



Wales Autism Research Centre: Five Year Priorities 2014-2019

Mission

“Advancing scientific understanding of autism to create positive change”

The mission of the Wales Autism Research Centre is to advance scientific understanding to create positive change and better outcomes for individuals and families affected by autism. Our progress in achieving this mission in the last five years has been driven by a unique collaborative endeavour between scientists, practitioners, policy makers and people living with autism. Our aim for the next five years is to build on the success of our research innovation, impact, and partnerships and to take the work of the centre forward in new directions.

Key developments planned:

- New developments in research on sensory and perceptual responsiveness as part of a research theme on biological and cognitive processes;
- An innovative programme of research on families;
- Research on the development of autism symptoms in children who also have ADHD, typical development and disruptive behaviour problems;
- A coordinated clinical and research network for ASD in Wales in collaboration with the Neuroscience and Mental Health Research Network;
- A family and schools network in collaboration with charities and special schools;
- Development of interventions to aid attention, memory and sensory processing;
- Support for services through professional training, assessment and advice to families and individuals.

Background: The last 5 years:

In our five year plan in 2009, we predicted that “By 2015, the Centre’s mission will have begun to be realised. The integrated and interdisciplinary research conducted by the Centre will be starting to advance understanding of factors that affect the onset and outcome of autism symptoms in childhood and adulthood. It is expected that the Centre will have an excellent international reputation for its research in psychological and biomedical research in autism and related conditions, with a developing reputation as a training centre for PhD and postdoctoral scientists as well as for its translational work in policy and practice. It therefore should provide a model of excellence for research centres in other countries.”

The achievements and research findings of the last 5 years are summarised in the Appendix.

Five year Plan: 2014-2019

Research Themes and Objectives 2014-2019

Research Themes

Three themes have been selected to form the main focus areas for the work of the centre. These themes will consolidate the Wales Autism Research Centre's growing reputation and expertise in these areas. The themes are:

- (i) Behaviour and diagnosis
- (ii) Biological and cognitive processes
- (ii) Families and relationships.

Within each theme, new basic science research and applied work will bring a change of direction to WARC. A distinctive new priority will be to extend new knowledge into other neurodevelopmental and mental health conditions.

Objectives

The overall objectives and planned activities for the work of the centre are as follows.

Objective 1. To conduct internationally competitive scientific research projects and facilitate collaborative research networks

Planned activities: 2014-2019

- Success in funding applications;
- Publication in high quality journals;
- International conference presentations and invited talks;
- Databases and measures developed;
- WARC seminars;
- Joint activities and meetings with the Neuroscience and Mental Health Research Institute;
- Contributing to the development of research and training networks in Wales, UK and internationally.

Objective 2. To develop research and training for practice and policy and improve professional and public awareness of research

Planned activities 2014-2019

- Evidence and reports to Welsh Assembly Government on diagnostic services;
- Meetings or university exchanges with Welsh Government Members, government staff and practitioners;
- Measurable outcome/impact of research on policy and practice;

- Professional and undergraduate student training;
- Development of materials to promote the Centre and our research to the public, professional groups and media;
- Events targeting public and professional awareness of autism scientific research in autism;

We outline below the research projects and activities that the team would like to see prioritised over the next five years. Three themed areas of research activity have been identified that represent the experience and scientific reputation of the team. Each theme is subdivided into the two main objectives above.

The final themes and measurable objectives in the WARC strategy plan will drive research activity and impact across the next five years. However, this current draft plan is provisional, to be informed by advice from stakeholders and colleagues. We anticipate that the framework for these themes will offer sufficient flexibility for expansion as new appointments are made in WARC. The themes have also been selected to intersect with other programmes of work and to be response to strategic calls by funders. For example, we are currently involved in preparing with Prof Dale Hay (PI), an MRC programme grant on the development of children's imagination that would intersect with the themes of behaviour and diagnosis and biological and cognitive processes. We have also been invited to join an 8-site EME MRC application for a RCT led by the Institute of Psychiatry that would build capacity in these same themes.

This is a particularly important time to build plans for the future of neurodevelopmental disorders research in Cardiff ASD where expertise is strong and growing. The timing is perfect to align our future work with the new work going forward for CUBRIC-2 and plans for the Neuroscience and Mental Health Research Institute.

Theme 1: Behaviour and diagnosis

Theme leaders: Dr Kate Langley, Dr Sarah Carrington

Kate Langley, Sarah Carrington and Sue Leekam carry out research on the behavioural patterns in autism. This work has provided new findings that are informing the area of diagnosis in ASD and other neurodevelopmental conditions. Kate Langley's research brings a distinctive new direction by examining traits for ASD directly in comparison with those from ADHD and learning difficulties and in the context of genetic findings. Sarah Carrington's work on detailed and abbreviated diagnostic measurement is having an impact on clinical work on diagnosis and has relevance for neuroimaging of ASD symptoms.

Objective 1: Scientific research projects and collaborative research networks

Our aim over the next five years would be to prioritise projects that enhance the detection and understanding of specific, behavioural, genetic and neurobiological problems seen in ASD. We would aim to take forward our current work investigating genetic variants (CNVs)

as predictors of ASD symptomatology. We would also aim to investigate developmental and neurobiological factors in the emergence of ASD traits in ADHD, OCD, schizotypy and learning difficulties and to carry out in-depth analysis of heterogeneous clinical traits to clarify widespread effects of alteration in white matter microstructure.

Alongside these projects we will build a coordinated research and clinical network for ASD in Wales in collaboration with the Neuroscience and Mental Health Research Network. A school and family network in collaboration with charities and other universities will also support this work (see Theme 2 and 3).

Objective 2. Research and training for practice and policy and improve professional and public awareness of research

Our goal is to optimise the use of diagnostic tools in research and in clinical practice. Members of WARC have developed diagnostic assessment tools for the DISCO and we will carry out research to examine the effectiveness of not only the DISCO but also different methods of gathering clinical information. We will examine the value of applying a set of brief, essential diagnostic items in research settings, in diagnostic services and schools. We will also find out under which circumstances it is important to assess more complex individual profiles through clinical interview tools.

We will also build on our existing contribution to training and services within the Welsh Government's All Wales ASD Diagnostic and Pre and Post Diagnostic Counselling Network for Adults. The Welsh Government revision of ASD Action Plan 2014-2019 includes a commitment to data collection and to continuation of the ASD Adult Network and importantly a new Child Diagnosis network. We aim for our new work to extend the previous training models to which we have contributed. We also aim to utilize the ASD module of Child Health Database and to introduce innovative developments for the assessment of ASD symptoms behaviours by teachers in schools.

Theme 2: Biological and Cognitive Processes

Theme leaders: Dr Catherine Jones and Dr David McGonigle

Research by Catherine Jones, Dave McGonigle and Sue Leekam, has helped to identify sensory problems as possibly one of the most important symptoms affecting individuals with ASD. Research by Dave McGonigle and Catherine Jones has identified ways that an individual's atypical sensory and perceptual responses can interfere with ongoing processing of the environment, showing how relatively basic perceptual processing mechanisms impact on cognition and behaviour. Research by Dave McGonigle has shown how atypical sensory responses (hypo- or hyper-sensitivity) have a neurobiological basis affecting adaptation. Our group has also helped to pinpoint the relation between atypical sensory responses, anxiety and repetitive behaviour, and identified first evidence of elevated sensory symptoms in parents. We are also developing new research to establish the process by which restrictedness in behaviour and thinking affects the development of imagination.

Objective 1: Scientific research projects and collaborative research networks

In the next five years Catherine Jones and colleagues at WARC will take research on biological and cognitive processes in a new direction by targeting the role of timing processes in perceptual and sensory processing, and also in social communication and emotion. The research recognises that temporal processing, both perceiving time and the production of time-sensitive responses, are fundamental to human interaction. To be 'out of synch' and experience temporal disconnect is likely to have a fundamental impact on cognition and behaviour. The planned work will include projects that focus on how timing difficulties impact the coordination of social communication, how temporal discrimination affects sensory processing and how timing-based memory problems might be helped by developing a new intervention technique.

David McGonigle's work is based upon the proposal that sensory symptoms offer a non-invasive mechanism to investigate the disorder's underlying neurobiology. A critical part of this proposal is that ASD is the end result of a number of separate developmental pathologies that target fundamental aspects of synaptic physiology – for example, some affecting membrane receptor subunits, gephyrins, interneuron density, etc. In the next five years research projects in this area will prioritise the use of psychophysical tasks to link behaviours to specific neural mechanisms and aim to identify sensory deficits as causal factors during early development. Future planned work would include: building up a sensory database of sensory deficits in ASD; investigating the involvement of C-Afferents in social touch in ASD; evaluating learning-based theories of ASD from a neuroplasticity perspective; and continuing our work in neuroimaging and neurostimulation focused on both measuring GABA in ASD (MRS) and potentially modulating it (tDCS).

Research by Sue Leekam and her colleagues was among the first to identify difficulties in visual social attention. More recently we have identified the capacity for attentional learning in non-social attention tasks. We are now developing interventions using eye tracking technology to improve attention control. In the next five years we will aim to identify particular visual and cognitive characteristics that are associated with training benefits and uncover the underlying learning and reward mechanisms that create change. An interdisciplinary research network has been set up within current grant-funded work and will be expanded by this new work.

Objective 2. Research and training for practice and policy and improve professional and public awareness of research

Building on our good relations with special and mainstream schools in South Wales, we will create a Schools' Network, collaborating with specialists in schools to advise and train on cognitive assessment methods, and sensory assessment tools. The goal will be to embed research into practice. This will lead to innovative data collection plans and intervention designs and to the increase of evidence based professional practice approaches. We will also work in similar ways with adult diagnostic and support services and with Autism Cymru to build research-practice networks and initiatives.

Families and relationships

Theme leader: Dr Katherine Shelton

A new direction will be brought to existing research at WARC by the work of Dr Katherine Shelton. The projects under this new theme will develop gradually over the five years. The work will adopt a systems perspective as a theoretical framework to consider the complexity of family life, drawing from the field of developmental psychopathology. The main focus will be on the mechanisms that explain the links between child and parent risk factors and parent mental health in the context of ASD.

Objective 1: Scientific research projects and collaborative research networks

Some of the new work under this theme will explore how child symptoms interact with parent anxiety, depression and physical health problems. At the level of the family system, the question is how family processes operate among families where a child and/or parents themselves have symptoms of ASD. Child symptoms of ASD and associated behaviour problems may exert an additive effect with poor family functioning adding to children's anxiety and depression or such risk factors may best be conceptualised as multiplicative. Another question is whether relationship quality with other family members acts to buffer any negative effect of ASD child symptoms on parent mental health.

New research will also highlight how having a parent with ASD can influence outcomes for the child and the interaction between genetic and environmental factors. There might be particular time points when family contribution plays an important role, for example in the transition from adolescence to adulthood, with genetic and environmental factors linked to resilience in the transition. New research is also underway to study relationship satisfaction between adults when at least one in the couple has ASD.

Objective 2. Research and training for practice and policy and improve professional and public awareness of research

This is a new research area and the first goal will be to develop research-led approaches to support and advice to families. Working with our established contacts who already work with us at WARC as staff and student members, we would aim to develop a family network to give support on relationship issues in families. This would involve collaborating closely with existing services and local support organisations such as the National Autistic Society and with Autistica's ASD-UK research database, and Research Autism. We will be informed by Welsh Government's planned work on parent support as part of the revised ASD strategic action plan to be published at the end of this year.

Appendix

Objectives and planned activities achieved in the last 5 years

Objective 1: Conducting internationally competitive scientific research projects

New research council grants applied for and obtained in last 5 years

- ESRC and Cardiff University School of Psychology PhD Studentship. Inflexibility of Thought and Behaviour in Autism Spectrum Disorders. PhD student: **Barrett, S.L.**; Supervisors: **Leekam, S.R. & Jones, C.R.G.** £60,000. Oct 2013-Sept 2016.
- ESRC Knowledge Exchange Grant. *Development of Research-Policy-Practice Hub*. PI: **Leekam, S. R.**, Col: Wimpory (Bangor University). £200,000 inc. £100, 000 matched funding from Welsh Government. Nov 2012-Mar 2014.
- ESRC. *Integrating research and practice in autism spectrum disorders*. PI: **Leekam, S. R. & Carrington, S. J.** £124,403.40. Jul 2011-Sept 2012.
- ESRC. *Internship with Welsh Government*. PhD student **Rachel Kent**, £3,300. Oct 2011-Dec 2011.
- ESRC. CASE Award *Using the Diagnostic Interview for Social and Communication Disorders (DISCO) for research*. PI: **Leekam, S.R.** in partnership with NAS, £64,000. Oct 2009-Dec 2013

Success in funding applications (non research council)

- Cardiff University School of Psychology PhD Studentship. The eye dominance effect in Autism. PhD student: **Thompson, S.J.**; Supervisors: **Jones, C.R.G. & Leekam, S.R.** £60,000. Oct 2013-Sept 2016.
- Welsh Crucible Grant. Social communication in autism spectrum disorder: The role of synchrony explored using computer pattern matching. PI: **Jones, C.R.G.** £7,351 Dec 2013-Sept 2014.
- Wellcome Trust Institutional Strategic Support Fund in collaboration with NISCHR. Seedcorn grant. Visual attention control in individuals with neurodevelopmental disorders. June 2013. PI: **Leekam, S. R.** CO-Is: Wass, S., Erichsen, J., Clarke, A., Millington, A. £49, 402. Oct 2013-Sept 2014.
- Welsh Government. Online infrastructure for Research-policy-practice hub. PI: **Leekam, S.R.** £15,000. March 2013.
- Welsh Government. Children's Diagnosis Methods. PI: **Leekam, S.R.** £42,116. Feb 2013- March 2013.
- Cardiff University PhD Studentship. REACH project: Research Exploring Autism Spectrum Condition Couple relationship satisfaction, Health & wellbeing. **PI: Winn, B** (PhD student); supervisors: Dr Katherine Shelton & **Professor Susan Leekam**. £60,000 Jan 2013-Jan-2018.
- Remedi Research Award. REACH project: Research Exploring Autism spectrum condition Couple relationship satisfaction, Health & wellbeing. PI: **Winn, B** (PhD student); supervisors: Dr Katherine Shelton & **Professor Susan Leekam**. £1,860. Jan 2013-Jan 2013.
- Wellcome Trust. Longitudinal follow-up of 22q11.2 Deletion Syndrome: A study of individuals at high risk for schizophrenia. PI: Van den Bree, M.B. Co-Is: Owen, M.J., Thapar, A., Doherty, J., van Goozen, S., **Leekam, S.R., Carrington, S.J.**, Jones, D.K. £69,579. Oct 2012-Sept 2013.
- Cardiff University Community Engagement Team Small Grant. Developing web content on autism spectrum disorder (ASD) for families affected by ASD. PI: **Carrington, S.J., Lidstone, J.; RA: Winn, B.** £489.00. Sept 2012-Oct 2012. Sept 2012-Dec 2012.

- Cardiff University Research Opportunities Programme. Effect of early intervention on the social orienting of children with autism. **Lidstone, J. & Leekam, S.R.** £1,360.00. Aug2012.
- Strategic Insight Partnership Grant. Funding to work with Dr Judith Gould in meetings with Cardiff University and the Welsh Government. PI: **Leekam**, £2,000. July 2012.
- Autism Speaks Trailblazers Award. *Tuning anxiety out: Exploring the potential of noise cancellation in Autism Spectrum Disorder sound sensitivity* PI: Dr Mark Atherton, Brunel University; Co-I **Prof. Leekam, Dr McGonigle**, Sue Osborn (Kingwood Trust). £100,000. May 2012-June 2013.
- Cardiff University Neuroscience and Mental Health Research Institute seed corn funding. White matter alterations in 22q11.2 Deletion Syndrome: a pilot study. PI: **Dr Carrington**; Co-I: Dr van den Bree, **Prof. Leekam**, Prof. Jones, Prof. Owen. £4,964.75. Mar 2012-Feb 2013.
- SENSE Scotland. Joint attention in deaf-blind children. PI. Dr M. Nunez, Glasgow Caledonian. Collaborators, Dr F Franco, Middlesex University, **Prof S. Leekam**, Cardiff University. Sept 2011-Sept2013.
- NISCHR Children's and Young People's Research Network, Research Development Group. Identification and diagnosis of ASD. PI: **Leekam**, £2,500. Jul 2011-Jun 2012.
- WAG & BCUHB: *Development of an Autism Spectrum Disorder (ASD) database within the Betsi Cadwaldr University Health Board (BCUHB)* PI. Dr Wimpory, Coapplicant, **Leekam**, £73,000. Dec 2010-May 2011.
- Baily Thomas Charitable Fund: *Developing targeted intervention for repetitive behaviours and anxiety in children with Autism Spectrum Disorder*. PI: **Leekam**, £115,618. Oct 2010-Jul 2012.
- Welsh Assembly Government: *Children's ASD Diagnostic Services in Wales*. PI. **Leekam**, Collaborator, Dr Wimpory, £24,995. May 2010-Oct 2010.
- Waterloo Foundation: *'ASD and the Neurobiology of Sensory Symptoms'*. PI: **Dr. D. McGonigle**. (2010). Co-apps; **Prof Leekam**, Prof Eddon, Prof Jones, Prof Singh. £53,473. Apr 2010-Mar 2011.
- Cardiff University and Waterloo Foundation (matched funding). Research Networking Event Award. **Kourkoulou & Leekam**, £2,795. Apr 2010-Mar 2011.
- Welsh Assembly Government Social Care Studentship award *Developing effective early intervention for children with Autism Spectrum Disorders*. PI: **Leekam**, £60,000. Jan 2010-Dec 2013.
- NIHR Research for Patient Benefit *Effective therapy for young people with autism spectrum* PI: McConachie, Coapp; **Leekam**, £228,857. Jul 2009-Jul 2011.
- Waterloo Foundation Aug 2009: *Understanding anxiety in children with Autism Spectrum Disorders (ASD): An awareness-raising training module designed to integrate new research evidence into practice in schools*. PI: **Leekam**, with collaborators, Autism Cymru, £14,889. End date: Apr 2010.

Publication in high quality journals

Under review:

- Arnott, B., **Leekam, S.R.**, Burt, M.D., Riby, D.M. (2014). Understanding the quality of eye contact associated with Williams Syndrome. *Research in Developmental Disabilities*. Submitted.
- Carter Leno, V., Charman, T., Pickles, A., **Jones, C.R.G.**, Baird, G., Happé, F., Simonoff, E. (2014). Callous-Unemotional Traits in Adolescents with Autism Spectrum Disorder: Common but Not Necessarily Associated with Antisocial Behaviour. *British Journal of Psychiatry*. Submitted.
- Whitaker, L., **Jones, C.R.G.**, Wilkins, A.J., & Roberson, D. (2014). Colored tints improve judgments of emotional intensity in individuals with autism spectrum disorder. *Journal of Autism & Developmental Disorders*. Submitted.
- **Cooper, M.**, Thapar, A., Jones, D.K. (2013). White matter microstructure predicts autistic traits in ADHD. *Journal of Autism & Developmental Disorders*. Submitted.

Published or in Press:

- **Uljarević, M.**, Prior, M. R. & **Leekam, S. R.** (2014). First evidence of sensory atypicality in mothers of children with Autism Spectrum Disorder (ASD). *Molecular Autism*, 5: 26. Doi: 10.1186/2040-2392-5-26
- **Carrington, S.J.***, **Kent, R.G.***, Le Couteur, A., Gould, J., Wing, L., Noens, I., Maljaars, J., Berckelaur-Onnes, I., & **Leekam, S.R.** (2014). DSM 5 Autism Spectrum Disorder: In search of essential behaviours for diagnosis. *Research in Autism Spectrum Disorders*, 8(6), 701-715. (*joint first authors).
- **Martin, J., Cooper, M.**, Hamshere, M., Pocklington, A., Pinto, D., Kent, L., Gill, M., Owen, M.J., Williams, N., O'Donovan, M., Thapar, A., Holmans, P. (2014). Investigating the biological overlap of ADHD and ASD. *Journal of the American Academy of Child and Adolescent Psychiatry*.
- Hollocks, M.J., **Jones, C.R.G.**, Pickles, A., Baird, G., Happé, F., Simonoff, E. (2014). The association between social cognition and executive functioning and symptoms of anxiety and depression in adolescents with autism spectrum disorders. *Autism Research*.
- Stirling, L., Douglas, S., **Leekam, S.R.**, & Carey, L. (2014). The use of narrative in studying communication in autism: A review of findings and methodologies. In J. Arciuli and J. Brock (eds.) *Language and Communication Impairment in Childhood Autism*, Trends in Language Acquisition Research, Amsterdam: John Benjamins.
- **Iao, L. & Leekam, S.R.** (2014). Non-specificity and theory of mind: New evidence from a non-verbal false-sign task and children with autism spectrum disorder. *Journal of Experimental Child Psychology*, 122, 1-20.
- **Lidstone, J.***, **Uljarević, M.***, Sullivan, J., Rodgers, J., McConachie, H., Freeston, M., Le Couteur, A., Prior, M., **Leekam S.R.** (2014). Relations among restricted and repetitive behaviours, anxiety and sensory symptoms in individuals with autism spectrum disorders. *Research in Autism Spectrum Disorders*, 8(2), 82-92. (*joint first authors).
- **Lidstone, J., Uljarević, M.**, Kanaris, H., Mullis, J., Fasoli, L., & **Leekam, S.R.** (2014) Imitating the Child with Autism: A Strategy for Early Intervention? *Autism* 4:124. doi: 10.4172/2165-7890.1000124.
- **Cooper, M.***, **Martin, J.***, **Langley, K.**, Hamshere, M., Thapar, A. (2014). Autistic traits in children with ADHD index clinical and cognitive problems. *European Child and Adolescent Psychiatry*, 23(1): 23-34. (* joint first authors).
- **Kent, R.G.***, **Carrington, S.J.***, Le Couteur, A., Gould, J., Wing, L., Noens, I., Maljaars, J., Berckelaur-Onnes, I., & **Leekam, S.R.** (2013). Diagnosing Autism Spectrum Disorder: Who will get a DSM-5 diagnosis? *Journal of Child Psychology and Psychiatry*, 54(11), 1242-1250. (*joint first authors).
- Fletcher-Watson, S., **Leekam, S.R** & Findlay, J. (2013). Social Interest in High-Functioning Adults with Autism Spectrum Disorders. *Focus on Autism Spectrum Disorders* -11-140.
- Evans, C. J., Puts, N. A. J., Robson, S. E., Boy, F., **McGonigle, D. J.**, Sumner, P., et al. (2013). Subtraction artifacts and frequency (Mis-)alignment in J-difference GABA editing. *Journal of magnetic resonance imaging*, 38(4), 970-975.
- Mullins, P. G., **McGonigle, D. J.**, O'Gorman, R. L., Puts, N. A. J., Vidyasagar, R., Evans, C. J., et al. (2013). Current practice in the use of MEGA-PRESS spectroscopy for the detection of GABA. *NeuroImage*, 86, 43-52.
- Thapar, A., **Cooper, M.** (2013) Copy number variation: What is it and what has it told us about child psychiatric disorders? *Journal of the American Academy of Child and Adolescent Psychiatry*, 52(8): 772-4.
- **Kourkoulou, A.**, Kuhn, G., Findlay, J.M., & **Leekam, S.R.** (2013). Eye movement difficulties in Autism Spectrum Disorder: Implications for contextual learning. *Autism Research*. Published online, Feb 2013, DOI: 10.1002/aur.1274.

- Meins, E., Fernyhough, C., Arnott, B., **Leekam, S. R.**, De Rosnay, M. (in press) Mind-mindedness and Theory of Mind: Mediating roles of language and perspectival symbolic play. *Child Development*. Published online, Feb 2013, DOI: 10.1111/cdev.12061.
- **Leekam, S.R.** (2013). Diagnostic Interview for Social and Communication Disorders. In Volkmar, F. Ed. *Encyclopedia of Autism Spectrum Disorders*. Berlin: Springer.
- **Uljarević, M.** & Hamilton, A. (2012) Recognition of emotion. Recognition of emotions in autism: a formal meta-analysis. *Journal of Autism and Developmental Disorders*. Published online, Nov 2012, DOI: 10.1007/s10803-012-1695-5.
- Falter, C. M., Braeutigam, S., Nathan, R., **Carrington, S.J.**, & Bailey, A. J. (2012). Enhanced access to early visual processing of perceptual simultaneity in Autism Spectrum Disorders. *Journal of Autism and Developmental Disorders*. Published online, Dec 2012, DOI:10.1007/s10803-012-1735-1.
- Fletcher-Watson, S., **Leekam, S. R.**, Connolly, B., Collis, J. M., Findlay, J. M., McConachie H., and Rodgers, J. (2012). Attenuation of change blindness in children with autism spectrum disorders. *British Journal of Developmental Psychology*, 30, 446-458.
- Nešić, M., Kostić J., **Uljarević, M.**, Ćirić, M., Nešić, V. (2012) Relationship between empathy and cardiovascular response to emotional movie scenes. *Clinical Neurophysiology*, 123(7): e82.
- Nešić, M., Kostić, J., **Uljarević, M.**, Čičević, S., Nešić, V. (2012). Empathy as a predictor of skin conductance response to evocative movie scenes. *Clinical Neurophysiology*, 123(7): e85.
- **Kourkoulou, A., Leekam, S.R.**, Findlay, J.M. (2012). Implicit learning of local context in Autism Spectrum Disorder, *Journal of Autism and Developmental Disorders*, 42, 2, 244-256.
- **Price, M. & White, L.** (2012) Letter to *The Psychologist*, British Psychological Society, 5, 10, 726-733.
- **Leekam, S.R.**; Prior, M. R.; **Uljarević, M.** (2011). Restricted and repetitive behaviours in autism spectrum disorders: A review of research in the last decade. *Psychological Bulletin*, Vol 137 (4), 562-593.
- **Lidstone, J. S. M.**, Meins, E., & Fernyhough, C. (2012). Verbal mediation of cognition in children with specific language impairment. *Development and Psychopathology*, 24(2), 651-660
- Wiestler T, **McGonigle DJ**, Diedrichsen J. Integration of sensory and motor representations of single fingers in the human cerebellum. (2011) *J Neurophysiol*, 105(6), 3042-53
- Meins, E. Fernyhough, C., Arnott, B., Turner, M. & **Leekam, S.R.** (2011). Mother versus infant centred correlates of maternal mind-mindedness in the first year of life. *Infancy*, vol 16, 2, 137-165.
- **Iao, L.S., Leekam, S.R.**, Perner, J. & McConachie, H. (2011). Further Evidence for non-specificity of theory of mind in preschoolers; training and transferability in the understanding of false beliefs and false signs. *Journal of Cognition and Development*, 12, 56-79.
- **Lidstone, J. S. M.**, Meins, E. & Fernyhough, C. (2011). Individual differences in children's private speech: Consistency across tasks, timepoints, and contexts. *Cognitive Development*, 26 (3), 203-213.
- **Kourkoulou, A, Leekam, S.R.**, Findlay, J.M. (2011). Implicit learning of local context in Autism Spectrum Disorder, *Journal of Autism and Developmental Disorders*, 42, 2, 244-256.
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- Fletcher-Watson, S., **Leekam, S.R.**, Connolly, B., Collis, J.M., Findlay, J.M., McConachie, H.R., Rodgers, J. (2011). Attenuation of change blindness in children with autism spectrum disorders. *British Journal of Developmental Psychology*. Online July 2011.

- Meins, E., Fernyhough, C., de Rosnay, M., Arnott, B., **Leekam, S. R.** & Turner, M. (2011). Mind-mindedness as a multidimensional construct: Appropriate and non-attuned mind-related comments independently predict infant–mother attachment in a socially diverse sample. *Infancy*. Online: 29 Aug 2011.
- Kuhn, G., & **Kourkoulou, A.** & **Leekam, S.R.** (2010). How magic changes our expectations about autism. *Psychological Science*, *21*, 1487-1493.
- **Lidstone, J. S. M.**, Meins, E., & Fernyhough, C. (2010). The roles of private speech and inner speech in planning in middle childhood: Evidence from a dual task paradigm. *Journal of Experimental Child Psychology*, *107*, 438-451.
- Kuhn, G., Benson, V., Fletcher-Watson, S., Kovshov, H., McCormick, C., Kirkby, J. & **Leekam, S.R.** (2010) Eye movements affirm: Automatic overt gaze and arrow cueing for typical adults and adults with autism spectrum disorder. *Experimental Brain Research*. 201, 155-165.
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- Bundovska, S., **Uljarevic M.** (2010). Ethical and practical challenges when conducting fMRI research in children. *Psychology Yearbook*, *6*(8), 23-32.
- **Leekam, S.** & Prior, M. Restricted and repetitive behaviours. In Volkmar, F. (Ed). Autism and autism spectrum disorders: History, diagnosis, neurobiology, treatment and outcome. The Biomedical and Life Sciences Collection. Henry Stewart Talks Ltd., London (online at <http://hstalks.com/?t=BL1042580-Leekam>).
- **Leekam, S.R.**, Solomon, T.L. & Teoh, Y-S, (2010). Adults' social cues facilitate young children's use of signs and symbols. *Developmental Science*. 13, 1, 108, 119.
- Fletcher-Watson, S., Collis, J.M., Findlay, J.M. & **Leekam, S.R.** (2009). Development of change blindness: Children's attentional priorities whilst viewing naturalistic scenes. *Developmental Science*, *12*, 3, 438-445.

International conference presentations and invited talks

- **Carrington, S.J., Kent, R.G.**, Maljaars, J., Le Couteur, A., Gould, J., Wing, L., & **Leekam, S.R.** DSM-5 Autism Spectrum Disorder: In search of essential behaviours for diagnosis. Invited for oral presentation at the International Meeting for Autism Research, Atlanta, USA, May 2014.
- **Leekam, S.** Autism and repetitive behaviours. Promoting well-being in children with autism conference, Birmingham. 12th Mar, 2014.
- **Cooper, M.**, Thapar, A., Jones, D.K. Diffusion MRI in adolescents with ADHD: The significance of autistic traits. Talk given at Eunethydis International ADHD Meeting, Prague, October 2013.
- **Cooper, M., Martin, J., Langley, K.**, Hamshere, M., Thapar, A. Autistic traits in children with ADHD index clinical and cognitive problems. Poster presented at Eunethydis International ADHD Meeting, Prague, October 2013.
- **Jones, C.R.G.** Temporal bisection in individuals with autism spectrum disorder. Invited speaker at symposium: Timing in Clinical Populations, Meeting of the Hellenic Cognitive Science Society, Athens, June, 2013.
- **Jones C.R.G.**, Gaigg S, Lambrechts A. Sensitivity to emotional stimuli in autism spectrum disorder: The effect of emotional images on time perception. Poster presented at the International Meeting for Autism Research, San Sebastián, Spain, May, 2013.
- **Kent, R.J., Carrington, S.J.**, Le Couteur, A., Gould, J., Wing, L., Maljaars, J., Noens, I., van Berckelaer-Onnes & **Leekam, S.R.** Diagnosing Autism Spectrum Disorder: Who will get a DSM-5 diagnosis? Poster presented at the International Meeting for Research in Autism, San Sebastian, May, 2013.

- **Leekam, S.R.**, Wimpory, D., & Nicholas, B., An Autism Spectrum Disorders (ASD) Database: Regional pilot for a national ASD database for Wales. Poster presented at the International Meeting for Research in Autism, San Sebastian, May, 2013.
- **Fyfield, R., Leekam, S.R., & Hay., D.F.** Infants' repetitive behaviour: Locomotor development and social communication abilities. Poster presented at the International Meeting for Research in Autism, San Sebastian, May, 2013.
- **White, L., Carrington, S., Winn, B., Ramsden, C., Morgan, H., & Leekam, S.R.** Integrating research, policy and practice in ASD. Poster presented at the International Meeting for Research in Autism, San Sebastian, May, 2013.
- **Uljarevic, M., Lidstone, J., Leekam, S.R.,** Le Couteur, A., Evans, D.W., Freston, M., McConachie, H., Rodgers, J., & Prior, M. Intolerance of uncertainty and coping strategies as correlates of anxiety in mothers of children with ASD. Poster presented at the International Meeting for Research in Autism, San Sebastian, May, 2013.
- **Uljarević, M., Carrington S.J.,** Tucker, J., Evans, D., & **Leekam, S.** Anxiety, Temperament and Autistic Traits in the General Population. Talk given at the Anxiety pre-meeting, the International Meeting for Autism Research, San Sebastian, May 2013.
- **Leekam, S. & Barratt, S.** Imagining the worst. Talk given at the Anxiety pre-meeting, the International Meeting for Autism Research, San Sebastian, May 2013.
- **Leekam, S.** The John Findlay Keynote Lecture. Social attention: eye movements, and learning in Autism Spectrum Disorders. British Oculomotor Group Annual Meeting. 16th Dec, 2013.
- **Lidstone, J., Uljarević, M., Leekam, S.R.,** Kanaris, H., McKigney, A.-M., Mullis, J., & Paradice, R. (2012). *How do the functions of restricted and repetitive behaviours vary with developmental level in children with autism spectrum disorders?* Poster presented at the International Meeting for Autism Research, Toronto, Canada, May 2012.
- **Carrington, S.J., & Bailey, A.J.** (2012). *A functional MRI study of imitation and mirror neurons in ASD.* Poster presented at the International Meeting for Autism Research, Toronto, Canada, May 2012.
- **Kent R.G., Leekam, S.R.,** Gould, J., and Wing, L. (2012) *Exploring the Associated Features of ASD: Sensory, Motor, Emotions & Daily Living Skills.* Poster presented at the International Meeting for Autism Research, Toronto, Canada, May 2012.
- **McGonigle, D.J., White, L.,** Puts, N., **Kent, R.G., Carrington, S.J.,** Tommerdahl, M., Edden, R., Singh, K., Jones, D.K., **Leekam, S.R.** (2012). Linking GABA to Tactile function in ASD: A pilot Magnetic Resonance Spectroscopy (MRS) study. Poster presented at the International Meeting for Autism Research, Toronto, Canada, May 2012.
- **Uljarević, M., Lidstone, J., Leekam, S. R.,** Kanaris, H., McKigney, A. M., Mullis, J., Paradice, R. *Anxiety in Children with Autism Spectrum Disorders is Associated with Affective Symptoms in Their Mothers.* Poster presented at the International Meeting for Autism Research, Toronto, May 2012.
- **Winstanley, A. & Gattis, M.** (2012). The Baby Care Questionnaire: A Reliable Measure of Parenting Principles and Practices. Poster presented at the SRCD Themed Meeting: Developmental Methodology. Tampa, FL, February, 2012
- Nešić, M., Kostić, J., **Uljarević, M.,** Ćirić, M., Nešić, V. (December 2011). The Relationship between empathy and physiological responses to emotional movie scenes. CogSciNish.
- Nešić, M., Kostić, J., **Uljarević, M.,** Ćirić, M., Nešić, V. (November 2011). The Relationship between empathy and cardiovascular response to emotional movie scenes. Symposium of Clinical Neurophysiology of the Society of Serbia and Montenegro with International Participation, Belgrade, Serbia.
- Nešić, V., Nešić, M., Kostić, J., **Uljarević, M.,** Čičević, M. (September 2011). The Neurobiology of Empathy. VII International Conference of Applied Psychology in Nish with the Focus on the Psychology of Communication

- **Winn, B** (2011). Harnessing Repetitive behaviours in a sensory playful environment. Autism Cymru International Conference, 21st June, 2011.
- **Carrington S.J.**, Bailey A.J. (2011). False Beliefs and Intentions: Can the brain tell the difference? Poster presented at the International Meeting for Autism Research, San Diego, US-.13th May 2011.
- **Kent, R** (2011). What role does atypical sensory processing play in the core features of ASD? International Meeting For Autism Research, San Diego,USA. 13th May, 2011.
- **Leekam, S. R.**, Wimpory, D., **Lidstone, J.S.M.**, Ramsden, C., & Morgan, H. (2011). How Are Diagnostic Tools Used In Clinical Practice? Evidence from a Nationwide Survey of Children's Diagnostic Services In Wales, UK. Poster presented at the International Meeting for Autism Research, San Diego, USA. 13th May, 2011.
- Invited Lectures by **Professor Leekam**. Division of Speech and Hearing Sciences, Hong Kong University, 7-9 March 2011 (Title 1) Specificity and social cognitive impairment in autism (Title 2) Understanding autism as a spectrum: Research using The Diagnostic Interview for Social and Communication Disorders (DISCO).
- Paper symposium Biennial Meeting of the Society for Research in Child Development, Montreal, Canada. March 2011. Liebermann & **Lidstone** (2011). "If I Say So": Current Trends in Research on Private and Inner Speech.
- Invited Keynote Lecture by **Professor Leekam**. Olga Tennison Research Centre, La Trobe University Australia. Feb 24 2011: Title: Understanding autism as a spectrum: Research using The Diagnostic Interview for Social and Communication Disorders (DISCO).
- AWARES International Online Conference. 8-29 Nov 2010. Kuhn, G., **Leekam, S.R. & Kourkoulou, A.** (2010). Magic and autism: How magic changes our expectations about autism.
- **Leekam, S.** Invited Keynote Lecture: Conference of the Danish Association of Special Schools and Treatments Centres for Children with Autism, Skive, Denmark, November 2010
- **Iao, L.-S., & Leekam, S.** (2010). Non-specificity of theory of mind in children with and without Autism Spectrum Disorder: Evidence from a new non-verbal false sign task. IX International Congress Autism-Europe, Catania, Italy, October 2010
- **Leekam, S. R.**, Kuhn, G., **Kourkoulou, A** - How magic changes our expectations about autism. International Meeting for Autism Research, Philadelphia, May 2010
- **Leekam, S.R.** Eye movements and social information in autism spectrum disorder. *AWARES International Online Conference on Autism*. November.2009.
- Kuhn, G. & **Leekam, S.R.** Susceptibility to magic illusions in autism. Paper presented at the European Conference in Eye Movements. Southampton, August 2009.
- Mifsud, J., Dissanayake, C. & **Leekam, S.R.** Pretend play in autism. Poster presented at International Meeting for Research in Autism, Chicago, May 2009.
- **Leekam, S.R.**, McConachie., H.M., Arnott, B.M., Meins, E., Fernyhough, C.P., Turner, M., Vittorini, L., Parkinson, K., & Le Couteur, A. Continuity and change in children's restricted and repetitive behaviours. *Society for Research in Child Development*, Denver. 2-4 April 2009

National conference presentations and other external presentations:

- **Jones, C.R.G.** Temporal processing in clinical populations: Insights from Parkinson's disease and autism spectrum disorder. Invited talk to the Department of Psychology, University of Portsmouth, 12th Mar, 2014.
- **Barrett, S. L.** The Adult Version of the RBQ-2. North East Autism Research Group (NEAR). Newcastle University. 28th Mar, 2014.
- **McGonigle, D.** Confessions of a Neuroscientist with a Methods Problem: Neuroimaging, Touch, and Beyond. Reading University, 13th Mar, 2014.

- **Leekam, S.R.** Joint attention and early communication development. Northern Region Child and Adolescent Psychiatry academic programme. Newcastle University. 7th Jan, 2014.
- **Ramsden, C.** Linking Autism research to better policy decision making and practice - Welsh National Social Services Conference. Llandudno. June 27th, 2013.
- **Leekam, S.R. and Ramsden, C.** How can research help policy and practice? Autism Alliance UK. London. 12th June 2013.
- **Ramsden, C. & White, L.J.** Developing a Research- Policy-Practice Hub for Autism Spectrum Disorders - Bristol Autism Research Group (BARG). School of Experimental Psychology, Bristol. 9th Apr, 2013.
- Wimpory, D. & **Leekam, S.R.** (2013). *An Autism Spectrum Disorder Database: Pilot for a national database in Wales*. Poster presented to Betsi Cadwaldr University Health Board Conference, Mar 2013.
- **Carrington, S., Kent, R.G.** *Draft DSM-IV: What are the research findings?* National Autistic Society Professionals Conference. Harrogate, 5th-6th Mar 2013.
- **Leekam, S.R.** *Specificity and social cognitive impairment in autism*. Cambridge University. 22nd Zangwill Talk. Cambridge University, 22nd Feb 2013,
- **Leekam, S. R.** *Attention and social attention in autism spectrum disorders*. Kent University, 6th Mar 2013
- **Uljarević, M., Lidstone, J., Leekam, S. R.** *Sensory symptoms and anxiety: A study of children with ASD and their parents*. Bristol Autism Research Group (BARG), School of Experimental Psychology, Bristol, 18th Sept 2012.
- **Uljarević, M., Lidstone, J., Leekam, S. R.** *Anxiety and stress in parents of children with autism*. Talk given at the NAS Cardiff & Vale Parent Support group and WARC event, School of Biosciences, Cardiff University, 17th Sept 2012.
- Atherton, M., Jensen, F., **Kent, R., Leekam, S.R., McGonigle, D.,** Rotter, K., **White, L.** Anxiogenic sounds for people with Autism Spectrum Disorder, presented at British Society of Audiology 3rd Annual Conference and Experimental & Clinical Short Papers Meeting, Nottingham Trent University, 5th-7th Sept 2012.
- **Uljarević, M., Lidstone, J., Leekam, S.R.,** Freeston, M., Le Couteur, A., McConachie, H., Rodgers, J., & Prior, M. *Sensory processing and repetitive motor behaviours in children with Autism Spectrum Disorders (ASD)*. Poster presented at the British Psychological Society Developmental Section Annual Conference, University of Strathclyde, Glasgow, 5th-7th Sept 2012.
- **Kent, R.G., Carrington, S.J.,** Gould, J., & **Leekam, S.R.** *Overlapping diagnoses across the autism spectrum: ICD-10 Childhood Autism, Gillberg's Asperger syndrome, Wing & Gould's Autism Spectrum Disorder, Kanner & Eisenberg's Autism and Prospects for DSM-5 Autism Spectrum Disorder*. Poster presented at the British Psychological Society Developmental Section Annual Conference, University of Strathclyde, Glasgow, 5th-7th Sept 2012.
- Nunez, M., Franco, F., & **Leekam, S.R.** *Joint Attention in Deafblind Children: Touching a shared world*. Poster presented at the British Psychological Society Developmental Section Annual Conference, University of Strathclyde, Glasgow, 5th-7th Sept 2012.
- Kozic, M., **Uljarević, M.** *The role of empathy in humour: an illustration through autism and psychopathy*. Poster presented at the 4th UK Cognitive Linguistics Conference, King's College London, 10th-12th July 2012.
- **Carrington S.J.** *Neuroimaging in Autism Spectrum Disorder: How much can we learn?* Invited speaker at the National Autism Today conference. London, 5th July, 2012.
- **Carrington, S.J., Kent, R.G, Leekam, S.R.** *Abbreviating the DISCO for children and adults*. Presentation at DISCO research meeting. The Lorna Wing Centre, London, 19th June, 2012.
- **Kent, R.G., Carrington, S.J., Leekam, S.R.** *Adapting the DISCO for DSM-5*. Presentation at DISCO research meeting. The Lorna Wing Centre, London, 19th June, 2012.
- **Leekam, S.R.** (2012), *Assessment and diagnosis issues in complex children and young people*. Keynote lecture at the Diagnosis Conference, City Hall, Cardiff – 27th March, 2012

- **Leekam, S.R.** (2012). Invited department seminar at the Institute of Neuroscience, Newcastle University – 8th March, 2012
- **Winstanley, A., Sperotto, R.G., Bornstein, M.H. & Cherian, S. & Gattis, M.** (2012). Social and cognitive development in preterm infants. Poster presented at the Wellcome Trust Final Year PhD student meeting. Wellcome Trust Buildings, London, UK, February, 2012
- **Leekam, S.R.** (2011). Seminar at CBCD, University College London – 21st November, 2011
- **Lidstone, J.S.M., Leekam, S.R., Ramsden, C., & Wimpory, D.** (2011). How are standardised developmental assessments used in clinical practice? Qualitative and quantitative findings on the diagnosis of autism. Poster presented at the British Psychological Society Developmental Section Conference. Newcastle, UK. 7th September 2011.
- **Leekam, S.R.** (2011). Social imitation and imagination. Discussant at symposium on social imitation, British Psychological Society Developmental Section Conference, Newcastle, UK, 7th September, 2011.
- **Uljarevic, M., & Leekam, S.** (2011) Repetitive behaviours and anxiety in children with Autism Spectrum Disorders. Poster presented at the Annual Event of the Learning Disability, Autism and Neurodevelopmental Disorders Network, Cardiff, March 2011.
- **Lidstone, J.** (2011), Private speech and inner speech of children with specific language impairment.
- **Kent, R. G., Leekam, S., Gould, J., LeCouteur, A., & Wing, L.** (2011) Sensory processing in AS
- Learning Disability and Autism and Neurodevelopmental Disorders Conference, Cardiff, March 2011.
- **Uljarevic, M., & Leekam, S.,** Effectiveness of existing early interventions in reducing repetitive behaviours and anxiety in children with autism.spectrum disorders. Poster presented at the Annual Event of the Learning Disability, Autism and Neurodevelopmental Disorders Network, Llandudno, March 2010.
- **Kourkoulou, A., Findlay, J. & Leekam, S.** Intact implicit learning in autism spectrum disorders. Poster presented at the Annual Event of the Learning Disability, Autism and Neurodevelopmental Disorders Network, Llandudno, March 2010.
- **Kent, R., Leekam, S., Gould, J. & Wing, L.** Investigating sensory processing in autism spectrum disorders. Poster presented at the Annual Event of the Learning Disability, Autism and Neurodevelopmental Disorders Network, Llandudno, March 2010.
- **Iao, L, & Leekam, S.** Non-specificity of theory of mind in children with and without autism spectrum disorders: Evidence on a new non-verbal false sign task. Poster presented at the Annual Event of the Learning Disability, Autism and Neurodevelopmental Disorders Network, Llandudno, March 2010.
- **Somers, N., Leekam, S., Bowen, M. & Plimley, L.** Recognizing, understanding and managing anxiety in ASD: A teacher training module. Poster presented at the Annual Event of the Learning Disability, Autism and Neurodevelopmental Disorders Network, Llandudno, March 2010.
- **Kourkoulou, A., Findlay, G., Kuhn, G., & Leekam, S.R.** Enhanced implicit learning in autism: An eye-tracking study. Poster presented at the *Experimental Psychology Society Meeting*, London, January 2010.
- **Iao, L, Leekam, S.R & McConachie, H.R.** Nonspecificity of theory of mind in preschoolers: Evidence from a new nonverbal theory of mind task. Poster presented at the *Experimental Psychology Society Meeting*, London, January 2010.
- **Leekam, S.R.** Invited seminar. *Attention in autism*. York University, Nov 2009
- **Leekam, S. R.** Autism Research Group *Magic changes our expectations of autism*. Newcastle University, Nov 2009.
- **Iao, L.,Leekam, S., Perner, J., & McConachie, H.** Further evidence for non-specificity of theory of mind in preschoolers: Paper presented at British Psychological Society, Developmental Psychology Section Conference, Nottingham, September 2009.

- Marshall, D. R., Findlay, J.M., & **Leekam, S.R.** Stimulus interest and disengagement of attention in children with autism. Paper presented at *British Psychological Society, Developmental Psychology Section Conference*, Nottingham, September 2009.
- **Kourkoulou, A.**, Findlay, J. M., & **Leekam, S. R.** Implicit learning of local context in Autism. Poster presented at the *British Psychological Society Developmental Section Conference*, Nottingham, September 2009
- **Leekam, S.R.** Invited lecture: *Restricted and repetitive behaviours in autism* Medical lecture film series, Aug 2009.
- **Leekam, S.R.** Keynote presentation *Understanding attention in autism*. Bristol Autism Research Group, June 2009.
- **Leekam, S.R.** Seminar *Attention and social attention in autism*. Glasgow University May, 2009.
- **Leekam, S.R.** Invited talk: *The development of repetitive behaviours* UC Davis Mind Institute, Sacramento, April 2009.

Internal academic presentations

- **Jones, C.** Timing in clinical populations. School of Psychology. 28th Mar, 2014.
- **Langley, K.** Genetic risk factors predicting psychopathology in children with learning disabilities. School of Psychology. 7th Mar, 2014.
- **Winn, B.** Research Exploring Autism spectrum condition Couple relationship satisfaction, Health and Wellbeing (REACH project). School of Psychology. 13th Nov, 2013.
- **Carrington, S.J.** The Neurobiology of Sensory Symptoms in Autism Spectrum Disorders. Presentation at 'Looking Forward' meeting, 21st Jan 2013.
- **Carrington, S.J.** Integrating Research and Practice: Engaging users. Presentation at 'Looking Forward' meeting, 21st Jan 2013.
- **Ramsden, C.** Introducing the Research-Policy-Practice hub. Presentation at 'Looking Forward' meeting, 21st Jan 2013.
- **Uljarević, M.** Sensory problems, anxiety and repetitive behaviours in children with ASD. School of Psychology seminar, 29th June 2012.
- **Kent, R.G.** Adapting the DISCO to meet changes in current International diagnostic criteria (DSM-5). School of Psychology seminar, 22nd June 2012.

Databases and measures developed

- *Training materials for the DISCO Abbreviated.* Prof Sue Leekam, Dr Mirko Uljarevic, Dr Sarah Carrington, in collaboration with Dr Judith Gould and Mrs Carole Murray. Recording and editing of clinical interviews using the DISCO Abbreviated for training of clinicians throughout Wales.
- *Manual for the DISCO Abbreviated.* Dr Sarah Carrington.
- *Algorithms for the Diagnostic Interview for Social Communication Disorders.* Rachel Kent, Dr Sarah Carrington, Prof. Sue Leekam and an international team of researchers and clinicians.
- *Development of an Autism Spectrum Disorder database within Betsi Cadwaldr University Health Board.* Dr Dawn Wimpory, Bangor University (Co-I: Prof Leekam WARC). Database to develop the use of NHS data (Phase 1 development complete).
- *The Wales Autism Research Centre Recruitment Register.* Dr. Sarah Carrington, Wales Autism Research Centre. Register for recruitment of potential research participants (Phase 1 development complete).
- *Research Awares booklet.* Dr Mirko Uljarević, Dr Louise White and the WARC team. Developed a family-friendly leaflet providing information to help parents of children with ASD in choosing an intervention for their child. July 2012.

- *The adult version of the RBQ-2.* Sarah Barrett and Prof. Sue Leekam.
- *Translation of Wales Autism Research Questionnaires (RBQ-2) into Dutch, French, and Serbian.*

Objective 2: Facilitating interdisciplinary research and research networks

The development of Cardiff Autism Research Group seminars and visits to the Centre by international research visitors

Academic Workshops delivered

- Early Intervention for young children with ASD. One-day Conference held at Bangor University organized by Professor S Leekam, Dr D. Wimpory and Dr S. Carrington. Speakers- Dr Dawn Wimpory, Dr Catherine Aldred, Prof. Sally Rogers, and Prof. Jonathan Green. 20th June, 2011.
- Restricted and repetitive behaviours. Workshop for child development professionals (ESRC grant-funded). University of Durham. 30 November 2009
- Autism and Neuroscience: Multidisciplinary meeting hosted by Cardiff Neuroscience Centre and funded by Waterloo Foundation. Cardiff University. 22nd January 2010.
- Restricted and Repetitive Behaviours Research Workshop attended by collaborators from throughout the UK. 24th September, 2010,
- Autism, Attention and Eye movements Workshop. 1st July, 2010.

Invited seminar speakers (Cardiff Autism Research Group)

- Dr Emma Gowen, University of Manchester, 26th Mar, 2014.
- Dr Rachael Bedford, Institute of Psychiatry, Kings College London, 10-11th Dec, 2013.
- Dr Sue Fletcher Watson, University of Edinburgh, 10th Dec, 2013.
- Dr Maria Nunez, Glasgo Caledonian University, 12th December, 2012.
- Prof. David Evans, Brucknell University, USA, 27th July, 2012.
- Prof. Teresa McCormack, Queens University, Belfast, 26th April, 2012.
- Dr Wendy Keay-Bright, Cardiff School of Art and Design, 28th March 2012.
- Prof. Sir Michael Rutter, Institute of Psychiatry, King's College, London, 24th Nov, 2011.
- Dr Kristelle Hudry OTARC, La Trobe University, Australia, 6th July, 2011.
- Dr Tony Atkinson, Senior Lecturer, Durham University, 6th June, 2011.
- Dr Liz Pellicano, Senior Lecturer, Institute of Education, University of London, 26th May, 2011.
- Dr Elizabeth Hill, Reader, Goldsmiths, University of London, 3rd February, 2011.
- Prof Vasu Reddy, Portsmouth University 28th October 2010.
- Dr. Josephine Barbaro, La Trobe University, Melbourne, Australia. 8th October 2010.
- Dr. Christine Falter, The University of Oxford, 12th August 2010.
- Dr Maria Nunez, Glasgow Caledonian University, June 2010.
- Prof. Chris Jarrold, Bristol University, 29th April 2010.

Other academic visitors to the Cardiff Autism Research Group

- Dr Sami Basha, Director of the Special Education Program and Centre Palestine Ahliya University college, April 2014.
- Prof. Tokio Uchiyama & Dr Yota Uno, Yokohama Psycho-Developmental Clinic, 28th-29th Jan, 2014.
- Monique Post consultant on the Dutch Government's 'Looking from Within Autism' project
- Dr Anneli Kylliainen, University of Tampere, Finland. 21st June, 2013

- Dr Margot Prior, University of Melbourne: External Advisor for WARC, Visit 31 May - 6th June 2013
- Dr Maria Nunez. Glasgow Caledonian University. Research visit Oct-Dec 2012.
- Dr Maria Nunez, Glasgow Caledonian University – 12th December, 2011
- Prof Christine Trevett, Autism Spectrum People and Religion Research Group - Nov 2011.
- Dr. Christine Ecker, the Institute of Psychiatry; 24th January, 2011.
- Prof. Vasu Reddy, Portsmouth University: one month sabbatical hosted by the School of Psychology and the Wales Autism Research Centre, Oct-Nov, 2010.
- Prof. Margot Prior, University of Melbourne: External Advisor for WARC, Visit 20-25 Sept 2010

Joint activities with Cardiff Neuroscience Society / Neuroscience and Mental Health Research Institute.

- Prof. Anthony Bailey. *The neuroscience of Autism*. CNC Seminar. 4th May, 2010
- Autism Research Open Day Conference: *Sensory Challenges in Autism*. 25th June, 2010, Cardiff University, School of Psychology.
- Brain Awareness Week workshop. *Autism Spectrum Disorder and the Brain*. Speakers from the Wales Autism Research Centre and the Brain Bank for Autism. 15th March, 2011, Cardiff University, Glamorgan Building.
- Public Lecture for Brain Awareness Week hosted by Society for Neuroscience and NMHRI: *Do hormones affect how your mind develops? The foetal testosterone theory of autism*. 14th March 2011. Professor Simon Baron-Cohen.
- Autism Research Open Day Conference: *Sensory Challenges in Autism*. 25th June, 2010, Cardiff University, School of Psychology. Prof. Anthony Bailey. *The neuroscience of Autism*. CNC Seminar. 4th May, 2010
- Neuroscience Café - Understanding Autism: The Science and Experience of Sensory Symptoms. 7th June, 2011.

Contributing to the development of collaborative research and training networks in Wales, UK and internationally.

- **Prof. Sue Leekam, Dr Katherine Shelton, Prof. Dale Hay**, Dr Sofia Gameiro, **Dr Catherine Jones, Dr David McGonigle**, Prof. Cheryl Dissanayake (La Trobe University), Prof. Ilse Noens (Catholic University of Leuven), Hugh Morgan (Autism Cymru), Simon Wallace (Autistica), Carole Povey (NAS), Richard Mills (Research Autism). Research collaboration focusing on the Autism Research Parent Partnership.
- **Dr Mirko Uljarević**, Prof. David Evans (Bucknell University, USA), **Dr Sarah Carrington**: data collection using a newly modified adult version of the Childhood Routines Inventory.
- **Dr Mirko Uljarević**, Dr Anneli Kylliäinen (Tampere University, Finland), **Dr Sarah Carrington**: planned research collaboration to investigate motivational approach-avoidance tendencies toward another person's gaze in children with autism and children with social anxiety, building on Dr Kylliäinen's previous findings.
- **Prof. Sue Leekam, Dr Sarah Carrington**, Mrs. Anne Marie McKigney & Dr Alka Ahuja (Aneurin Bevan Health Board): research collaboration to investigate DISCO Abbreviated algorithms in clinical practice.
- **Dr Catherine Jones**, Dr Ali Roula (University of South Wales): Research collaboration to develop a digital technique for analysing verbal and non-verbal social communication in ASD.
- **Dr Catherine Jones, Dr David McGonigle**, Dr Alexandros Kontogeorgakopoulos (Cardiff Metropolitan University): Research collaboration to investigate auditory and tactile processing in ASD, and their association with sensory behaviours.

- Collaboration with Dr Mark Atherton (Brunel University), Sue Osborn (Kingwood Trust) and Hilary Gilfoy exploring noise cancellation and sound sensitivity. Funded by an Autism Speaks Trailblazers Award.
- International team of researchers working with the Diagnostic Instrument for Social and Communication Disorders
- Training and research network for the Autism Diagnostic Observation Schedule and Diagnostic Interview for Social and Communication Disorders
- Neuroscience and Mental Health Research Institute: Dr. Carrington and Prof. Leekam –Dr. Van Den Bree, and Prof. Owen (Department of Psychological Medicine and Genetics), and Prof Derek Jones (CUBRIC).
- Wales CRC Network: Learning Disability, Autism and Neurodevelopmental Disorders Network (LDAN) (Prof Leekam on Management Committee)
- Scientific Board of British Autism Siblings Study UK Network (Prof Leekam)
- International research networking: Meetings by Prof Leekam with researchers in Psychology , Linguistics, Psychiatry at La Trobe University and Melbourne University, Australia and researchers Speech and Hearing Sciences, Psychology and Psychiatry at Hong Kong University, Feb 10-March 10 2011.
- Celtic Nations Autism Partnership membership

Contribution to planning for international conference (2011) organised by Autism Cymru

Prof. Sally Rogers workshop and presentation at Autism Cymru conference – Invited speaker part funded by WARC ESRC funding 21st & 22nd June, 2011. Prof Leekam chaired the second day of the conference. The Wales Autism Research Centre hosted a stand at the conference for both days. WARC members gave volunteer support throughout the conference

Collaborators on grants and funding sources

- Dr Dawn Wimporoy, Bangor University, (Welsh Government and ESRC)
- Dr David McGonigle, Cardiff University (Waterloo Foundation and Autism Speaks)
- Sue Osborn, Kingwood (Autism Speaks)
- Prof. Margot Prior, University of Melbourne (Baily Thomas Charitable Fund)
- Prof. David Evans, (Baily Thomas Charitable Fund)
- Prof. Helen McConachie, Prof Mark Freeston, Prof. Ann Le Couteur, Dr. Jacqui Rodgers, Newcastle University (Baily Thomas Charitable Fund, NIHR funding)
- Maggie Bowen and Lynn Plimley, Autism Cymru (Waterloo Foundation)
- Dr. Judith Gould and Dr. Lorna Wing, National Autistic Society and Prof. Ann Le Couteur, Newcastle University (ESRC)
- Mr Hugh Morgan, Autism Cymru, Mr Jonathan Morgan, Insight Wales Consultancy (ESRC and the Welsh Government)
- Mrs Hilary Kanaris, Aneurin Bevan NHS (Baily Thomas Charitable Fund)
- Mrs Anne Marie McKigney, Aneurin Bevan NHS (Baily Thomas Charitable Fund)
- Mrs Julie Mullis, Cardiff and Vale NHS (Baily Thomas Charitable Fund)
- Dr Ruth Paradise, Cardiff and Vale NHS (Baily Thomas Charitable Fund)
- Dr Marianne Van den Bree, Prof. Michael Owen, Prof. Anita Thapar, Dr Joanne Doherty, Prof. Stephanie van Goozen, Prof. Derek Jones, Cardiff University (Wellcome Trust)

Research network meetings

- ‘Looking forward’ meeting, Cardiff University, hosted by the Wales Autism Research Centre. Attended by Dr Simon Wallace & Olivia Curno (Austistica), Hugh Morgan (Autism Cymru), Sarah Shenow (The Waterloo Foundation), Julie Annetts & Alyson Collins (The Welsh Government), Sue Murphy (Autism Initiatives), & Andrew Wells (ESRC). Jan 21st 2013.
- British Autism Study of Infant Siblings Annual Scientific Meeting, London. Attended by Prof. S. Leekam, Dr J. Lidstone, Ms. A. Winstanley, Ms. K. Ellis-Davies. 19th Sept 2012.
- Bristol Autism Research Group. Attended by Prof. S. Leekam, Dr J. Lidstone, Dr S. Carrington, Ms. R. Kent, Dr M. Uljarević. 18th Sept 2012.
- Skype meeting with members of the International Advisory group supporting the Baily Thomas and Welsh Office for Research and Development Project. Attended by Prof. Sue Leekam, Dr Jane Lidstone, Dr Mirko Uljarević, Prof. David Evans, Bucknell University (USA), Prof. Margot Prior, Melbourne University (Australia), Dr Jacqui Rodgers, Newcastle University and Prof Helen McConachie, Newcastle University (UK). 26th July 2012.
- Inaugural meeting with international DISCO research team. Presentations given by Prof. S. Leekam, Ms. R. Kent and Dr S. Carrington. Attended by researchers from the UK, Belgium, the Netherlands, Japan, and Canada (by Skype) and Japan 19th June 2012.
- Skype meetings with Prof Leekam and Hong Kong collaborators, Prof Brendan Weekes and Dr Linda lao. Jan 2013. As part of new research project “Word imageability and N400 in individuals with ASD” Dec 2012-Dec 2013.
- Bi-monthly meeting of interdisciplinary researchers working on the Autism Speaks Trailblazer project “Tuning Anxiety Out” 2012-2013.

Objective 3: Developing research and training that supports and influences practice and policy

Policy and practice related events and presentations

The Autism Research Policy Practice (RPP) Hub has been invited to partner on three international initiatives;

- (1) *Canada*: The Autism RPP hub is a community partner to a global initiative on early identification and intervention: <http://globalearlyautism.com/>.
- (2) *Australia*: The Autism RPP Hub team have been invited to advise on the development of an ASD Knowledge Hub for the Olga Tennison Autism Research Centre in Australia.
- (3) *UK/Global*: Prof Leekam was invited to be part of the International Society for Autism Research (INSAR) initiative to host global open-access research tools. This invitation was a direct result of the RPP initiative to deliver free resources on diagnostic tools on the hub for the online seminar series.

Evidence and reports to Welsh Assembly Government on diagnostic and intervention services

- Advisory Support 2011-2012: Prof Leekam is on Steering Committee for National ASD Clinical Network (Adults). Subgroup for training. Prof Leekam, Dr Carrington and Ms Kent are providing research evidence on which new abbreviated methods of diagnosis will be based.
- Report: *The circumstances and support needs of older people with autism: Proposals for future directions*: Proposals submitted by Prof Leekam, Feb 2011, following invitation by Minister in

response to Welsh Assembly Government Report on the circumstances and support needs of older people with autism.

- Proposals submitted by Prof Leekam, Feb 2011, following invitation by Minister in response to Welsh Assembly Government Report on the circumstances and support needs of older people with autism.
- Report: *Children's diagnostic services in Wales: Methods of diagnostic practice and clinicians views of service effectiveness*. Dr J. Lidstone: Dr D. Wimpory, Dr. C. Ramsden Mr. H. Morgan, Ms. J. Manikiza, Ms M. Walters, Ms. M. Rendell. Prof S. Leekam. Submitted Dec 2010
- Advisory support: Following invitation from Minister Mrs Edwina Hart: Prof. Leekam –Meeting with parent group in Sketty, Swansea. Accompanied by Dr Richard Roberts, Head Vaccine Preventable Disease Programme, Public Health Wales and Dr Mike Simmons, Director of Health Protection, Public Health Wales, 27th May, 2010

Meetings or university exchanges with Welsh Assembly Members, government staff and practitioners

- Rachel Kent PhD student completed three month ESRC internship with the Welsh Government Oct-Dec 2011
- Hugh Morgan and Jonathan Morgan will spend one day per month at the Wales Autism Research Centre as part of a new ESRC award to develop a “Research-policy-practice hub” 2012-2013
- Open Afternoon for the Deputy Minister for Social Services Gwenda Thomas, and our funders and collaborators. Jan 2011.

Meetings attended

- Monthly meetings of the ASD All Wales Clinical Network for Adult Diagnosis attended by Prof. S. Leekam. 2012-2013.
- Welsh Government members David Clayton (WG Dept leading Social Services legislation) and Alyson Collins (WG Adults Social Services) visited the Wales Autism Research Centre. They were given a tour of Cardiff University Brain Research Imaging Centre and attended poster presentations by the team. 24th July 2012.
- Official launch of the Welsh Assembly Government’s bilingual autism information booklets.
- Welsh Assembly Government Cross Party Autism AGM, The Senydd, Cardiff Bay, 23rd March 2011.
- Prof Leekam: Oral report (older people with ASD) to the WAG meeting on adults (13th Aug 2010)
- Adults with Autism Conference, organised by the Welsh Assembly Government, Autism Cymru, and the Welsh Local Government Association, 10th-11th June, 2010. Attended by Jane Lidstone,
- Launch of Deis Cyfle, The Senydd, Cardiff Bay, 10 May, 2010. Supporting speech from Prof Leekam

Wales Autism Research Centre talks presented to Welsh Assembly Government audiences

- **Presentation by Dr C. Ramsden, Mrs. L. Morgan and Prof. S. Leekam** with Jonathan Morgan and Hugh Morgan. Seminar to Welsh Government hosted by Mark Drakeford (Minister for Health). 12th Mar 2013.
- Presentation to Autism Learning Information Network, Newtown, Powys. ‘Knowledge Exchange Research-Policy-Practice Hub. **Dr L. White**. 6th Mar 2013.
- **White, L.J.**, *The Wales Autism Research Centre*. Presentation at ASD leads meeting, Llandrindod Wells 11th March, 2011.
- **Carrington, S.J.**, *Research in the Laboratory: Brain imaging Studies of ASD*. Presentation at ASD leads meeting, Llandrindod Wells 11th March, 2011.

- Open Afternoon for the Deputy Minister, Gwenda Thomas, Deputy Minister, Social Services, our funders and collaborators. Presentations given by **Prof. Sue Leekam** (WARC), Dr. Dawn Wimpory (Bangor University), Lynn Plimley (Autism Cymru), **Dr. Mirko Uljarevic** (WARC), **Nicky Hall (parent)**, **Rachel Kent** (WARC), **Dr. Jane Lidstone** (WARC), Mrs Hilary Kanaris (NHS), **Dr. Sarah Carrington** (WARC), and **Dr. David McGonigle** (Cardiff University)
- Launch of the Wales Autism Research Centre and Inaugural Lecture *Believing is seeing: A vision for autism*. **Prof Leekam**, 23rd Sept 2010. Introduction by Edwina Hart, Minister of Health and Social Services. Presentations by Lord Dafydd Wigley, Mr. Hugh Morgan, Mrs Hilary Gilfoy (Autistica), Professor Bill Fraser (Autism Cymru).
- **Leekam, S.R.** *Research and the ASD Action Plan*. Presentation at Cardiff and Vale ASD Leads Meeting, Tongwynlais, 26 May, 2010.

Meetings and exchanges with third sector and educational organisations, practitioners, charities

- Adult Autism Advice – ASD employment event. Attended by **Mrs Lynda Morgan**. Cardiff. 25th Mar, 2014.
- Alliance for Useful Evidence 'What Works Wales'. A joint seminar held in Cardiff, in partnership with Wales Public Services 2025. Attended by **Dr Louise White and Mrs Lynda Morgan** 17th May, 2013
- Meeting with Johanna Manikiza, ASD National Strategic Coordinator, to discuss the Research Policy Practice Hub. Attended by **Mrs Lynda Morgan**. 28th Aug, 2013.
- Meeting with Dr Maria Nunez to discuss the SENSE project. **Prof. Sue Leekam**. London. 25th Aug, 2013.
- Meeting with Deepa Korea, Chief Executive Research Autism to discuss WARC's current and future projects. Attended by **Prof. S. Leekam, Dr C. Ramsden, Dr L. White, Dr M. Uljarević, Mrs L. Morgan and Mrs B. Winn**. 5th Mar 2013.
- Consultation with clinicians for the Research-Policy-Practice Hub. Hosted by Dr L. White and Mrs **L. Morgan**. Attended by Anne Marie McKigney (Consultant Child Psychologist, Aneurin Bevan Health Board) Jenny Jones (Occupational Therapist Cardiff and Vale Health Trust), Christine Griffiths (Learning Disability Services for Cardiff and Vale, Bro Morgannwg and Cwm Taf Health Boards). 21st Feb 2013.
- Meeting with Mrs Sarah Shenow (The Waterloo Foundation). Attended by **Prof. S. Leekam and Dr L. White**. 20th Feb 2013.
- Meeting with Autism Alliance. Attended by **Prof. S. Leekam, Dr C. Ramsden, Dr L. White, Mrs L. Morgan, Ms. K. Lake**. 15th Jan 2013.
- Meeting with the Autism Support Team, Mynachdy Centre, Cardiff to discuss implementation of the Wales Autism Intervention Survey and research findings on anxiety and coping in parents of children with Autism Spectrum Disorders. 12th September 2012. Attended by **Dr M. Uljarević**. 12th Sept 2012.
- Baily Thomas and WORD project– **Prof. S. Leekam, Dr J. Lidstone, Dr M. Uljarević**, Bi-monthly meetings with clinicians Hilary Kanaris, Anne Marie McKigney, Julie Mullis, Dr Ruth Paradise. 12th Sept 2012.
- Meeting with clinicians in Newport to discuss implementation of abbreviated DISCO within clinical practice in Wales. Attended by **Prof. S. Leekam, Ms. R. Kent, and Dr S. Carrington**. 20th Aug 2012.
- NAS Professionals Conference. Attended by **Dr Carrington and Miss Kent**. 3rd -4th Mar 2013.
- The NAS Cardiff and Vale Support Group Workshop by Chris Alders, Educational Psychologist. Attended by parent consultant, **Mrs. B. Winn**. 24th May 2012.

Training: materials for use by non-academics (e.g. in education services) and student training in practice and policy.

- Introduction training session to Ashgrove School Occupational Therapists in the use of the Vineland Adaptive Behaviour Scales delivered by **Prof. S. Leekam and Dr. Uljarević**. 30th January 2013.
- Administration of the Brief DISCO interview for researchers delivered by **Prof. S. Leekam, Dr S. Carrington & Miss R. Kent**. November 2012.
- Research Aware Leaflet - A family-friendly leaflet providing information to help parents of children with ASD in choosing an intervention for their child. Developed by **Dr Mirko Uljarević, Dr Louise White** and the WARC team, July 2012.
- Research Toolkit – A resource for the non-academic professional sector on how to recognise good and poor evidence for interventions (June 2012)
- Training course on the administration of the Autism Diagnostic Observation Schedule (Aug 2011). Attended by local clinicians and academics.
- Understanding anxiety in children with Autism Spectrum Disorders (ASD): An awareness-raising training module designed to integrate new research evidence into practice in schools. A training module to integrate new research evidence into practice in schools, prepared by **WARC** for use by Lynn Plimley and Maggie Bowen, Autism Cymru. 2010.

Clinical training delivered

- **Leekam, S.R.** Trainer in administration of the DISCO Abbreviated for the Wales Adult ASD clinical network. Cardiff: 25th-26th July and Sept 11th, 2013; Carmarthen: 25th-26th Nov and 16th Jan, 2014; Conwy: 21st-22nd Jan and 25th Mar, 2014.
- **Carrington, S.J.** DISCO Abbreviated algorithms. Training in the administration of the DISCO Abbreviated for the Wales Adult ASD clinical network. Cardiff: 26th July, 2013; Carmarthen: 16th Jan, 2014; Conwy: 25th Mar, 2014.
- **Carrington, S.J.** DISCO algorithms. Training on a clinical DISCO course for experienced NHS clinicians. The Lorna Wing Centre, Bromley. 6th Feb, 2014.

Improved measurable outcome/impact of research on policy and practice

- The Adult ASD strategy has adopted the DISCO in clinical practice. This will include the DSM-5 and abbreviated algorithms developed by the Wales Autism Research Centre and their collaborators.
- 120 researchers and practitioners have joined the on-line forum AWARES-TALK developed as part of our ESRC Knowledge Exchange Grant
- 122 clinicians registered for a talk presented by Prof. Leekam about the Diagnostic Instrument for Social and Communication Disorders
- 18 parent group leaders, representing parent organisations across Wales have attended our *Researcher on the Road* events.

Undergraduate Applied student training experience

- Four undergraduate project students supervised 2013-2014
- Two summer student placements, Katherine Fillingham and Alessandra Roberts. Funding awarded by the School of Psychology Research Internship scheme, May 2013.
- Three undergraduate project students supervised 2012-2013

- Summer Student Internship, Matthew Price, funded by Cardiff University School of Psychology. June-August 2012.
- Cardiff University Research Opportunities Programme student (Ms. L. Dankova). May-September 2012.
- Three undergraduate project students supervised 2011-2012
- ESRC Internship with WAG. Oct-Dec 2011. PhD student Rachel Kent
- Summer student placement, Donna Harris, funded by Cardiff University Research Opportunities Programme. July-August 2011.
- Cardiff University Professional Placement student – Hollies School and ASD Strategy. Katy Morris. Year end May 2010
- The Autism RPP Hub featured within a university course designed by Dr Mark Brosnan, University of Bath in Feb 2014. Third Year Psychology undergraduates visited the Autism RPP Hub and complete a coursework exercise involving a search for resources and information from the hub.
- Presentation on autism research policy and practice by Prof. Sue Leekam to Educational Psychology Doctoral Training Course , June 2013

Undergraduate autism teaching

- **Leekam, S.R.** The Development of Autism Spectrum Disorder. Lecture for the final year undergraduate psychology module 'Developmental Psychopathology and Criminality'.
- **Carrington, S.J.** ASD and the Brain. Lecture for the final year undergraduate psychology module 'Developmental Psychopathology and Criminality'.
- **Leekam, S.R & Carrington S.J.** DSM-5 debate and diagnosing DSM-5 ASD. Workshop for the final year undergraduate psychology module 'Developmental Psychopathology and Criminality'.
- **Jones, C.R.G** Social communication difficulties in autism spectrum disorder. Lecture for the second year Developmental Psychology module.
- **Jones, C.R.G** Differences in perception in autism spectrum disorder. Lecture for the second year Developmental Psychology module.
- **Jones, C.R.G.** Social understanding in the context of developmental disorders. Lecture for the second year Developmental Psychology module.
- **Leekam, S.R.** Social cognition and developmental disorders: Repetitive behaviours and executive function. Practical course in the second year Developmental Psychology module.
- **Carrington, S.J.** Social cognition and developmental disorders: Social understanding and repetitive behaviours. Practical course in the second year Developmental Psychology module.

Postgraduate Student success

- **Powell, G.** Hadyn Ellis Prize for best PhD Dissertation. Awarded Feb, 2014.
- **Uljarević, M.** Repetitive behaviours, anxiety, and sensory problems in children with autism and correlates of anxiety in their parents. PhD thesis successfully defended, 21st Oct, 2013.
- **Cooper, M.** Autistic traits in attention deficit hyperactivity disorder: clinical significance and biological underpinnings. PhD thesis successfully defended, 5th Feb, 2014.
- **Barrett, S.L.** MSc dissertation. What is the nature of restricted and repetitive behaviours in autism spectrum disorders? Submitted as part of MSc Social Science Research Methods (Psychology). Awarded Distinction, 2013, and received commendation for the highest marks of the master's year.
- **Thompson, S.** External training on the Autism Diagnostic Observation Schedule 2. Dec 2013.
- **Iao, L-S.** Children's understanding of false representations. Feb, 2011.
- **Kourkourlou, A.** Implicit learning of spatial context in adolescents and adults with Autism Spectrum Disorder. May, 2010.

Objective 4: Improving public and professional awareness of research.

Develop materials to promote the Centre and our research to the public, professional groups and media.

For Professional groups:

- A 'Research Toolkit': Part one. A booklet and set of guidelines about research methods developed in partnership with Sarah Shenow, Waterloo Foundation and Gina Gomez, National Autistic Society, for professionals involved with interventions for ASD.
- Research Aware booklet included in the post diagnostic pack for Aneurin Bevan Health Board (Mrs Anne Marie McKigney and Dr Alka Ahuja).

For participants and parents:

- Our website is <http://www.cardiff.ac.uk/psych/home2/warac>. The webpages are regularly updated and include a dedicated 'downloads' page, where documents such as our Research Aware Leaflet and Annual Reports can be downloaded.
- New family-friendly content for Wales Autism Research Centre web pages developed as a direct result of the ESRC funded 'Researcher on the Road' events.
- Up to date postings and photos are given weekly on our Facebook page (<http://www.facebook.com/#!/pages/Wales-Autism-Research-Centre-WARC/103033943068748>) which can be accessed by non-facebook members. Our Facebook page now has 605 fans. We are now also on Twitter and have 434 followers.
- Online forum for researchers and professionals <http://awares.org/talk>.
- Revision of the recruitment protocol for the Research Recruitment Register (RRR), which is WARC's database of individuals interested in engaging in research at WARC. The revision has simplified the recruitment process, making the RRR more accessible.
- Annual Wales Autism Research Centre Newsletter.
- Research Awares Booklet on interventions: A family-friendly leaflet providing information to help parents of children with ASD in choosing an intervention for their child.
- A Research Awares Bookmark to complement the Interventions booklet. The bookmark has abbreviated information about choosing an intervention.
- Research Awareness-raising leaflet developed 2012
- Promotional leaflets have been developed providing a general introduction to the Wales Autism Research Centre
- '*The Wales Autism Research Centre and Brain Imaging*'. A family-friendly booklet developed by Dr Carrington as part of our ESRC knowledge Exchange Grant. The booklet describes what to expect if visiting the brain imaging centre to help out with a study.
- '*The Wales Autism Research Centre Brain Imaging Volunteer DVD*'. A short film following a participant as they participate in a brain imaging study. A tool developed to introduce the imaging experience to help families decide whether they would like to take part in brain imaging research.
- A model of the 'headcoil' from a MRI scanner to allow potential participants to familiarise themselves with it in a safe environment.
- A 'Research Toolkit': A booklet and set of guidelines about research methods for professionals involved with interventions for ASD. Developed in partnership with Sarah Shenow, Waterloo Foundation and Gina Gomez, National Autistic Society.
- AWARES Talk: An online forum developed in partnership with Autism Cymru to enable researchers and professionals to discuss issues pertaining to ASD.

Use the latest bibliographic linking tools and search engine facilities to maximise impact of publications

All WARC members' publications are linked to search tools Researcher ID and Scopus. This ensures that any search for name, topic, keywords, accesses the full title of all scientific publications and their impact (times cited).

Provide events targeting public and professional awareness of autism scientific research in autism

- A joint dissemination event was held by the Wales Autism Research Centre, Research Autism and the Institutes of Psychiatry and Education, London "A Future Made Together" and "Autism RPP Hub on 3rd April 2014.
- Members from the centre participated in the Cardiff University Brain Games event at the National Museum, Cardiff, 16th March, 2014
- Cardiff and the Vale NAS Branch event and dissemination of research findings. Keynote speaker Dr Wendy Lawson. Co-hosted by the Wales Autism Research Centre and Cardiff and the Vale NAS, Cardiff University, 17th September, 2012.
5 *Researcher on the Road* trips to all parts of Wales to engage with the leaders of parent groups (2011-2012)
- Familiarisation procedure for families considering involvement in brain imaging research involving visits to WARC to meet staff
- Cardiff and the Vale NAS Branch event. Keynote speaker Dr John Clements, introductions by Prof. Sue Leekam, Dr Louise White, and Dr Sarah Carrington. Co-hosted by the Wales Autism Research Centre and Cardiff and the Vale NAS, Cardiff University, 21st September, 2011.
- Open Door week 2011 for families to visit the Centre
- Sensory Challenges Conference for families and professionals 2010

Wales Autism Research Centre talks presented to schools, colleges, and parent audiences

Selection only

- **Winn, B.** *Autism Spectrum Disorder: Implications for the Youth Justice System*, Gwent Magistrates Youth Panel, Gwent. 2^{6th} Feb, 2014.
- **Winn, B.** *Autism Spectrum Condition: Teaching Strategies*. Teacher's Workshop. Rougemont Independent School, Gwent. 1st Sept, 2013.
- **Winn, B.** *What is Autism Spectrum Condition & Teaching Strategies*. Monmouth Deputy Heads Group - Independent Schools Sector Deputy Head Teachers for East Wales & South West England. 12th June, 2013.
- **Winn, B.** Interviewed by Radio Cardiff about her role as the WARC parent consultant and her PhD project. 7th June, 2013.
- **Winn, B.** *REACH project: Research Exploring Autism spectrum condition Couple relationship satisfaction, Health & wellbeing*. NAS Bridgend support Group. 15th May, 2013. Bridgend.
- **Winn, B.** interviewed by Radio Cardiff about her role as the WARC parent consultant and her PhD project. 7th June, 2013.
- **Leekam, S.R., Jones, C.R.G., Uljarević, M.** represented WARC at an induction event at Ashgrove School. 19th June, 2013.
- **Barrett, S.L.** presented at the Autism Awareness evening as part of Mind Your Head week at Cardiff University. 7th Oct, 2013.
- **Kent, R.G. & Carrington, S.J.** *Diagnosing Autism Spectrum Disorder: Who will get a DSM-5 diagnosis?* National Autistic Society South West Regional Members Day. 9th Apr, 2013. Filton, Bristol.

- Meeting with intervention study participants to share findings from completed project: 'Developing targeted intervention for repetitive behaviours and anxiety in children with Autism Spectrum Disorder' (Baily Thomas Charitable Fund). Hosted by **Prof. S. Leekam** and **Dr J. Lidstone**. 21st Sept 2012.
- Cardiff and the Vale of Glamorgan NAS Branch event, co-hosted by the Wales Autism Research Centre. Keynote speaker Dr Wendy Lawson. 17th September 2012.
- Integrating research and practice in autism spectrum disorders. Presentation by **Dr L. White** to disseminate the outcome from the ESRC Knowledge Exchange Grant. 17th Sept 2012.
- Children's and parents' behaviour study. Presentation by **Dr J. Lidstone** and **Dr M. Uljarević** to disseminate the outcome of work supported by the Baily Thomas Charitable Fund. 17th Sept 2012.
- Linking brain to behaviour in autism spectrum disorder: the neurobiology of sensory symptoms. Presentation by **Dr D. McGonigle** to disseminate the outcome of work supported by The Waterloo Foundation. 17th Sept 2012.
- Researchers on the Road, Bangor, Carmarthen, Cardiff, Merthy Tydfil and Wrexham –2012. Organised by Dr White, Dr Carrington, Mrs Winn, and Mrs Morgan.
- Researchers on the Road, Merthyr Tydfil – Tydfil Autism Support Group NAS Bridgend Parent Support group. Organised by Dr White, Dr Carrington, Mrs Winn and Mrs Morgan. Hosted by **Dr L. White** and **Mrs B. Winn**. 19th June 2012
- Presentation to Carmarthenshire Stakeholder Group, Pontyates. 'Overview of the Wales Autism Research Centre'. Dr Sarah Carrington and Dr Louise White – 4th Nov, 2011
- Cardiff and the Vale NAS Parent Group Conference, hosted by the Wales Autism Research Centre. Introductions given by Prof. Leekam, Dr White, and Dr Carrington – 21st September, 2011.
- Dr Carrington and Dr White informal presentation about the Wales Autism Research Centre for the Asperger social group in Pontypridd – 16th June, 2011.
- Ashgrove School Fun Day attended by Dr Lidstone and Dr Uljarević – 11th June, 2011
- Prof. Leekam speaks at Three Counties Forum Meeting, Carmarthen – 8th June, 2011
- Prof. Leekam and Dr Uljarević - Invited talk on Wales Autism Research Centre to Cardiff and the Vale NAS Parent Group, Cardiff, 26th May 2011.
- Prof. Leekam – Invited talk on research at the Wales Autism Research Centre to Ashgrove School, Penarth, 18th May, 2011. Uljarevic, M. *Repetitive behaviours and anxiety in children with autism*. Hollies School, 25th November, 2010
- Lao, L.-S. *Non-specificity of theory of mind in children with and without Autism Spectrum Disorder: Evidence from a new non-verbal false sign task*. Talk presented to the Hollies School, Cardiff, September, 2010
- Leekam, S.R., *Research in autism*. Invited talk to Parent Event, Hollies School, Cardiff, 29th June, 2010.
- Leekam, S.R. *Research and the ASD Action Plan*. Presentation at Cardiff and Vale ASD Leads Meeting, Tongwynlais, 26 May, 2010.
- Somers, N & Leekam, S. *Anxiety in children with autism*. Secondary School Forum, Llandrindod Wells, April 2010.

Develop a communications strategy in collaboration with other agencies; e.g. AWARES, Autism Cymru.

- The Wales Autism Research Centre Research-Policy-Practice Hub project is focusing on the development of a communication strategy to bring together the research, policy and practice communities. The project involves two policy consultants, Mr. Hugh Morgan and Mr. Jonathan Morgan.

- Our current ESRC Follow-on grant involves partnership working with three charities (Autism Cymru, Waterloo Foundation, National Autistic Society)
- Organisation of Wales parent group network will formalise and facilitate communication channels with parents
- Development of AWARES online forum structure will formalise and facilitate communication with professionals

Press releases

- *ESRC Features: New hub connecting autism research practice and policy.* June 2013. <http://www.esrc.ac.uk/news-and-events/features-casestudies/features/26624/new-hub-connecting-autism-research-practice-and-policy.aspx>.
- *Autism RPP Hub on ASD Mental Health, Government of Canada project,* York University, Canada. <http://asdmentalhealth.blog.yorku.ca/2013/10/autism-research-policy-practice-hub/>.
- *Press release: Launch of the Autism RPP Hub* <http://www.cardiff.ac.uk/news/articles/autism-hub-launches-11776.html>; <http://www.esrc.ac.uk/my-esrc/grants/ES.J02080X.1/read>, Sept 2013.
- *Analysing Psychiatry's Diagnostic Bible.* Press Release regarding the online publication of the teams research using the Diagnostic Interview for Social Communication Disorders (DISCO) to investigate new international diagnostic guidelines (DSM-5). <http://www.cardiff.ac.uk/news/articles/analysing-psychiatrys-diagnostic-bible-11114.html>. 25th May, 2013.
- *Demonstration of the RPP hub.* A recent video episode of 'Inside the Lab' at Olga Tennison Autism Research Centre (OTARC), La Trobe University, Australia. <https://www.youtube.com/watch?v=BU6JuPo0zfA&list=PLiyKW2t9WyX4BLRAf6-dwu3NWj9YS-EXS&index=1>.
- *Autism link to testosterone.* Press Release 9/3/11. Public Lecture by Prof Baron Cohen <http://www.cardiff.ac.uk/news/articles/autism-link-to-testosterone-6400.html>
- *Minister hears latest developments in autism research.* Visit by Gwenda Thomas AM, Deputy Minister for Social Services to WARC Open Day 17th January 2011 <http://www.cardiff.ac.uk/news/articles/minister-hears-latest-developments-in-autism-research-5922>. Press release 18th Jan, 2011.
- *Reaching Higher: Wales Autism Research Centre's new grants.* Included in a discussion article on record university income, by Zoe Slater, in the Cardiff University Magazine, December 2010. <http://www.cardiffnetwork.cf.ac.uk/NetCommunity/Document.Doc?id=52>
- *Magic gives autism insight.* Press release 28 October 2010 <http://www.cardiff.ac.uk/news/articles/magic-gives-autism-insight-5625>.
- Research by Dr Kuhn, Dr Kourkoulou and Prof Leekam. See video: <http://www.scivee.tv/node/25133>. 20th October, 2010
- <http://www.psychologicalscience.org/index.php/news/releases/magic-tricks-reveal-surprising-results-about-autism.html>
- Research by Dr. David McGonigle and the launch of the Wales Autism Research Centre. New autism initiatives outlined in article October, 2010. <http://viewer.zmags.com/publication/c5e59f6a#/c5e59f6a/1>
- *Advancing knowledge of autism:* Official launch of the Wales Autism Research Centre 23rd Sept 2010. <http://www.cardiff.ac.uk/news/articles/advancing-knowledge-of-autism-5316.html>
- ITV news: <http://www.itv.com/wales/autism-centre54722>.
- *Understanding autism:* 3/8/10. Dr. D. McGonigle, Sensory Processing in people with Autism <http://www.cardiff.ac.uk/news/articles/understanding-autism-4427.html>
- ITV Wales Tonight News 6/10/10

- *New site for autism*. Web launch of WARC website on World Autism Awareness Day, 1st April, 2010. Cardiff University News Centre, Awares Org <http://www.cardiff.ac.uk/news/articles/new-site-for-autism-research-4263.html>
- Summary of all press releases for WARC research 2010-2011
<http://www.cardiff.ac.uk/news/articles/3700.htm>