



Athena SWAN Bronze department award application

Name of university: University of Warwick

Department: Statistics

Date of application: 29 April 2013

Date of university Bronze SWAN award: May 2010

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GLOSSARY	
[AS...]	Refers to Action Plan (Appendix), action point pertaining to Academic Staff.
[AT...]	Refers to Action Plan (Appendix), action point pertaining to Admin Team.
[G...]	Refers to Action Plan (Appendix), action point pertaining to Governance.
[PDRA...]	Refers to Action Plan (Appendix), action point pertaining to Postdoctoral Research Assistants.
[PG...]	Refers to Action Plan (Appendix), action point pertaining to Postgraduates.
[UG...]	Refers to Action Plan (Appendix), action point pertaining to Undergraduates.
COPS	The Committee of Professors of Statistics represents academic statistics groups in British and Irish universities.
Departmental Council	The Departmental Council meets at least once a term according to the ordinances of the University, with membership being all staff in the department.
FTC	Full-time contract.
HoD	Head of Department.
IGGY	International Gateway for Gifted Youth , a social network run from Warwick to provide networking opportunities, events, and other activities.
JACS	Joint Academic Coding System to code provision of higher education across the UK.
MORSE	Mathematics, Operations Research, Statistics and Economics , a quadripartite degree run by Warwick Department of Statistics.
OEC	Open-ended Contract.
PCAPP	The Warwick Postgraduate Certificate in Academic and Professional Practice offers participants opportunities to develop their skills, knowledge and understanding in Teaching and Learning, Research, and Academic Management. It forms a component of training for probationary academic staff.
PDRA	Postdoctoral research assistant.
PGR	Postgraduate Research student.
PGT	Postgraduate Taught student.
Pulse	The Pulse survey is Warwick's annual staff survey, eliciting views on working at Warwick.
Research SSLC	Research Student – Staff Liaison Committee.
SMT	Senior Management Team.
STEMM	Science, technology, engineering, mathematics, and medicine.
STEP	Sixth Term Examination Paper , a mathematics examination designed to test school candidate on questions that are similar in style to undergraduate mathematics.
Taught SSLC	Taught Student – Staff Liaison Committee. Taught students include both UGT and PGT.
WCC	Welfare and Communications Committee.

1. Letter of endorsement from the Head of Department

26th April, 2013

Ms Dickinson
Senior Policy Advisor Athena SWAN
7th floor, Queens House
55/56 Lincoln's Inn Fields
London
WC2A 3LJ

Dear Ms Dickinson

Please find attached our application for an Athena SWAN Bronze award, submitted by the Department of Statistics at the University of Warwick.

As noted there, Warwick Statistics Department has experienced considerable numerical growth over the last decade, doubling in size to 36 academics and making a major contribution to UK teaching and research in Statistics. Much of this growth has been at junior level, and a significant proportion of the recruitment has been of women, also mostly at junior level. Historically the Department has operated informally and with a flat hierarchy; the recent growth means we need to formalize much of our way of operating, and to establish clear organizational ways of communicating, while preserving the ethos which has served us so well in the past. In particular we must ensure that our academic women, now typically in mid-career, are supported to fulfil their considerable academic potential.

I have therefore welcomed the opportunity offered by the Athena SWAN initiative. It has been extremely useful to me as head of department to examine data concerning our operation, to identify challenges to be overcome in the national task of encouraging young women to consider the exciting career possibilities afforded by mathematical sciences and by statistics. I have been encouraged to oversee the growth of our strong female representation at associate professorial level, and am keen to seek to maintain and strengthen this as we recruit from an increasingly international range of applicants. The application and Action Plan identify a range of initiatives to address these, both directly (*eg* by ensuring visibility of role models in our undergraduate recruiting process) and indirectly (*eg* by establishing a mentoring system for mid-career academics, and by clarifying and extending support for maternity and other caring leave).

We have followed the University strategy of embedding Athena SWAN initiatives in a set of actions intended to improve quality of working life for all Departmental staff. These actions, and other initiatives arising, will be overseen by a newly constituted Welfare and Communications Committee, which I chair as Head of Department. This committee is tasked with promoting a positive working culture for all, facilitating effective communications, and taking forward the Athena SWAN action plan as well as results from the University's annual PULSE survey of staff. Committee membership is listed in the application: we have taken care to ensure representation from all groups within the Department including support staff and research students.

The application includes profiles of three of our mid-career women academics who contribute in many vital ways to the life of the Department. I also want to mention Prof Jane Hutton, appointed at senior lecturer level and now a professor and a distinguished medical statistician, who has served as head of department and spent tireless energy in the service of our academic community. We look forward to continuing to work with the University Athena SWAN steering group and Athena SWAN Network to facilitate and enable contributions from the women academics of the future.

Yours sincerely



Professor David Firth
Head of Department

495 words

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2. The self-assessment process

The Statistics department was represented on the University self-assessment team which put together the successful Athena SWAN Bronze bid in 2010. Since then departmental representatives have contributed to meetings of the University Athena SWAN Network group. At the end of the academic year 2011–2012 it was decided that the department should bid for Bronze status as part of a general strategy for improving communication and staff engagement after more than a decade of significant numerical growth. Accordingly a Statistics Welfare and Communications Committee (WCC) was formed in October 2012, tasked in particular with acting as the Department's Athena SWAN self-assessment team, as well as considering more general issues of welfare and communications within the department. This follows the model adopted by most Warwick departments, in which Athena SWAN activities are embedded in a wider staff welfare remit within the department.

The WCC meets twice a term, with Athena SWAN as a standing item on its agenda. Its membership represents academics at varying levels of experience, postdoctoral researchers, PhD students, and support staff. Current membership is as follows:

Prof David Firth (committee chair) is halfway through a 3-year term as Head of Department. He chairs the Welfare and Communications Committee.

Prof Wilfrid Kendall (committee vice chair, Athena SWAN coordinator). Appointed as lecturer in 1988, Prof Kendall has served in a wide variety of roles in the Department, including as Head of Department in 1999–2002. Married with four children, he has some personal experience of dealing with disability issues arising from the type 1 diabetes of his younger daughter.

Dr Joanne Kennedy was appointed as a lecturer in 1998 and promoted to senior lecturer in 2001 after holding previous lecturing positions at the Universities of Bristol and Oxford. At the time of her appointment Dr Kennedy was the only female member of academic staff in Statistics at Warwick. She has been working part-time since 2005 in order to manage caring responsibilities at home. She is married with one child.

Dr Anastasia Papavasiliou was appointed as a lecturer in 2005 and was promoted to Associate Professor in 2010. She is currently the departmental Undergraduate Admissions Tutor. She is married with two young children (born 2007 and 2012) and has recently returned from maternity leave after the birth of her second child.

Dr Nikolaos Zygouras is an Associate Professor. He has a wide international experience as he completed his undergraduate studies in Athens, Greece (NTUA), did his PhD in New York (NYU) and prior to coming to Warwick he spent time in Switzerland (ETH) and Los Angeles (USC) as a postdoc and Assistant Professor. He has been at Warwick since 2008 and is married with one child.

Dr Matthew Roberts. Since completing his PhD in 2010, Dr Roberts has worked in several different departments around the world. After spells in Paris, Berlin and Montreal he returned to the UK in 2012 as a Postdoctoral Research Fellow at Warwick.

Ms Lorna Barclay is a 3rd year PhD student. She holds a degree in Mathematics from the University of St Andrews and also completed an MSc in Statistics at Warwick prior to starting her

PhD. This year she has visited Monash University, Australia, and collaborated in Warwick with visitors from Monash, as part of Warwick's EPSRC "Global Engagements Award". Outside work she enjoys playing the violin in several orchestras and therefore has experience in balancing work and rehearsals.

Mr Dejan Siraj is a 2nd year PhD student from Slovenia. He is involved in a number of activities within the Department, including teaching.

Mrs Lynn Clarke (Department Secretary/PA to HoD) provides administrative support to the Head of Department and department staff and is responsible for a variety of administrative procedures including Finance and Human Resources. Lynn's core hours are 08.30 to 16.30 hours each weekday but she occasionally provides support for conferences and public lectures which take place in the evening. The department works flexibly and Lynn is able to take time off in lieu of any additional hours worked.

The self-assessment process

The self-assessment process began with a period of consultation with all departmental staff (mediated by WCC members). Issues highlighted were discussed and refined as part of twice-termly meetings of the WCC. As the draft proposal was developed, progress was reported back *via* an Athena SWAN standing item in termly meetings of departmental academic and administrative staff. Undergraduate students have been consulted via discussions with the Department Taught Student-Staff Liaison Committee (SSLC). An early draft of the proposal was discussed at the inaugural meeting of an annual Department Away Day held in March 2013. The WCC has been pivotal to this process: consequently its agendas and minutes are made available to all Department staff members through the Departmental intranet. The WCC webpage (go.warwick.ac.uk/stats/intranet/current-info/committees/welfarecommunications) is accessible to all members of the Department, including undergraduates. It serves as the anchor page for Departmental Athena SWAN matters, and includes an electronic suggestions box.

Quantitative data to support this application have been supplied by the University Departments of Human Resources and Office of Strategic Planning & Analytics. In addition, Sandra Beaufoy (HR Adviser, Equality and Diversity) and Caroline Peck (University Athena Project Officer) have served as external members of the WCC. External advice and discussion has been obtained by attending a London Mathematical Society Good Practice Workshop in London (15th November 2012), and *via* a departmental representative attending the LMS launch of its national report on women in mathematics (27 February 2013). Professor Alison Rodger (Chemistry) and Sandra Beaufoy of the University Athena SWAN Steering Committee have advised on Departmental Athena SWAN activities and reviewed this document before submission.

Subsequent to the application, the WCC will continue to meet to review progress on the Athena SWAN action plan. The remit of the WCC will also include the monitoring of University-run staff satisfaction surveys (the Pulse Survey) and facilitation of effective communications within the Department. The WCC will keep the Department informed of Athena SWAN progress and related issues *via* a standing item for the termly Department Council.

(1000 words)

3. A picture of the department

Warwick University is a leading UK higher education institution, providing a stimulating and rigorous intellectual environment for students and staff, with ~5000 staff in 4 Faculties (including 1687 academics and researchers), formed into 32 academic departments and 55 research centres. At present 22,418 students study at Warwick (full-time or part-time); 12,704 are undergraduates and 9,714 are postgraduates. Of these, 6,543 are international students. About 33% of all students study in STEMM departments. This excludes exchange students, staff on study-leave and intercalating students.

The Statistics Department is one of ten STEMM departments, and is a large research-active group of statisticians and probabilists. It runs two internationally respected undergraduate programmes: Mathematics and Statistics, and the interdisciplinary MORSE degree (Maths, Operations Research, Statistics, Economics), well-respected amongst prospective employers. Including fractional FTEs from Mathematics students registered for Statistics modules, UGT enrolment comprises 21% of UK Statistics UGT provision (2010/2011 figures). The Department also runs an MSc and hosts a substantial community of PhD students and research fellows. The last decade has seen considerable numerical growth: academic numbers growing from 15 to 36, annual intake of undergraduates from 107 to 163. Departmental culture is largely non-hierarchical; a head of department serves a three-year term and is chosen in turn from the professoriate. Numerical growth has required more formalized sharing of responsibilities and now requires careful attention to enhancing communication and collegiality, and to ensuring that delegation of responsibilities is clear, effective and transparent.

The Department is strongly international: half our UGTs and 12 out of 37 academics are non-UK. The proportion of international academics is expected to increase; recent tenure-track openings each attracted around 60 applications, many from overseas world-class universities. UGTs opting for post-graduate study often move to highly ranked UK or international research groups, balanced by strong international PGR recruitment (9 out of 50 current PGR are from UK).

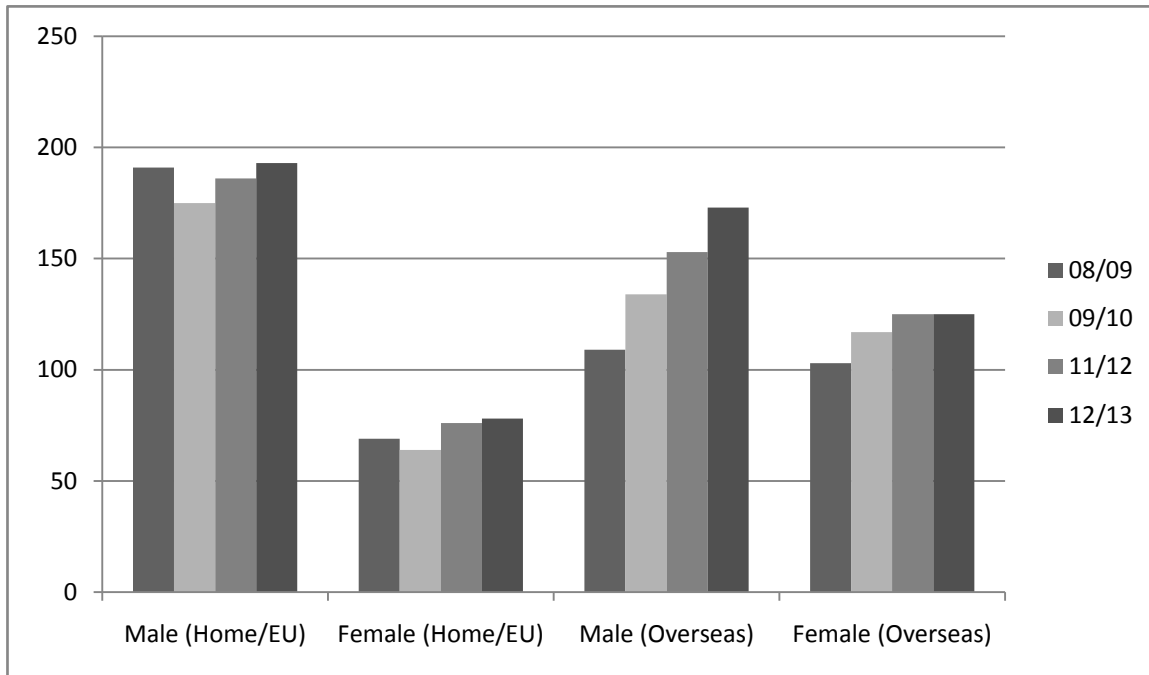
Student data

i. **Access/foundation courses.** The Department does not run these.

ii. **Undergraduate male and female numbers**

Compare Table 3.1 to a sector average of 43% women. ("Sector" means student enrolments for UK Statistics courses categorised under JACS code G3-Statistics.) Most enrolments are for the interdisciplinary MORSE degree (510 out of 569 in 2012/2013). Assuming binomial variation, the overall percentage of women among Home/EU entrants (28%) lies below the sector average, with expected fluctuations of $\pm 5\%$ (two standard deviations).

Table 3.1: UGT enrolments (full and part-time)	08/09	09/10	10/11	11/12	12/13
Male (Home/EU)	191 (73%)	175 (73%)	186 (71%)	188 (69%)	193 (71%)
Female (Home/EU)	69 (27%)	64 (27%)	76 (29%)	84 (31%)	78 (29%)
Male (Overseas)	109 (51%)	134 (53%)	153 (55%)	168 (56%)	173 (58%)
Female (Overseas)	103 (49%)	117 (47%)	125 (45%)	134 (44%)	125 (42%)



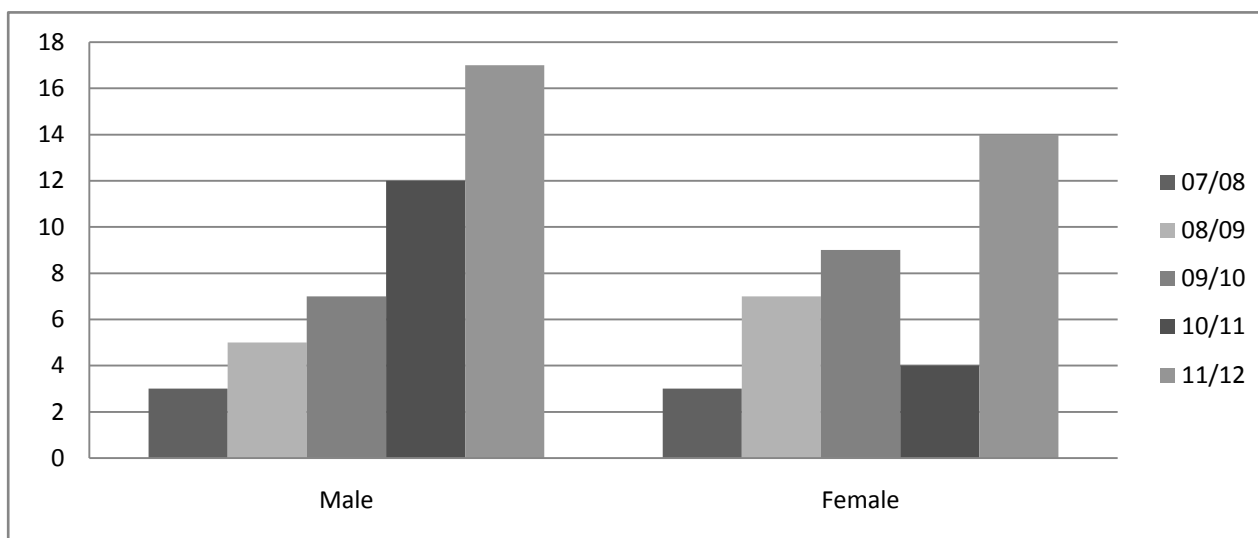
Our high entrance requirement (eg: A*AA or AAA + 2 in STEP) clearly conveys desirability of A-level Further Mathematics, shedding light on the data of Table 3.1; nationally, 40% of passes at Mathematics A-level are women, but only 30% of Further Mathematics passes (www.icq.org.uk/Download/examination-results/a-levels/a-as-and-aea-results-summer-2012).

Analysis of these data has led us to develop the following aims. We aim to increase the profile of Warwick Statistics amongst A-level students particularly women. Relevant initiatives include an annual Public Engagement Lecture (the 2013 speaker is a distinguished female statistician), also facilitation of staff participation in IGGY (International Gateway for Gifted Youth, www.iggy.net), and (together with Mathematics) possible plans for local Women in Mathematics and Statistics Days [UG1-3]. We fully engage with University Open Days and separately arrange a Department visit for every UK-based applicant for whom an offer is considered. We will take the following opportunity to enhance visibility and accessibility of female role models. The student visits include a campus tour, led by a current student: the Department will encourage current women undergraduates to take part, and monitor this and also the visibility of women in publicity [UG4,5]. Since female students often have broad interests, publicity will emphasize the MORSE degree flexibility [UG6]. We also assist the Taught SSLC to enable older UGT to mentor groups of first-year students, assessing success *via* end-of-year questionnaires [UG7].

iii. Postgraduate male and female numbers completing taught courses

PGT numbers are relatively small, so percentages fluctuate substantially (Table 3.2). In aggregate, women make up 46% of total PGT completions; slightly higher than the sector.

	Sector (10/11)	07/08	08/09	09/10	10/11	11/12
Male	385 (55%)	3 (50%)	5 (42%)	7 (44%)	12 (75%)	17 (55%)
Female	315 (45%)	3 (50%)	7 (58%)	9 (56%)	4 (25%)	14 (45%)



At PGT level, our attention currently focuses on development of good induction/mentoring procedures to maximize student benefit from the twelve-month course. We plan to arrange mentoring of all PGT (and also fourth-year UGT) by third/fourth year PhD students, to develop a welcome pack of relevant information, and to continue a “Welcome Saturday” at start of term 1 (country walk followed by pub meal). All will be assessed by end-of-year questionnaire [PG1-4].

A small fraction of our PGT students continue as PGR in the Department (Table 3.3), which is an important part of the course rationale. Men choose this at about twice the rate of women; this provides further motivation to develop induction and mentoring procedures at PGT level.

	08/09	09/10	10/11	10/11	11/12
Male	2	1	2	2	3
Female	0	0	1	0	2

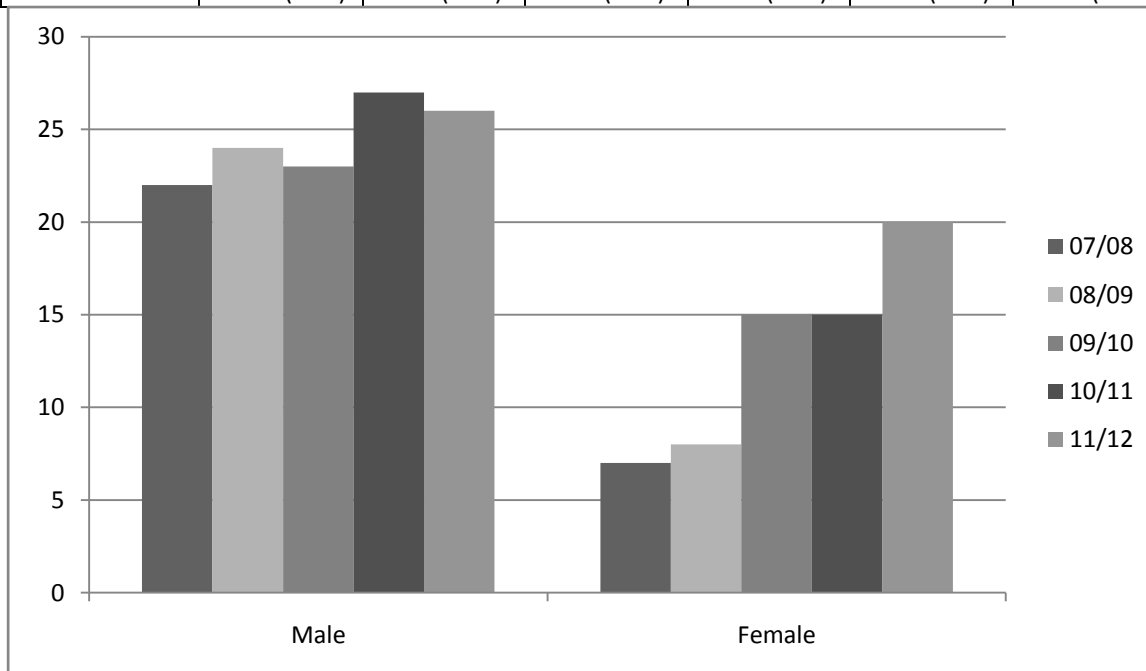
iv. Postgraduate male and female numbers on research degrees

PGR numbers are also relatively small (Table 3.4). Nevertheless female enrolments exhibit a striking increasing trend. As noted, PGR students are encouraged to progress to other leading UK and international universities as part of their academic development; however, 6 male and 2 female PGR took up post-doctoral positions within the Department between 2008–date. We plan

to adapt PGT induction arrangements and support mechanisms for PGRs and PDRA's [PG2,3,PDRA2], to foster their engagement with practicalities of academic life, and so to encourage consideration of an academic career. Minutes of the Departmental teaching committee will be sent to the Research SSLC, PGR representation on the WCC will continue; and PGR/PGT students will be encouraged to use the WCC on-line suggestions box [PG5-7]. The Department resources networking for PGR students using the four intensive training weeks run by the Academy for PhD Training in Statistics (a Warwick Statistics initiative involving most first-year UK PGR Statistics students) or equivalent, also the annual national Research Students Conference in Statistics [PG10], and the Department resources a "Young Researchers Seminar" run by PGR students and PDRA's [PG11,PDRA1]. It is also planned to offer each PDRA/PGR student the opportunity of attending national "Women in mathematics/statistics" meetings at the rate of one per year per student [PG8,PDRA3]. In addition, PDRA's will be encouraged to register for the accredited PG certificate in transferable skills in science [PDRA4].

Table 3.4: PGR enrolments (full and part-time)

	Sector (09/10)	08/09	08/09	09/10	10/11	11/12
Male	440 (58%)	22 (76%)	24 (75%)	23 (61%)	27 (64%)	26 (57%)
Female	315 (42%)	7 (24%)	8 (25%)	15 (39%)	15 (36%)	20 (43%)



No cases of maternity leave have arisen in the PGT/PGR/PDRA population since 2008. We will adapt and publicize policies developed in e.g. chemistry to be fit-for-purpose in statistics [PG9,PDRA5].

v. Ratio of course applications to offers and acceptances by gender for undergraduate, postgraduate taught and postgraduate research degrees

Table 3.5: ratios of offers, applications and enrolments		08/09	09/10	10/11	11/12	12/13
Offers / applications (%)	UGT F	70	69	67	76	75
	UGT M	60	58	60	70	68
	PGT F	70	54	65	80	75
	PGT M	52	42	56	74	75
	PGR F	36	40	44	44	35
	PGR M	22	49	37	42	33
Enrolments / offers (%)	UGT F	24	25	30	25	24
	UGT M	31	32	33	27	29
	PGT F	47	36	23	46	19
	PGT M	40	36	30	48	16
	PGR F	25	50	82	29	83
	PGR M	50	35	44	50	38
Enrolments / applications (%)	UGT F	17	17	20	19	18
	UGT M	19	18	20	19	20
	PGT F	33	19	15	37	14
	PGT M	21	15	16	36	12
	PGR F	9	20	36	13	29
	PGR M	11	17	16	21	11

UGT offers and acceptances are based strictly on predicted/actual performance at A-level or equivalent. Table 3.5 displays percentage ratios of offers/acceptances (O/A), enrolments/offers (E/O) and the derived percentage of enrolments/acceptances (E/A). O/A, E/O ratios exhibit clear M/F differences, but effects on the decisive E/A ratio cancel out: variation is at most $\pm 2\%$ (two standard deviations). A 2011/2012 decliners questionnaire produced responses from 31 women and 45 men; 11 of the women cited preference for another university and 6 cited high entry-requirements, while 34 of the men cited preference for another university and 9 (who would have paid overseas fees) cited high fees. This will be investigated further [UG8].

PGT/PGR numbers are smaller than UGT numbers, leading to larger percentage fluctuations. Aggregating over all five years, the E/A percentage for PGT is 22%(F) versus 20%(M); for PGR it is 24%(F) versus 15%(M); percentages differences are both within sampling fluctuation of $\pm 9\%$ (PGR) and $\pm 15\%$ (PGR) (two standard deviations).

vi. Degree classification by gender

Table 3.6 summarizes degree classification by gender/graduation-year. There is no discernible pattern: sampling fluctuation for this size of population is $\pm 7\%$ (two standard deviations) for aggregate differences of percentages in the First-class category.

Table 3.6: Degree by gender	First	2:1	2:2	Third	(Total)
07/08 (M)	24	39	11	5	79
(F)	16	29	5	6	56
08/09 (M)	28	44	18	2	92
(F)	16	18	10	4	48
09/10 (M)	25	34	16	4	79
(F)	12	22	13	1	48
10/11 (M)	24	34	15	2	75
(F)	9	14	10	4	37
11/12 (M)	29	36	15	5	85
(F)	17	29	13	3	62
Aggregate % (M)	32%	46%	18%	4%	
Aggregate % (F)	28%	45%	20%	7%	

Staff data

vii. Female:male ratio of academic staff and research staff

Table 3.7 records women and men at levels FA6 (PDRA), FA7 (Assistant Professor and senior research fellows), FA8 (Associate Professor), FA9 (Professor); Table 3.8 displays percentages taken from the 2012 COPS (Committee of Professors of Statistics) Data Collection exercise (www2.imperial.ac.uk/~ayoung/copsq12.pdf); row categories correspond loosely to FA6, FA7, FA8, FA9.

Table 3.7: numbers of academic staff at various levels (M:F)		07/08	08/09	09/10	10/11	11/12	Current F%
FA6	M	9	7	5	3	2	60%
	F	2	2	5	4	3	
FA7	M	3	7	6	5	6	14%
	F	3	3	3	1	1	
FA8	M	7	6	8	9	7	42%
	F	3	3	4	5	5	
FA9	M	8	9	8	8	9	10%
	F	1	1	1	1	1	

Table 3.8: COPS 2012	Female FTE	Male FTE	Female FTE %
Research Assistant / Fellow	81.6	122.5	40%
Lecturer (Assistant Professor)	72.75	162	31%
Senior Lecturer / Reader (Associate Professor)	44.75	108	29%
Professor	26.5	131	17%

These figures show above-average representation of women at FA8 (42% at Warwick Statistics *versus* 29% nationally), but lower at FA7 (at Warwick this is a transient grade for academics on probation) and FA9. See 4(a)(i), 4(a)(ii).

viii. Turnover by grade and gender

Turnover is relatively low at grades FA7 and above (FA6 concerns fixed-term contracts). Of 9 cases of involuntary turnover, 2 were normal retirements and 7 obtained compensated redundancy at fixed-term contract expiry at FA6 level. The 2 female cases arose from fixed-term contract expiry.

Table 3.9: voluntary turnover of academic staff at various levels	2008		2009		2010		2011		2012	
	M	F	M	F	M	F	M	F	M	F
FA6	0	0	2	0	1	0	2	0	1	1
FA7	1	0	0	1	0	0	1	1	1	1
FA8	0	0	0	0	0	0	0	0	2	0
FA9	0	0	0	0	0	0	0	0	0	0

Table 3.9 summarizes voluntary turnover. The 3 female FA7 leavers took up academic posts at Birmingham, Montreal and Oxford (2 promotions, 1 Assistant Professorship). The female FA6 leaver re-located.

(2000 words)

4. Supporting and advancing women's careers

(a) Key career transition points

(i) Job application and success rates by gender and grade

Table 4.1 Applications and success rates	07/08			08/09			09/10			10/11			11/12		
	FA6	FA7	FA8	FA6	FA7	FA8	FA6	FA7	FA8	FA6	FA7	FA8	FA6	FA7	FA8
Posts advertised	2	1	1	2	1	-	4	2	-	1	3	-	5	3	2
# applications	27	28	12	31	28	-	56	72	-	33	60	-	82	61	11
% M applications	74%	86%	75%	68%	61%	-	68%	86%	-	76%	78%	-	77%	74%	64%
% F applications	22%	14%	8%	19%	32%	-	23%	13%	-	21%	22%	-	23%	21%	27%
# Appointed	2	3	1	2	1	-	4	2	-	1	2	-	4	2	1
# F Appointed	0	0	0	1	1	-	3	0	-	0	0	-	0	0	1

Male/female percentages do not add to 100%;
Warwick does not ask for gender on application, and gender is not always clearly deducible from name.

Numbers are low, so we aggregate over the five-year period. At FA6 there were 229 applications for 14 posts advertised; 22% were women. A total of 13 appointments were made; 31% came from women. At FA7 and FA8 level there were 272 applications for 13 posts; 19% came from women. A total of 12 appointments were made; of these, 17% were women. Fluctuations of 2 standard deviations are $\pm 6\%$, producing no evidence of a discrepancy in rates of appointment success.

The COPS data (Table 3.8) gives higher UK percentages of women, at 40% for research fellowships (FA6) and 26% at higher levels (FA7+). The lower rate of applications from women at Warwick should be set against the high current percentages of Table 3.7: (women at Warwick Statistics are 60% at FA6 and 42% at FA8, the grade of established academics). The lower national representation of women in academia, together with the lower rates of women applying for Warwick jobs, means the Department can only sustain these higher percentages if it makes extra efforts to attract well-qualified women applicants. This is particularly challenging in view of the increasing trend towards international recruitment as discussed above, both in ensuring suitable candidates hear of our openings and because women are widely deemed to be less willing to move internationally. Job advertisement and associated material will be examined to ensure that women are encouraged to apply, and gender ratio on shortlists will be monitored and reported to WCC. [AS4,5].

The principal strategy for ensuring good representation in application lists at FA7+ level is to increase the profile of opportunities at Warwick at the pre-recruitment stage. We plan to ensure that an appropriate proportion of invitations to present research seminars, and to participate in the Department's series of research workshops, go to well-qualified women academics. We will monitor gender of invitees, to encourage invitation of female role models for students and postdocs [AS6].

The Department follows the University's Recruitment and Selection Policy. The Head of Department consults with all professorial colleagues when formulating job descriptions and criteria. The resulting job specification, further particulars and advertisement (which follow University templates) is then checked by Human Resources, who process all applications. All received by the deadline are considered for short-listing; care is taken to cross-check against the person specification of the role and to allow for actual time in research-related employment since PhD. All academics in the department are invited to participate in the short-listing process; the head of department specifically invites certain individuals in order to ensure balance. All short-listed candidates are invited to interview (including a research presentation to the whole department). A common list of questions is agreed by the interview panel before commencing the interviews for a given post. Decisions after interview are checked against the job criteria agreed with Human Resources. Each interview panel at FA7 or higher includes two academics external to the Department, one of whom is chair, and also includes at least one member of departmental academic staff chosen in consultation with all the academics in the department. It is usual to include at least one female academic on the interview panel.

The Department does not run special procedures to attract women applicants. The Athena SWAN process has highlighted the increase of international applicants for posts and the decrease in

percentage of women appointed at FA7; two clearly linked trends. Given the requirement to recruit at international levels of excellence, we believe the best way to increase the proportion of excellent female applicants is to raise the profile of Warwick Statistics, by making strategic invitations to present research seminars and facilitating connections through research travel by our academics whether male or female. The department will continue to contribute to the wider University Athena SWAN initiatives that are outlined in Warwick’s Silver Institutional application, which aim to make Warwick a more attractive place of employment: family friendly hours, a conference attendance fund (assisting with additional childcare costs incurred whilst the member of staff attends a conference/workshop), enhancing opportunities for early and mid-career females, hosting scientific events, and a play scheme for school children to assist working parents during school holidays. A local document listing these initiatives will be updated annually [AS8].

(ii) Applications for promotion and success rates by gender and grade

Table 4.2 displays promotions in the Statistics Department in the period running from 09/10 to 11/12. There have been 5 completions of probation (including 2 women) and consequent promotion to Associate Professor and 3 promotions to Reader or Professor (all men). All applications for promotion met with success.

Table 4.2: Recent promotions		09/10		10/11		11/12	
		Rec	Promoted	Rec	Promoted	Rec	Promoted
Professorships	Female	-	-	-	-	-	-
	Male	-	-	-	-	1	1
Associate Professors (readers)	Female	-	-	-	-	-	-
	Male	-	-	1	1	1	1
Associate Professors	Female	2	2	-	-	-	-
	Male	1	1	1	1	1	1

There have been few recent promotions in Warwick Statistics. This is a consequence of (a) rapid recent numerical growth including several appointments of first-time Assistant Professors, (b) the promotion structure at Warwick, comprising five years’ probation as Assistant Professor, successful completion producing promotion to Associate Professor, and then a period of accumulating an academic record strong enough to earn promotion to Reader, followed by Professor (with intervals of at least three years – but typically longer – between promotions). In particular the lack of women ready to be put up for promotion to Grade 9 arises from demographic reasons and should soon be remedied.

Considerable attention has been focussed on the probation process. This includes mandatory participation in the University Postgraduate Certificate in Academic and Professional Practice (PCAPP), associated mentoring support, and a lighter teaching and administrative load (1/3 in first year, increasing to full load at end of probation). Feedback from our academics undergoing this process has produced adaptation of PCAPP to include the option of gaining credit *via* a substantial number of workshops contributed by Warwick Mathematics and Statistics Departments (*eg*, on personal tutoring, difficulties encountered in university-level mathematics by undergraduate students, and importance of collegiality). As a result, in the last ten years none of our academics, male or female, has had probation denied.

The most recent promotion of a woman was to Reader, in 2009. Our expectation is that several women at Associate Professor grade will seek further promotion over the next few years, thus redressing the current low representation of women at FA9. To facilitate this, we plan to establish various support structures including mentoring [AS1]. Informal feedback from colleagues, especially women, identifies mentoring in the post-probation period as the most crucial single initiative in assisting career development at this stage. The University is already developing a programme to ensure that staff are well-informed about the Promotion cycle (timing, criteria, support) and the Department will work with the University on this and consider how best to promote it to staff [AS2-3]. Recently a “demystifying promotion” event was appreciated by all attendees.

(b) Career development

(i) Promotion and career development

Warwick University operates an annual review system, carried out within each department by seniors (academic or administration as appropriate), resulting in summary reports to the Head of Department and allowing for advice on career development. Promotion and probation criteria are clearly stated in University guidance documents and require strong performance for academics at appropriate levels in the three areas of teaching, administration and research. Pastoral and outreach work are subsumed within teaching and administration as appropriate. For most academics, primacy in these three areas is given to research (natural for a highly research-active institution), although it is clearly stated within promotion documentation that even cases at professorial level can be based on excellence in teaching or administration. The quantity of teaching and administration expected of each academic is controlled by a departmental workload model (see below), while in research it is made clear that annual high-quality research output to very strong journals is preferred to large volumes of work published in less demanding outlets.

(ii) Induction and training

Departmental induction arrangements have to date been informal at a level suitable for a small department but no longer appropriate after the growth noted above. We therefore plan to establish a formal “induction folder” containing summaries of essential material, presented to new staff on arrival, and formalizing the current mentoring arrangements especially at the post-probation stage [AS1,9]. The University provides training opportunities for all staff through (a) PCAPP for new Assistant Professors (see above), (b) a programme of staff training and development, publicized to staff by monthly emails and on the Learning and Development website. Both emphasize the importance of networking and personal and professional development opportunities. Within the Department, networking is promoted by means of a monthly staff lunch, which also provides the opportunity for brief presentations on matters of common concern (eg, discussion of cultural differences to be encountered when dealing with a student population with a strongly international component). FA6 staff can register on the Postgraduate certificate in transferable skills in science for postdoctoral researchers.

(iii) Support for female students

Current Departmental policy is to establish gender-blind opportunities for student support including the personal tutor system. Students are told they can at any time request a change of

personal tutor, without giving reasons (typically, 5 a year do so). This system operates up to and including PGR level, and provides a channel for students to express any dissatisfaction with teaching or supervisory arrangements. Meetings between tutors and tutees occur at least twice each term, and are supplemented by tutors being available for two office hours each week. Meetings include discussion of student progress, review of student vitas, and release and discussion of major examination marks. The personal tutor is not expected to be expert on all issues, but refers students to the Careers Service, to the Departmental Undergraduate Senior Tutor, and to Counselling Services as appropriate.

(c) Organisation and culture

(i) Male and female representation on committees

Table 4.3: Female and Male representation on committees										
	08/09		09/10		10/11		11/12		12/13	
	F	M	F	M	F	M	F	M	F	M
Committees (Departmental)										
Senior Management Team	0	5	0	6	0	6	1	7	0	7
Promotions (all professorial staff)	-	-	-	-	-	-	-	-	1	9
Teaching	3	8	2	10	3	9	3	7	3	6
IT	1	6	1	5	1	5	1	6	1	6
Research	1	4	1	5	1	5	1	5	1	6
Welfare & Communications	-	-	-	-	-	-	-	-	3	3
Committees (University)										
Senate	1	0	1	0	0	1	0	1	0	1
Faculty of Science	0	2	0	3	0	2	0	2	0	2
Science SubFaculty	0	3	0	2	0	2	0	2	1	1
Graduate Studies	1	1	1	1	1	1	0	2	0	2
1st Year Exam Board	0	1	0	2	0	2	0	2	0	2
Exam Appeals	1	0	1	1	1	1	0	2	0	2
Equal Opportunities	1	0	1	0	0	0	0	0	0	0
Science Faculty IT	0	1	0	1	0	1	1	1	1	1

Table 4.3 presents membership of departmental and university committees. Membership of Departmental committees is linked to assigned administrative duties; these committees meet once or twice a term depending on the nature of business being transacted. Departmental representation on University committees is not high – an inevitable consequence of the substantial demands of running a large and successful multidisciplinary degree (section 3 introduction). Membership of University committees is mostly linked to assigned administrative duties, with the exception of Senate (election). Gender distribution reflects the remarks in 3(vii) above; in particular the low representation of females at FA9 leads to low representation on University committees. The most direct way of remedying these proportions is to support our academics in progression to promoted posts, as noted in Career Development above. Mentors will also be asked to encourage women to consider being nominated / elected to serve on such committees, in order to gain more awareness of and to influence University-wide issues [AS11]. The specific absence of female representation on the Senior Management Team in 12/13 (as opposed to 11/12) arises because the female academic in question is on study leave in 12/13. The Head of Department will consider how best to enhance female representation on Senior Management Team [AS12].

(ii) Female:male ratio of academic and research staff on fixed-term contracts and indefinite (permanent) contracts

Table 4.4 tabulates numbers of staff on fixed-term versus indefinite contracts by gender by grade by year. There is a clear distinction between grade FA6 (largely fixed-term) and FA7+ (largely indefinite), but otherwise no pattern and no evidence of gender distinction. In general Warwick is making a transition away from OEC for short-term funding, so the presence of OEC FA7 posts is historical.

Staff Level		FTC			OEC		
		M	F	Total	M	F	Total
FA 6	2008	9	1	10	0	1	1
	2009	7	1	8	0	1	1
	2010	5	3	8	0	2	2
	2011	3	2	5	0	2	2
	2012	2	2	4	0	1	1
FA 7	2008	0	0	0	3	3	6
	2009	0	1	1	7	2	9
	2010	0	0	0	6	3	9
	2011	1	0	1	4	1	5
	2012	2	1	3	4	0	4
FA 8	2008	0	0	0	7	3	10
	2009	0	0	0	6	3	9
	2010	0	0	0	8	4	12
	2011	0	0	0	9	5	14
	2012	0	0	0	7	5	12
FA 9	2008	1	0	1	7	1	8
	2009	1	0	1	8	1	9
	2010	0	0	0	8	1	9
	2011	0	0	0	8	1	9
	2012	0	0	0	9	1	10

(iii) Representation on decision-making committees

Low female representation on the Departmental committees (SMT, Promotions, Research) derives from the low female proportion at FA9, since membership is largely determined by professorial responsibility (see also the note at (i) above). As noted in 3.7, in due course the large female proportion at FA8 is expected to drive an increase in the FA9 proportion and thence committee representation. Relevant actions are therefore subsumed under actions to encourage progression and promotion (see above). Committee membership derives from specific administrative responsibilities, and is thus indirectly reflected in the workload model.

(iv) Workload model

Workload in the Department is organized on the basis of a matrix workload model which takes account of lecturing (pro-rata by number of lectures), supervision of project students, MSc students, PhD students and post-doctoral researchers, and administrative tasks including chairing of committees. Allowance is made for people holding research grants which specifically fund their research time but do not completely excuse them from teaching and administrative duties. The

Head of Department annually organizes assignment of responsibilities according to this model, discusses the proposed assignments with members of department and adjusts accordingly. Conventionally specific tasks and roles are undertaken for at least 3 years (for the sake of efficiency), but not much longer (to allow for changeover for individuals carrying specific demanding duties, and also to avoid over-dependence on individuals). Pastoral responsibilities (i.e. personal tutoring) are shared equally by all staff, as are student interviewing duties and participation in sixth-form open days. The workload model undergoes continual evolution: at present the perception is that the model needs to be more clearly explained and understood [AS13,AT1,2].

(v) Timing of departmental meetings and social gatherings

The principal departmental meeting is the termly Department Council, for all academic staff (including PDRAs) and admin staff, which is held during the morning of a term-time weekday so as to maximize possible attendance. Informal feedback from academic staff who have parental responsibilities is that the principal useful changes would be (a) to ensure the two main departmental seminars (one in probability, one in statistics) finish by 3pm, and (b) to establish a buddying system between pairs of academics to allow flexibility for parents in case of child ill-health [AS14,15]. An informal monthly lunch for academic women provides opportunities for informal discussion with seniors [AS7]. The staff common room is open to all staff members and PGRs, and is an effective community meeting point throughout the day; coffee is provided by the Department, encouraging informal meetings at 11am each working day.

(vi) Culture

The culture of the Department is still conditioned by a friendly, informal and hard-working style which developed when numbers were smaller. Several actions in the Action Plan are aimed at adjusting this style to fit better to today's substantially increased size, without losing its attractive features. In particular, we propose to institute a termly Departmental Newsletter [G3], to establish an annual reception for new staff arrivals [AS10], a welcome pack of material for new arrivals [AS9], a departmental mentoring system for all academic staff [AS1], and celebration of achievement both individual and collective [AS17]. These initiatives have been identified through consultation; female staff have been particularly insistent on the value of an effective mentoring system. We already run a monthly staff lunch, which is well attended, and plan to augment this with brief presentations on matters of general interest (for example, the actual process of consideration for promotion) [AS2].

(vii) Outreach activities

Three academic members of staff share oversight of outreach responsibilities. Outreach to the general public centres on Warwick Public Lectures in Mathematics and Statistics, run jointly with the Mathematics Department. The Statistics Department ensures these are available in streamed form via the web (go.warwick.ac.uk/stats/news/wplms). Current explicit participation in outreach to schools centres on the provision of support materials for students taking STEP papers (go.warwick.ac.uk/statistics/courses/AEA). We plan to expand this, to offer staff the opportunity to participate in IGGY (International Gateway for Gifted Youths), and also to explore (together with Mathematics) organization of annual "[Women in] Maths & Stats" days targeting local school students at the stage when they choose GCSE/AS subjects; we believe this is the point at which

good-quality information and strong role models of both genders is crucial in encouraging participation especially by young women and especially in encouraging them to consider the possibilities opened up by taking the Further Maths A-level [UG1,3]. All these activities are taken into account in the Department workload model. The University promotion pro-formas include space to list such activities as part of a case for promotion, and this will be communicated to prospective candidates by mentors and as part of departmental briefings by the Head of Department.

(d) Flexibility and managing career breaks

(i) Maternity return rate

In the years 07/08 to 11/12 there have been 5 instances of maternity leave (of whom 1 left before end of leave). There is no discernible trend.

(ii) Paternity, adoption and parental leave uptake

There has been 1 instance of paternity leave in the years 07/08 to 11/12, occurring at FA 9 grade. There have been no instances of adoption or parental leave uptake. The proposed Departmental Newsletter will be used to disseminate information on these and other University policies and procedures [G3].

(iii) Numbers of applications and success rates for flexible working by gender and grade

See next item.

(iv) Flexible working

Data available in the department only relates to part-time working arrangements. It is recognised that informal arrangements exist within the Department and line managers are actively encouraged to offer and consider such arrangements to allow individuals an effective work life balance. The Department will seek the views of staff as to whether these informal arrangements suffice, or whether staff would prefer more formal mechanisms [AS16,G3].

(v) Cover for maternity and adoption leave and support on return

Till now, the Department has dealt informally with support of female staff around the period of child-caring leave (also including other caring leave), with the exception that the Department has a formal policy of agreeing to requests for part-time working, though (to avoid any sense of coercion) it does not take the initiative in formulating such requests. Currently 2 female and 1 male academic are working part-time. It is clear from discussions with female colleagues that it would be useful to make the present informal arrangements more explicit; we therefore plan initiatives as follows. Firstly, we plan to monitor all instances of caring leave at all levels, and (with the agreement of the people concerned) document these in case-study form, available to all staff in order to publicize the possibilities involved [AS18,AT3]. In the period leading up to the caring leave, we plan for there to be an interview with Head of Department or nominee to discuss plans for appropriate transfer of work-load and to discuss longer-term plans for facilitating restart of research activity after leave [AS19]. During the caring leave we plan to offer monthly Keep-in-

Touch opportunities, for staff to spend a lunch-time in the Department being briefed on current developments, as well as maintaining personal contact with colleagues [AS20]. (The University formally offers paid Keep in Touch Days up to a maximum of 10 throughout the maternity leave.) On return from leave, the member of staff will again have an interview with Head of Department or nominee, firstly to ensure that the returner is getting sufficient support, and secondly to discuss the choice of an appropriate mentor to advise on the crucial process of re-entry and re-start of research activity [AS21]. The University has a Returning Parents Network for staff returning from maternity/adoption/paternity leave where relevant issues are discussed as well as having external and internal speakers. The University Learning and Development Centre runs a Returning Parents Mentor Scheme, where returners can have a dedicated mentor who has experience of balancing work with childcare. These initiatives will be promoted in the Departmental Newsletter [G3]. As noted we plan to formalize a “buddy system”, pairing academic staff to allow them to cover for each other in case of exigencies such as child illness [AS15].

In discussion with female staff we have identified particular anxieties about the extent to which parental commitments can damage promotion prospects, both because it may be difficult quickly to pick up research activity after absence, and because it is harder to take opportunity of foreign travel opportunities. We plan to address these concerns in a two-fold manner: firstly by taking the opportunity of the monthly staff lunch to deliver occasional presentations on matters concerned with promotion (particularly giving authoritative advice on the extent to which the University takes explicit account of caring leave when considering promotion), and secondly by ensuring that mentors of returning staff are in a position to give helpful advice about the difficult balance between family life and research-related travel [AS2,21].

We conclude this section with case studies [**lightly edited to increase anonymity**] of three of our female academics, which expresses well the current state of the Department: a friendly and supportive environment, but needing to improve structures so as to make the most of its excellent and creative staff at all levels and to attract new staff.

Case Study: Dr A

After a doctorate in Europe, Dr A took a half-year research fellowship, followed by a 3-year postdoctoral research position at two UK universities. She joined the Statistics Department around 15 years ago as a temporary lecturer, made permanent a few years later. Her daughter was born during that time. Promotions to senior lecturer came after 5 years and to reader after a further 5. Her research is inherently multidisciplinary and she has built up collaborations with various experimentalists at Warwick and elsewhere. She currently is co-investigator on 4 RCUK funded projects, each possessing a substantial mathematical and statistical modelling component. She reports that ever since she joined the Department of Statistics she has thoroughly enjoyed her career and the supportive and friendly atmosphere in the department. With regard to combining career with motherhood, she feels that an academic career on the one hand is generally compatible with parenting in that there is a fair amount of freedom to organize a daily schedule around parental chores. However, there are stresses and disadvantages. Seminar times, lecturing times and other commitments that take place on or after 16:00 are difficult to cope with; dense peak time traffic makes it impossible to pick up children from school in good time. Travelling to conferences is a problem as there are no grandparents that can be asked to help out (as is the case for many colleagues). Overall, her view is that pursuing an academic career with children means

that, realistically, there is less time to spend on research and travel to conferences and consequently a slightly slower promotion process.

Case Study: Dr B

After undergraduate studies abroad, Dr B obtained her doctorate at a UK University. Following a one year post doctoral research position and temporary lecturerships at two further UK universities, she joined the Department of Statistics at Warwick 15 years ago as a permanent lecturer. Her son was born a few months after arriving in the department. Promotion to senior lecturer came about 10 years ago. Her PhD was theoretical but more recently she has been working on applications.

In order to complete a book project whilst carrying a full teaching load, she arranged for her son to be minded by a carer from age three months until age seventeen months. She maintained a long working week until 10 years back, when family circumstances necessitated a review of work-life balance. She converted to half-time more recently in order to carry increased caring responsibilities at home.

Living a long distance from the university, she has very much appreciated having the flexibility to be able to work at home when not lecturing or having face to face meetings with students and staff. Whilst working part-time she has maintained involvement in research, teaching and administrative duties. Some administrative tasks, such as chief exam secretary, make it difficult to maintain a focus on research and a balance between work and home. It has also been necessary from time to time to remind colleagues of her part-time status.

At the time of her appointment Dr B was the only female member of the academic staff in Statistics at Warwick. Since that time there has been a tremendous cultural shift in the department partly due to its rapid growth but also because there are now a number of female colleagues. Despite the frustrations mentioned above she views the Statistics department at Warwick as a dynamic and stimulating place to work with excellent opportunities for women to develop their career.

Case Study: Dr C

Dr C obtained her Master's and then PhD at a European University. During postdocs in Europe and North America she moved into an applied field. Before taking up her lecturership at Warwick a little less than 10 years ago she spent two years as Assistant Professor in a joint appointment at a North American University.

She has two children born in USA about 10 years ago and in UK 5 years ago. She met her (American) partner when he was a postdoc in Europe before he went back to the US and they spent several years separated by the ocean. They share childcare as equally as possible, but she has carried the physical burden of childbirth and early childrearing: emotional ties of small children have made conference travelling almost impossible. Fortunately Warwick is an international focus of research activity. Inevitably, research projects were delayed after the birth of her second child; progress should increase now that both children are of school-age. Demands of a dual academic career path make it necessary for her to commute; fortunately much work can be done from home.

She is currently spending her first study leave (2012/13) in the USA. Coordinating study leave needed careful planning to be timed before the first daughter started secondary school. Departmental leadership was very helpful, and the university allowed her to take study leave in advance of entitlement.

She finds that motherhood has improved her communication skills, her leadership qualities and her awareness of others. This pays off in collaboration, teaching, mentoring and supervision. The Warwick Statistics department is her first workplace in which women are not a tiny minority, and where she is primarily perceived as "a colleague" rather than "that woman". Statisticians love discussions, and the department has capitalized on this by becoming a group of colleagues striving to do best by building on a variety of talents and skills. She particularly appreciates the value placed on all the different branches of research within probability and statistics as well as interdisciplinary work, including unusual innovative projects.

(5000 words prior to editing)

5. Any other comments

The commentary above, together with the Action Plan, summarizes the intention of the Department to develop arrangements for care of staff and students commensurate with its considerable numerical growth over the last decade.

The latest Pulse staff survey completed by the department has recently taken place (February 2013), but unfortunately the results have not been published in time to be included in this submission. However the results will be analysed and any issues of concern will be discussed in the WCC [G2] and any appropriate actions added to our Athena Action Plan.

The department is already benefiting from engaging with the Athena process; the Athena SWAN application process has developed communication within the department, enhanced staff awareness of issues that need addressing (as highlighted in the Action Plan) and stimulated wider engagement with other STEMM departments in joint events to improve the working environment of all staff. The drive to collect data has been particularly useful to a department of statistics, as then significant issues can be identified. We shall target methods for increasing the applicant pool at all levels, beginning with the issues of (a) fewer girls than boys taking Further Mathematics at A-level, and (b) the unexpected consequences for recruitment of internationalizing our staff appointments. The WCC will monitor progress at its termly meetings, and report annually to all Departmental staff [G1,4].

In particular, an Annual Away Day has been instituted, at which departmental strategy can be formulated and discussed by all academic and academic support staff. A digest of this discussion is presented to the following termly Departmental Council [G5].

(263 words)

6. Action plan

The Department's Action Plan is attached as Appendix 4.

Appendix: Action Plan

Athena SWAN Bronze Award Application, Department of Statistics, University of Warwick

Ref	Key Issue	Ultimate Goal	Actions	Measurable Outcome	Accountability	Timescales	Progress Log
UNDERGRADUATES							
UG1 see 3(ii), 4 (c)(vii)	Low proportion of women in UGT entry	Ensure department is attractive place for female UG students	Continue Annual Series of Public Engagement Lectures; Survey UGT students annually to elicit desirable changes. Encourage staff participation in IGGY	One lecture per year: woman speaker in alternate years	Academic responsible for Public Engagement lectures	Ongoing	
UG2 see 3(ii)		Raise profile of department with school students	Encourage staff participation in IGGY	One staff member participating per year, with workload credit	HoD	1 year then ongoing	
UG3 see 3(ii), 4(c)(vii)		Raise profile of department with female school students	Explore joint organization with Warwick Maths of "[Women in] Maths & Stats" days targeting local school students at stage when they choose GCSE/AS subjects	One workshop per year	Academics i/c public engagement	2 years then ongoing	
UG4 see 3(ii)		Raise profile of department with female school students	At dept open days and interviews, encourage participation by current female UGT (eg on campus tours, staffing welcome desks). Monitor numbers of female and male A-level students accepting an UG place.	Record percentage of female students assisting at these events. Aim to attain or exceed the sector percentage of women in UGT.	Dept UG Support Officer and Taught SSLC	2 years	
UG5 see 3(ii)		Ensure department is attractive place for female UG students	Monitor numbers of female and male A-level students accepting an UG place.	Proportion of successes for women and men to be statistically indistinguishable, after allowing for A-level score etc.	UG Admissions Tutor	Ongoing	

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UG6 see 3(ii)		Ensure department is attractive place for female UG students	Monitor examples used in publicity. Revise admission material to highlight a variety of fields including some potentially more attractive to women (economic development, decision theory, quality control, medicine, imaging, biology etc.)	Equal visibility of male / female presences in publicity	UG Admissions Tutor, Teaching Committee	Ongoing
UG7 see 3(ii)	Ease UGT Induction process	Incoming students experience a friendly and informative welcome	Mentoring arrangements by older UGT, monitored by questionnaire at end of each year	More than 75% of responses report mentoring is of assistance	Taught SSLC, reporting to Teaching Committee	2 years
UG8 see 3(v)	Patterns of UGT acceptance / declining of offers	Department understands student attitudes to study at Warwick	Analyse successive "Decliners Questionnaires"	Identification of major reasons for declining offers, classified by gender	UG Admissions Tutor	2 years
POSTGRADUATES						
PG1 see 3(iii)	Support	Maintain active engagement of MSc/PhD community with department	Commence mentoring of MSc and 4th year UG students by PhD students in year 2+	All MSc and 4th year UG students to be offered lunch with mentor in term 1 of relevant year	MSc Tutor, Director of PG studies, UG Senior Tutor	1 year then ongoing
PG2 see 3(iii) (iv)	Welcome	Every arriving PG student has ready access to basic information	Produce welcome pack. Questionnaire to measure extend to which students appreciate the welcome	All PG to be supplied with welcome pack on first day of first term	Research and Taught SSLC, PhD Admissions, MSc Admissions	1 year
PG3 see 3(iii) (iv)		Every arriving PG student is warmly welcomed	Welcome Saturday (walk in country followed by evening meal) for new PG (and PDRA, and staff)	All PG (and PDRA, and staff) to be invited by email to this event by end of week 3 of first term	Director of PG studies	Ongoing

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PG4 see 3(iii)		Assess PGT student experience	End-of-year questionnaire for PGT	More than 75% of responses report introductory activity is of assistance	MSc Tutor	2 years	
PG5 see 3(iv)	Communications	Keep PG students informed about department teaching activity, to facilitate their activity in teaching support classes	Teaching Committee minutes to be reported to Research SSLC	Reference to these components in Research SSLC minutes	Research SSLC, PG Support Officer	ongoing	
PG6 see 3(iv)		Ensure PG students are fully integrated into department	Establish / maintain appropriate representation of PGR on departmental committees (WCC, Teaching Committee)	Two PGR representatives on each of these committees	WCC, Research SSLC	1 year then ongoing	
PG7 see 3(iv)		Engage PhD students in proposal of initiatives to improve departmental culture	Encourage PGT students to use WCC online suggestions box	Two case studies of substantial new initiatives	WCC	3 years	
PG8 see 3(iv)		Ensure female PG students see Statistics as an attractive career	Supporting national "Women in maths/stats" events	All PGs to be offered opportunity to attend one of these per year, at departmental expense	Director of PG studies, MSc Tutor	Ongoing	
PG9 see 3(iv)	Maternity etc	Caring leave policies	Monitor caring leave policy in light of recent and new cases	Compile and update department case studies available on web to PGs, staff	PG Support Officer	Ongoing	

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PG10 see 3(iv)	Networking	Facilitate PGR student networking at national level	Support for APTS and annual national Research Students Conference (RSC)	All PhD 1st years in relevant areas to be offered opportunity to attend all 4 APTS weeks, subject to availability. Clear alternatives to be offered to PhD 1st years not in relevant areas (Pure Probability, Math Finance). All PhD 1 st years to be offered opportunity to attend RSC.	Director of PG studies	Ongoing
PG11 see 3(iv)		Nurture active PGR/PDRA community in department	Weekly Young Researchers Meetings	Weekly meetings in term	Research SSLC / PDRAs	Ongoing
POSTDOCTORAL RESEARCHERS						
PDRA1 see 3(iv)	Networking	Nurture active PGR/PDRA community in department	Weekly Young Researchers Meetings	Weekly meetings in term	Research SSLC / PDRAs	Ongoing
PDRA2 see 3(iv)	Welcome	Every incoming PDRA is warmly welcomed	Produce Welcome Pack.	All PDRAs to be supplied with welcome pack on first day of arrival.	Dept Secretary, PCAPP / Staff Development	1 year then ongoing
PDRA3 see 3(iv)		Ensure female PDRAs see Statistics as an attractive career	Supporting national "Women in maths/stats" events	All PDRAs to be offered opportunity to attend one of these per year	PCAPP / Staff Development	Ongoing
PDRA4 see 3(iv)	Career development	Encourage PDRAs to commence broad career development	Details of PG certificate to be included in induction pack	All PDRAs to be encouraged to register for in PG certificate in transferable skills in science	PCAPP / Staff Development	Ongoing
PDRA5 See 3(iv)	Support of carers	Caring leave policies	Monitor caring leave policy in light of recent and new cases	Compile and update department case studies available on web to PGs, staff	Dept administrator	Ongoing
ACADEMIC STAFF						

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AS1 see 4(a)(ii), b(ii), (c)(vi)	Support progression	Academic staff to be able to access informed advice on progression opportunities	Establish mentoring in clearly described framework.	All academics to be offered mentoring opportunities, together with document summarizing expectations	HoD, WCC	1 year	
AS2 see 4(a)(iii), (c)(vi), (d)(v)		Academic staff to gain informed overview of progression opportunities	Department briefing by HoD on promotions procedure targeted at all staff (those being promoted in current or future years and those encouraging others)	Annual briefing at staff lunch	HoD	ongoing	
AS3 see 4(a)(ii)		Academic staff to be able to access detailed information on progression opportunities	Local document summarizing how promotion procedures operate within the department, together with links to central material.	Annual revision of document to take account of recent promotions	HoD, Dept Administrator	ongoing	
AS4 see 4(a)(i)	Proportion of female recruitment	Maintain strong representation of women amongst academics in department	Review advertising material to ensure women are encouraged to apply, report results to WCC	Proportion applying who are women to match or exceed national proportion of women at this level as reported by COPS. Relative chances of success to show no statistical evidence of M/F effect	Dept Administrator	2 years	
AS5 see 4(a)(i)		Ensure good representation of women amongst those shortlisted for academic job interviews	Record gender ratio for shortlists	Proportion shortlisted to match or exceed national proportion of women at this level as reported by COPS.	Dept Administrator	3 years	
AS6 see 4(a)(i)		Ensure good representation of women among invited research seminar speakers	Seminar organizers to include summaries of gender balance in annual reports to Department	Summaries to match or exceed national proportion of women in the discipline as reported by COPS	Seminar organizers (CRISM, MPTS)	2 years	

Appendix: Action Plan

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AS7 see 4(c)(v)	Support for women academics	Create an informal network of women academics	Academic women's lunch for women involved in research (includes PDRAs), once a month	Attendance by more than 50% of women academics	Nominated organizer	1 year
AS8 see 4(a)(i)		Publicize university initiatives for support	Maintain document listing links to these initiatives	Annual update to be circulated to staff	PCAPP / Staff Development	ongoing
AS9 see 4(b)(ii), (c) (vi)	Induction	Enable new staff to become effective	Produce and maintain Welcome Pack.	All staff to be supplied with welcome pack on first day of arrival.	HoD, Dept Secretary	ongoing
AS10 see 4(c)(vi)		Welcome for new arrivals	Regular reception for new arrivals	At least annual occurrence	HoD	Ongoing
AS11 see 4(c)(i)	Representation of women	Representation of women on University-wide committees	Mentors to be asked to encourage women academics to allow their names to go forward for appropriate committees	Increase representation of women on appropriate University-wide committees	HoD, mentors	3 years
AS12 see 4(c)(i)		Representation of women on senior Department committees	HoD to consider opportunities to enhance female representation on SMT	Female representation on SMT in most years	HoD	1 year and ongoing
AS13 see 4(c)(iv)	Workload	Revise workload matrix so as to be understood and accepted by all	Compare current with other workload models elsewhere, revise and adapt current model, obtain departmental agreement	Establish workload matrix reflecting current best practice in comparable departments.	HoD, WCC	2 years
AS14 see 4(c)(v)	Family friendly timing	Ensure significant meetings happen at accessible times	Significant meetings (committees, seminars) finish early enough to enable staff to fulfil caring responsibilities	Two regular weekly departmental seminars (statistics, probability) to finish before 1500.	HoD, seminar organizers (CRISM, MPTS)	1 year

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AS15 see 4(c)(v), 4(d)(v)		Establish buddying system	Organize a scheme to pair academics to allow for cover in case of illness of dependants	All academics to be offered opportunity to be covered by such arrangements	WCC, Dept Secretary	1 year and ongoing
AS16 see 4(d)(iv)	Flexibility	Clarify desired arrangements for flexible working	Determine whether staff prefer current flexible arrangements or would prefer a more formalized approach	HoD to invite staff to make views known	HoD	1 year
AS17 see 4(c)(vi)		Celebration of achievement	Regular occasion of celebration of achievements of staff	At least annual occurrence	HoD	Ongoing
AS18 see 4(d)(v)	Maternity etc	Caring leave policies	Monitor caring leave policy in light of recent and new cases	Compile and update department case studies available on web to PGs, staff	Dept administrator	1 year then ongoing
AS19 see 4(d)(v)		Facilitate arrangements for Caring leave	Meeting of person embarking on carer leave with Head of Department to discuss handover plans before leave	Positive feedback from returners.	HoD	Ongoing
AS20 see 4(d)(v)		Ensure people on Caring leave are updated on departmental developments	Institute keep-in-touch (KIT) arrangements	Each staff member on leave to be offered KIT opportunity once per two months	Dept Secretary	Ongoing
AS21 4(d)(v)		Facilitate arrangements for Caring leave returners to resume duties	Meetings with Head of Department to ensure returner from carer leave has appropriate support, including choice of mentor	Positive feedback from returners	HoD	Ongoing
Admin Team & Support Staff						

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AT1 see 4(c)(iv)	Workload	Clarity of procedures (I): academics to respond to admin requests in timely manner	Effective follow-up to ensure timely and efficient response of all staff to administrative requests	Requests adhered to by deadlines set and progress reviewed regularly	Academic staff	Ongoing
AT2 see 4(c)(iv)		Clarity of procedures (II): efficient direction of requests from academics to support staff	Clear understanding of procedures for delegation of tasks to admin staff, to be disseminated effectively to all staff	Produce summary role descriptions and have these available on web to PGs and staff	Dept administrator	1 year
AT3 see 4(d)(v)	Maternity etc	Caring leave policies to be publicized	Monitor caring leave policy in light of recent and new cases	Compile and update department case studies available on web to PGs, staff	Dept administrator	Ongoing
GOVERNANCE						
G1 see 4	WCC	Maintain progress on action plan	Continue to monitor and remedy as necessary, considering whether normal practice is good enough.	Review progress as agenda item at each meeting.	HoD, WCC	Ongoing
G2 see 4		Monitor survey responses from department	Respond to Pulse and other surveys	Analyse results of annual Pulse survey and address any areas that require attention.	HoD, WCC	Annually
G3 see 4(c)(vi) , (d)(ii), (iv),(v)	Culture	Dissemination of general departmental news	Publication of Departmental Newsletter	Publication on a termly basis	Dept Secretary, WCC	Termly
G4 see 4	Self-Assessment	WCC to remain effective	Review its terms of reference	Annual report to Dept Council at Away Day	WCC	Annually
G5 see 4	Develop and formulate strategy	Review departmental strategy annually	Annual Away Day to provide forum for staff to discuss departmental strategy	Digest of Away Day discussions to be presented annually to Dept Council	HoD, Deputy HoD	Annually