>1,032,591</td>
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**Professor Martin Eimer** was elected as a Fellow of the British Academy in July, in recognition of his outstanding contribution to research in facial perception and recognition, and its impairment in prosopagnosia (face blindness). The British Academy is the UK’s national academy for the promotion of the humanities and social sciences, and Martin was among an elite cohort of only 42 academics to have been elected for the prestigious fellowship this year.
Professors Nazanin Derakshan, Anne Richards, and Michael Thomas were among only 45 academics from across the globe to have been elected Fellows of the US Association for Psychological Sciences (APS) in August this year. The APS is dedicated to the advancement of scientific psychology and its representation at national and international levels. Head of Department, Professor Mike Oaksford, said: “I’m delighted to see my colleagues recognised by the APS for their significant contributions to the psychological sciences. Their appointments as Fellows of this prestigious organisation are further evidence that Birkbeck has a world-class team of scientists in the field of psychology, whose talent impacts positively on the classroom environment at the College, as well as on the application of human psychology research.”
Professor Jacqueline Barnes was conferred as a Fellow of the Academy of Social Sciences in October this year, in recognition of her research on children’s behavioural and emotional development. The Academy of Social Sciences is the national academy of academics, learned societies and practitioners in the social sciences, with a mission to promote social science in the UK for the public benefit.

In September, Birkbeck psychology PhD graduate, Kristen Swan Tummeltshammer, was recognised by the American Psychological Association (APA) with an award for research excellence. Kirsten received the Developmental Psychology Dissertation Award for the PhD she completed at the Centre for Brain & Cognitive Development (CBCD), under the supervision of Dr Natasha Kirkham and Professor Denis Mareschal.

As a working mother with two young sons, Kristen said she was grateful to have had the support of female mentors at Birkbeck, and to have undertaken her PhD at a university that recognises and values students with many different needs and circumstances.

Dr Sarah Lloyd-Fox was shortlisted for the Functional Near-Infrared Spectroscopy (fNIRS) Early Investigator Award at the October Society for fNIRS Conference in Paris.
**Professor Anne** Richards gave a talk entitled “Exposure to disgusting imagery selectively enhances affective processing of disgusted facial expressions” at the Association for Psychological Science: 28th Annual Convention, May 26-29th 2016 in Chicago, US.

**Dr Iroise Dumontheil** gave a talk entitled “Social cognition and executive functions development during adolescence” at the International Neuropsychological Society mid-year meeting on 6th July in London.

**Dr Fiona Tasker** gave a talk entitled “Lesbian & Bisexual Parented Families: Mapping Family Relationships” at the LGBTQ+ Families, Wellbeing and Mental Health Workshop, jointly organized by the Transforming Gender and Sexuality Research Group at the University of Brighton & the Family, Kinship and Relationality Research Group at the University of Sussex, 22nd July 2016.

**Professor Mike Oaksford** was on the organizing committee of the International Conference on Thinking 2016 held at Brown University, Providence, Rhode Island, USA, on 4th-6th August, organising two seminars entitled “Dynamic inference and belief revision” and “Quantum probability” and giving two talks: “Learning in dynamic conditional inference” and “Causal Bayes nets and the effects of response format on causal conditional reasoning”.

**Professor Mike Oaksford** attended the 38th Annual Conference of the Cognitive Science Society, Philadelphia, USA, 10th-13th August 2016, where his PhD student, **Nicole Cruz** presented the paper: “*Centering and the meaning of conditionals*”.

**Professor Rick Cooper** gave a talk entitled "On the Acquisition of Goal Hierarchies: Insights from a Computational Model" at the 38th Annual Conference of the Cognitive Science Society on August 11th, 2016, in Philadelphia, PA, as part of a symposium on "Higher-level goals in the processing of human action events".
Dr Alex Shepherd went to the European Conference on Visual Perception (ECVP) in Barcelona at the end of August 2016, and gave a presentation, together with Ardian Dumani and Geddes Wyatt, on “Colour discrimination, coloured backgrounds, non-verbal IQ and global and local shape perception”.

Professor Jacqueline Barnes and co-authors presented a paper entitled “Community volunteer home visiting to support the engagement of vulnerable families with early childhood services” to the European Early Childhood Education Research Association (EECERA) Conference in Dublin, Ireland, on 2nd September 2016.

Dr Iroise Dumontheil gave a talk entitled “Self-regulation during adolescence” at the International Mind Brain and Education Society Wellcome Trust pre-conference on 15th September 2016, in Toronto, Canada.

Professor Denis Mareschal was an invited discussant at the Neurocuriosity 2016 Workshop on Information seeking, curiosity and attention, October 6th-8th 2016, in London.

Professor Denis Mareschal was Invited Keynote speaker at The Machine Intelligence 20 workshop on "Human-Like Computing", October 23-25th 2016 in Windsor, UK, speaking on “The role of development in human-like intelligence”.

Dr Iroise Dumontheil gave a talk entitled “Genetic influences on executive functions in adolescence and adulthood” at Leicester University’s Department of Neuroscience, Psychology & Behaviour seminar on 27th October 2016.

Dr Tim Smith presented his research on “Toddler-directed TV and the development of attentional control” at Durham University on 4th November 2016 and gave a talk entitled “The cognitive science of cinematic sound design” at Aberdeen University on 10th November 2016.
UPCOMING TALKS/EVENTS

Centre for Brain and Cognitive Development Seminar Series
1.00pm on Tuesdays, BMA Seminar Room

6th December 2016  Georgina Donati (Internal Seminar)
13th December 2016 Evelyne Mercure (Internal Seminar)

7th December, 12.30pm, 30 Russell Square
Dr Teodora Gliga
“Boy brain, girl brain? What have we learned about sex differences from studying typical and atypical brain development?”
(A TRIGGER event)

7th December, 1.00pm, B34 Malet Street
Professor Jamie Ward (Sussex)
“Feeling the pain of others”

16th December, 6.00 – 9.00pm, Birkbeck Cinema, 43 Gordon Square
BIMI Sci/Film 6: The Search for Extraterrestrial Life - The Andromeda Strain (Robert Wise, 1971) with expert guest Dr Jennifer Harris from Birkbeck’s Department of Earth and Planetary Sciences

10th May, 5.00 – 8.00pm, 639 Enterprise Centre, 639 High Rd, London, N17 8AA
Dr Angelica Ronald
“Why are teenagers paranoid?”
(Part of the Birkbeck’s Big Ideas Series)
Jane French was awarded a PhD for her thesis “Adolescence and context, the relevance of the neighbourhood and family for adolescent health and well-being” by Professor Steve Cummins (London School of Hygiene and Tropical Medicine) and Professor Ian Albery (London South Bank University). Supervisors were Professor Jacqueline Barnes and Dr Anne Miles.

Eleonora Vagnoni successfully defended her thesis entitled “Effect of emotion on the perception of visual looming”. She was supervised by Professor Matthew Longo and Professor Anne Richards.

Dr Angelica Ronald and Professor Mark Johnson were invited to examine Sarah James’s PhD thesis entitled “Attention-deficit/hyperactivity disorder and preterm birth as a risk factor: a cognitive-neurophysiological sibling-pair investigation” at King’s College London.

Professor Matthew Longo was an external examiner for Stephane Grade’s PhD at the Universite Catholique de Louvain, Belgium. The thesis was entitled “Implication of motor and numerical processes in the perception of external space”.

Professor Mike Oaksford was an internal University of London examiner for Steve Dewitt’s PhD thesis entitled “Determining Effective Methods of Presenting Bayesian Problems to a General Audience” at Queen Mary College, University of London.

At the University of Leeds Dr Belinda Brooks-Gordon was external examiner for Laura Connolly’s PhD entitled “The Governance of Sex Trafficking: Politics, Policy and Practice”.

Dr Belinda Brooks-Gordon was external examiner for the PhD of Rosie Campbell OBE, entitled “Not Getting Away With It: Treating Crimes Against Sex Workers As Hate Crime in Merseyside” at the University of Durham.

Dr Gillian Forrester was external examiner for Adrian Bell’s PhD entitled “On the Lateralised Motor Behaviour of Insects” at the University of Sussex.
Articles


Towler, J., Kelly, M., & Eimer, M. (2016). The focus of spatial attention determines the number and precision of face representations in working memory. *Cerebral Cortex*, 26, 2530-2540.


Books


Calling all Baby Scientists

The Birkbeck Babylab is looking for infants from birth to 18 months to take part in studies at the lab’s premises in Bloomsbury.

To find out more, please see: http://www.cbcdbbk.ac.uk/babylab