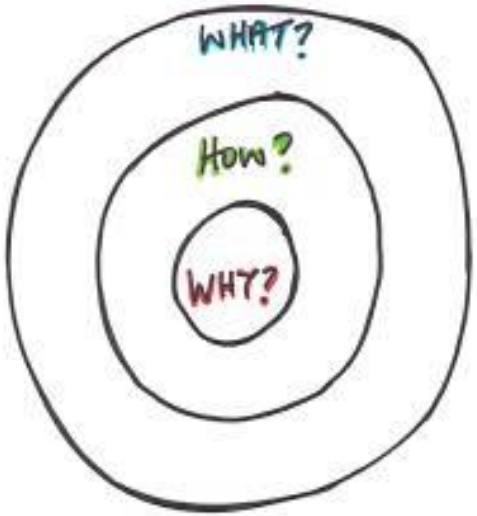
CStat – what, why, how?

Dr Paul D Baxter (RSS Vice-President for Professional Affairs)



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Introductions

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My career

BSc (1st class honours) Mathematics with Economics

Univ. Essex, 1997-2000

PhD Statistics “Extraction of fade slope profiles from radiocommunications data using wavelets”

Univ. Essex, 2000-2004

Lecturer in Statistics

Univ. Leeds, School of Mathematics, 2003-2009

Senior Research Fellow in Biostatistics

Univ. Leeds, School of Medicine, 2009-2011

Associate Professor in Biostatistics

Univ. Leeds, School of Medicine, 2011-Present

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My involvement with RSS

Joined as a **fellow** (Nov 2000)

Became **Leeds/Bradford Local Group Secretary** (Jun 2004 to May 2011)

Became **Young Statisticians Section Secretary** (Jul 2008 to Dec 2011)

Elected **Council Member** (Oct 2008 to Dec 2012)

Elected **Chartered Statistician** (Apr 2010)

Became **Associate Editor of JRSS-C** (Jan 2011 to Dec 2014)

Became **Professional Development Committee Chair** (Jan 2011 to Sep 2013)

Became **Guy Schools Lecturer** (Oct 2011 to Sep 2012)

Elected **Professional Affairs Committee Member** (Jan 2014 to Dec 2018)

Became **Leeds/Bradford Local Group Chair** (Jul 2014)

Became **Vice President for Professional Affairs** (Jan 2017)

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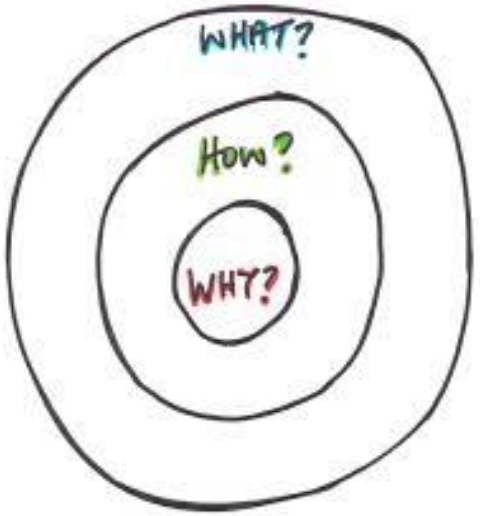
What?



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CStat, CSci & GradStat

Chartered Statistician is the RSS's **highest professional status**

Provides formal recognition of an individual's approved statistical qualifications / competency and approved professional experience of at least five years

CStats are eligible to apply for **Chartered Scientist status**

Those without the professional experience apply for **GradStat status**

For full details, including costs, see
http://www.rss.org.uk/professionalmembership

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Q & A

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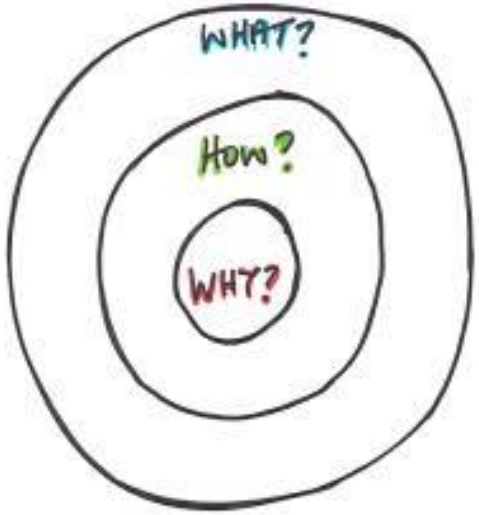
Why?



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Why chartered status?

Statistics is a body of knowledge and a job for **skilled professionals**.

Accredited statisticians have been recognised by their peers as combining **education, competence**, **experience** and **commitment to ethics and continued development (CPD)** at a level that labels them as professionals.

Provides a **measure of assurance** to employers, contractors and collaborators of statisticians

Mark of **accomplishment** to society – can appear on public register.

Valuable **addition to CV** in competitive job market!

Events for CStats such as professional statisticians forum

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Why graduate status?

Formal **recognition** of your qualifications

First step to eventual professional status as a Chartered Statistician

Become part of **professional statistical community** at an early stage in your career.

Mid Term Assessment – 2-3 years after graduating, GradStats given opportunity to submit details of their career progress to date. Members of Professional Committee assess and give helpful advice on progression to CStat status

Mentoring Scheme – GradStats who join the Scheme are allocated a mentor who is a CStat. Idea is to gain advice on the CPD needed to achieve eventual CStat status, how to keep records and get support on the CStat application process.

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Examples of those with chartered status

Full profile available at **http://www.rss.org.uk/professionalmembership**

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Siobhan Creaner, CStat CSci
Director of a Clinical Trials Unit and Associate Professor in Clinical Trials and Medical Statistics
Profile

Apostolos Fakis, CStat CSci
Senior Medical Statistician
Profile

Nigel Marriott, CStat CSci
Independent Statistical Consultant
Profile

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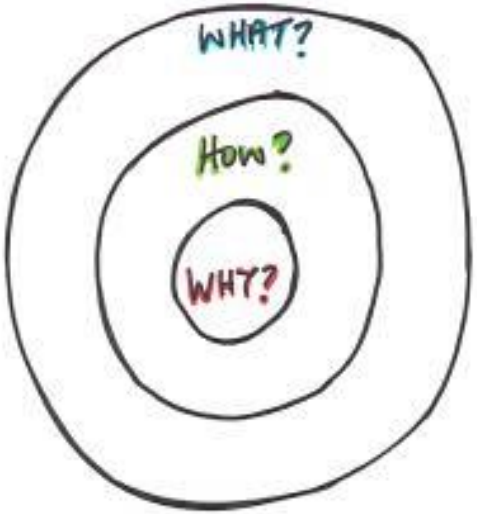
How?



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Application process for CStat

Web based application portal – **http://www.rssprofmembership.org.uk** – includes helpful guidance notes

Details of qualifications, including electronic versions of degree certificates and transcripts*
Details of professional experience including dates (i.e. copy of CV)
Summary of CPD activities from last 2 years (template available)
Contact details for at least 2 referees
[Optional] additional considerations (e.g. publication list)

*This is the standard route. Will be augmented by a competency report if applying under the competency route.

Qualification details

Qualifications **must map to our standards** at level 6 (BSc minimum 2:2) or level 7 (MSc minimum pass). Some degrees are **automatically accredited**

	A	B	C	D
1	**QAA Benchmark Statement**	**RSS Level 6 standards - Core Knowledge**	**Module Code and Title**	**Module Code and Title**
2			*Please indicate if module is compulsory or optional*	*Please indicate if module is compulsory or optional*
3	a reasonable understanding of the basic body of knowledge for the programme of study, normally including calculus and linear algebra a reasonable level of skill in calculation and manipulation within this basic body of knowledge and some capability to solve problems formulated within it application of core concepts and principles in well defined contexts, showing judgement in the selection and application of tools and techniques	A sound understanding, and skill in the appropriate use of, key mathematical operations in a given task.		
4		A sound understanding, and skill in the use of, key statistical techniques in a given task.		
5		Ability to solve practical problems, using appropriate statistical techniques e.g. modelling, experimentation and survey design.		
6		**Mathematical techniques**		
7		Students should have knowledge of: • Algebra: Permutations and combinations. Partial fractions, solution of linear and quadratic equations, simple inequalities, summation of series with notation, Limits of sequences and functions, geometric series, exponential and logarithmic functions • Calculus (differential and integral) underpinning the contents below. • Matrix algebra • Numerical methods: Iterative solution of equations		

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*Competency details

In addition to the standard application form

A **summary of other formal education/training** in statistics (assessed or not) typically undertaken during the period of professional experience and a **competency report**, providing information on:

C1: Use experiential knowledge and statistical understanding to optimise the application of existing and emerging statistical methods.

C2: Exercise sound judgement in the absence of complete information and in complex or unpredictable situations.

C3: Demonstrate critical statistical evaluation of information and concepts to propose solutions to problems

C4: Take responsibility for continuous performance improvement at both a personal level and in a wider context

Details of a contact who **can provide verification** of the information

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Experience details

Minimum 5 years of experience, normally since the date of the first award that qualified for GradStat, some examples:

- Managing a statistics section
- Leading projects with a substantial amount of statistical analysis or modelling
- Undertaking statistical analysis of data and reporting on the results
- Having responsibility for the interpretation and presentation of statistical information
- Designing statistical databases and reporting systems
- Teaching statistical theory and methods, and their applications, in a practically oriented way; at undergraduate and/or postgraduate level.
- Unsupervised statistical consultancy

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Experience details (cont'd)

Examples of presentation format

Period: Full-time 01/06/2009 onwards

Employer: Division of Biostatistics, University of Leeds, Leeds, LS2 9JT

Job title and *brief* description: Senior Research Fellow in Biostatistics

The main focus is to provide statistical input in collaboration with clinicians and allied health scientists for grant applications to the National Institute of Health Sciences, Medical Research Council and other awarding bodies. The role also requires the conduct of research in statistical methodology relevant to applied health research, the teaching of biostatistics and administration on behalf of the Faculty of Medicine and Health

Give details of your main tasks, including the statistical techniques you use and how frequently you use them (you may wish to categorise as "frequent" (3 or more times per year), "infrequent" (1 or 2 times per year) or "occasional" (less than once per year)).

Statistical Techniques

Linear and Generalised Linear Models, Multi-Level modelling, Basic Methods of Frequentist Inference (frequent), Partial Least Squares, Latent Variable Methods, Multiple Imputation, Generalised Additive Models (infrequent)

Indicate (please tick) your levels of statistical responsibility for the following work tasks.

	Sole	Major	Minor	None	Task not relevant
(a) Definition of objectives for a project			X		
(b) Selection of data to be used				X	
(c) Choice of analysis methods		X			
(d) Responsibility for calculations		X			
(e) Presentation and interpretation of findings		X			
(f) Monitoring follow-up actions			X		

Indicate (please tick) the proportion of your total working time spent on the statistical aspects of your work over this period.

10% or less	11% to 25%	26% to 50%	Over 50%
			X

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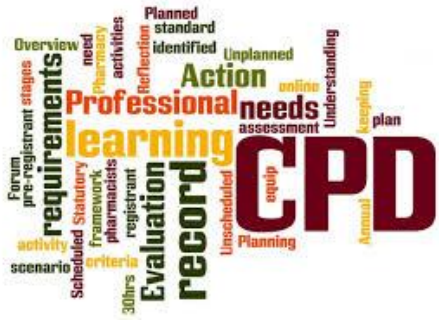
CPD details

CStats must follow the society code on CPD (notional 60 hours minimum per annum). Example CPD profiles are available, see: **tttp://www.rss.org.uk/professionalmembership**

Auditing of CPD also forms the basis for five–yearly re-validation of CStat. An online recording tool is also available

RSS CPD Policy - CPD 12-month Summary

CPD Activities over the 12 month period ……		Career Status - *include a brief description of your job role and how it has progressed over the 12 month period.*			
Category	Description of activity	Start Date	End Date	Learning Hours	Outcome/Benefit to practice (i.e. skills/ knowledge gained) or to delivery to employer/client
Worked based learning					
Worked based learning					
Professional activity					
Professional activity					
Formal/ educational					
Formal/ educational					
Self-directed learning					
Self-directed learning					
Other					
Other					
TOTAL				XXXXX	



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Referee details

At least two referees are required, and the references in combination must usually cover the most recent 5 years of an applicant's career.

At least one referee should be in a **position of seniority** (for example, the applicant's line manager)

Normally, all referees should themselves be statisticians and where possible should hold CStat status.

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Case study

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Advice surgery

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