



STATISTICAL METHODOLOGY AND COMPUTING SERVICE

Report of Activities
1 September 2011 to 31 August 2012

IMMAQ

Institute of Multidisciplinary Research
for Quantitative Modelling and Analysis

Université catholique
de Louvain

UCL

Statistical Methodology and Computing Service
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Introduction

Introduction

Dear colleagues,

The university authorities of UCL have confirmed the technology platform SMCS (Statistical Methods and Computing Service) as the principal provider in assistance, training, and leadership in statistics and the use of statistical software.

This report serves to document our work from 1 September 2011 to 31 August 2012. It presents usage statistics in consulting and training, describes enhancements to our computing infrastructure, and summarizes our involvement in a university-wide effort to improve the use of statistical software by rationalizing its acquisition, distribution, and support.

We responded to a continuous stream of consulting requests from all three sectors (412 requests for 1672 service hours). Demand increased in each university sector. The strongest increase occurred in the science and technology sector (SST, primarily the institutes ISV and ELI) after we introduced a dedicated proximity service. This suggests that there is still a large latent demand at other institutes at which we are less present.

We also assisted the central university administration and external entities (non-profits, public authorities, pharmaceutical companies) in designing and analyzing statistical studies. These collaborations are typically larger in size, such as a contract with the IBPT (the Belgian telecommunications regulator) on the design, execution, and analysis of a large national survey on the public perception of telecommunications market.

Our training activities have continued at the rhythm of 2010/11. During the academic year 2011/12, we offered 28 courses and workshops in statistical software and practice to 421 participants for a total of 969 person days. This also included courses for BioWin and the FOREM in the context of the efforts of making the Walloon economy more competitive.

With respect to the statistical computing infrastructure, the SMCS upgraded its main servers and integrated them

with the data storage and hosting services of the high performance computing center (CISM).

Since Spring 2012, the SMCS participates in the newly created steering committee for statistical software. The first mission of this committee is to pave the way to a better access to the five most used statistical programs for members of the university by eliminating co-payments and by simplifying installation procedures. Access to these tools will become even easier with the dedicated virtual desktop Ucilla (under development).

We are proud of what we were able to do with a very limited staff. In the year 2011/12 we only had 3.2 full time equivalents, 2.2 funded by ordinary university budget and 1 by temporary means.

Although the numbers clearly show our productivity, long term funding remains uncertain. Challenging negotiations in 2011/12 yielded a temporary agreement with the three sectors for limited support. This allowed us to reserve one full time equivalent per sector for fast response services and to hire additional help to serve the central administration and external clients.

These very time consuming negotiations at many levels had at least one positive side effect: it forced us to clarify our strategic plan and our four core missions:

1. Support the three sectors in statistical methodology and computing.
2. Be a prime partner of the central authorities with respect to statistical infrastructure.
3. Promote open access to adequate statistical tools at minimum cost.
4. Provide a support environment for data analysts embedded in university research institutes.

Don't forget, 2013 is the year of statistics. If you would like to organize an activity at this occasion, we can help you.

Christian Ritter, president of the comité de gestion of the SMCS (management committee).

News

Organization

The comité de gestion of the SMCS (management committee) is now fully operational and meets three times per year to assure that the initiatives taken by the SMCS correspond to needs of the sectors.

Personnel

After having served as an acting director of the SMCS since May 2011, Nathalie Lefèvre was confirmed in this position. She took over from Bernadette Govaerts who had founded the service. Bernadette remains an active associate member of the SMCS and serves on the steering committee for statistical software.

In August 2012, we hired two additional part-time consultants, Arnaud Pollaris and Matthieu Van Pachterbeke, on external funds. Their focus areas are surveys, hierarchical models and psychometrics. This was necessary to assure that we have one full time equivalent per sector and some additional capacity to handle requests from the central administration and from external clients.

The cancer center hired one biostatistician, Aline Van Namen, to support their clinical studies. She became an associated member of the SMCS. We collaborate on statistical trainings for medical researchers and enjoy exchanging ideas.

Lorise Moreau, who had supported the IACCHOS, ISPOLE and IL&C institutes, left for a new career. She was replaced by Veronique Gosselain who also became associated member of the SMCS. Among other things, she looks after the deployment of the software package NVivo for qualitative analysis.

Jean-Pierre Lemaître retired in 2011. For many years, he had supported the economics department in statistical software and methodology. He was replaced by Sébastien Fontenay, who is now also an associated member of the SMCS. His missions concern both teaching (ESPO) and research (IMMAQ/IRES). He recently initiated the purchase of an extended license of STATA. Besides covering the immediate needs of a growing user

community in economics, the new license allows including STATA in the Big Five distribution for statistical software.

The Big Five Initiative

Following a suggestion by the SMCS endorsed by the GSI, the university authorities allocated a budget to simplify the access to the five principal statistical software packages, JMP, SAS via Enterprise Guide, SPSS, Stata and R. Installation will be managed by the service desk 8282 and in many cases a co-payment will no longer be necessary. A browser interface is also under study which would extend access to systems for which no installable versions are available (including tablet computers running iOS or Android). In the future, all university members will have free and un-bureaucratic access to adequate statistical tools.

Administration and Miscellaneous

The development of a database to handle consulting requests and training offerings was more difficult than anticipated. Due to delays in the realization of the web interface, it was used in off-line mode until August 2012. Finally, since mid-September 2012 the database is on-line. For the first time, the usage tables for consultancy presented in this report have been generated automatically from this database. Automation of the usage tables for trainings is planned for the 2012/13.

A new seminar room has been equipped adjacent to the SMCS offices. We share its use with the ISBA/LSBA.

The SMCS will participate in the activities of the ISBA in the year of statistics 2013.

In July 2012, Christian Ritter visited the statistical consulting unit at the Université de Laval, Québec, Canada. We will exchange best practices in the future.

People

People

Management and Administration

Director: Nathalie Lefèvre

President of Management Committee : Christian Ritter

Administrative assistant : Nancy Guillaume

Administrative support : Monique Tanga (from March to Mai 2012), Tatiana Regout (since June 2012)

Consultants

Céline Bugli

(UCL/IMMAQ/SMCS – 0.6 EFT)

Main areas of activity : Medical Sector (SSS), Science and Technology Sector (SST), services for external clients.



Doctor of Science – Statistique, Institut de Statistique, Université catholique de Louvain, Louvain-la-Neuve, Belgium, 2006

Master (DEA) in Statistics, Institut de Statistique, Université catholique de Louvain, Louvain-la-Neuve, Belgium, 2003

Ingénieur Civil en Mathématiques Appliquées, Université catholique de Louvain, Louvain-la-Neuve, Belgique, 2001

Alain Guillet

UCL/IMMAQ/SMCS – 1 EFT)

Main areas of activity : Medical Sector (SSS), and statistical computing.



Master professionnel Sciences, Santé, Technologie, mention Mathématiques et Applications, spécialité Ingénierie Mathématique, Université de Nantes, 2005

DEA en informatique, Université de Nantes, 2004

Nathalie Lefèvre

(UCL/IMMAQ/SMCS 0,4 EFT and IPSY – 0.5 EFT)

Main areas of activity : Humanities Sector (SSH) and University Administration.



Master en Statistique, Institut de Statistique, Université catholique de Louvain, Louvain-la-Neuve, Belgique, 2007

Doctorat en Sciences psychologiques, Université catholique de Louvain, Louvain-la-Neuve, Belgique, 2003

Licence en Psychologie et en Sciences de l'Education, orientation psychologie expérimentale Université catholique de Louvain, Louvain-la-Neuve, Belgique, 1992.

Arnaud Pollaris

(UCL/IMMAQ/SMC – 0.6 EFT)

Main areas of activity : Humanities Sector (SSH) and services for external clients.

People



Master en Statistique, Institut de Statistique, Université catholique de Louvain, Louvain-la-Neuve, Belgique, 2011

Master en sciences psychologiques, à finalité spécialisée, Université catholique de Louvain, Louvain-la-Neuve, Belgique, 2009.

Catherine Rasse (UCL/IMMAQ/SMCS – 0.8 EFT)

Main areas of activity : Science and Technology Sector (SST), data bases.



Master (DEA) en Statistique, Faculté universitaire des Sciences agronomiques, Gembloux, Belgique, 2007.

Ingénieur agronome, orientation Génie rural, Faculté universitaire des Sciences agronomiques, Belgique, Gembloux, 2001.

Matthieu Van Pachterbeke

(UCL/IMMAQ/SMCS – 0.6 EFT)

Main areas of activity : Humanities Sector (SSH) and University Administration.



Doctorat en sciences psychologiques, Université catholique de Louvain, Louvain-la-Neuve, Belgique, 2011.

DEA en sciences psychologiques et en sciences de l'éducation, Université catholique de Louvain, Louvain-la-Neuve, Belgique, 2007

Diplôme de gestion et administration des entreprises, Université catholique de Louvain, Louvain-la-Neuve, Belgique, 2004

Licence en Sciences Psychologiques Université catholique de Louvain, Louvain-la-Neuve, Belgique, 2003

Associated Consultants

Associated consultants are professors or consultants who collaborate with the SMCS on trainings and consulting projects but who are not formally SMCS staff.

Professors

Bernadette Govaerts (UCL/IMMAQ/ISBA)

Main areas of activity: Industrial statistics, bio-informatics.

Catherine Legrand (UCL/IMMAQ/ISBA)

Main areas of activity: biostatistics.

Christian Ritter (UCL/IMMAQ/ISBA)

Main areas of activity: Industrial statistics, statistical computing.

Consultants at other institutes

Nathalie Lefèvre (UCL/IPSY)

Véronique Gosselain (UCL/IACCHOS – since June 2012)

Sébastien Fontenoy (UCL/IMMAQ – since February 2012)

Aline van Maanen (Saint Luc/Centre du Cancer – since May 2012)

Researchers at the ISBA

Some researchers and doctoral students of the ISBA participate in the consulting and training activities of the SMCS. This gives them an opportunity to gain valuable experience in practical statistics.

People

Workshop Instructors

The following list gives the names of the persons who contributed to the training activities of the SMCS. This includes SMCS and associated consultants, other members of the ISBA, visitors, and external trainers.

Jérôme Ambroise (IREC), Céline Bugli (SMCS), Bernard Francq (ISBA), Bernadette Govaerts (ISBA), Alain Guillet (SMCS), Jonathan Jaeger (ISBA), Nathalie Lefèvre (SMCS), Catherine Legrand (ISBA), Lorise Moreau (IACCHOS), Marco Munda (ISBA), Mathieu Pigeon (ISBA), Catherine Rasse (SMCS), Christian Ritter (ISBA), Réjane Rousseau (SMCS), Cédric Taverne (ISBA), Nathan Uyttendaele (ISBA), Sam Waltener (FUSL), SAS Institute trainers.

Interns

Denise Federico (2011-2012) - The internship consists in assisting senior consultants in consultancy services, assisting to meetings and trainings, supporting on office tasks, drafting and following up new projects and updating databases and web contents.

Alexandre Audibert (2011-2012) – Work on R code to mimic PROC MIXED in SAS.

Training

Training

Portfolio

The SMCS offers the following types of training:

- Regular 2-3 day courses (once or twice per year) on commonly used statistical software at UCL (SPSS, R, SAS, SAS Enterprise Guide, JMP, Stata, NVivo).
- Courses taught in partnership with SAS : Some of the annual or special courses qualify for sponsoring from SAS. This allows inviting trainers with know-how in special subject areas and hosting the trainings in a more comfortable way (coffee breaks, lunches, professional course notes). The course 'Data discovery and Statistical modeling with JMP' taught by B. Francq and C. Rasse belongs to this category.
- Courses sponsored by Walloon government agencies (BioWin, FOREM etc). BioWin is a project to enhance the competitiveness of health related enterprises in the Walloon region. Courses offered within this framework are centrally advertised and course fees are partially subsidized. The SMCS contributes courses on Statistical Experimental Design (taught by C. Rasse and B. Francq) and on Biostatistic (taught by C. Bugli, C. Legrand and M. Munda). The FOREM is the Walloon agency for professional training and employment. Last year, we contributed 20.5 days of statistics trainings in the context of the course 'Formation en bioinformatique à destination de demandeurs d'emploi' (taught by C. Bugli, B. Govaerts, J. Ambroise and J. Jaeger).
- We also offer customized courses for clients with specific needs (UCL and external) who pay for the extra cost related to tailor made course modules and training material. Examples : 'Atelier statistique dans le cadre de l'Ecole Doctorale Physiologie, Physiopathologie et Pharmacologie' (taught by A. Guillet) and 'Techniques statistiques dans l'évaluation de produits médicaux pour PhysiOL' (taught by C. Legrand).
- SMCS lunch sessions (Midis du SMCS) are short (1-3h) informal demonstrations of statistical methods

or software of particular practical interest. The presentation. Example: "Zakouskis statistiques » for members chemistry department (IMCN) taught by y B. Govaerts and C. Ritter. SMCS lunch sessions are free and don't require enrollment.

This year two new types of trainings were put in place to fulfill specific needs: one concerned a workshop for the ISV institute in which C. Rasse presented case studies and introduced the statistical program JMP, the other concerned the course MECA2355 for which the SMCS provided a module.

Statistics

Table 1 shows how the number of courses, course days, and participant days for the most recent accounting period from 1 September 2011 to 31 August 2012 (last column). During this time period, we taught 28 courses for a total of 71 training days. There were 421 enrollments for a total of 969 person days of training. This included a large training collaboration (20.5 days, 12 participants) with the FOREM (Walloon agency for professional training and employment) in Bioinformatics.

With respect to participation from UCL departments, we see that the participation remains at a similar level since 2010. Lately, more members from the SST sector participated whereas the number of participants from the humanities sector declined when compared to the previous year. Participation from the health sciences sector remains lower than for the other two. One reason for this may be that most courses are taught at the Louvain-la-Neuve campus whereas the health sciences departments are at the Brussels campus. We are trying to arrange more trainings at the Brussels campus but scheduling remains a challenge.

Our courses are open to external participants and we offer specialized trainings for enterprises and institutions at UCL.

Note that the participation statistics do not cover the SMCS lunch session since they do not require registration.

Training

Table 1. Number of courses and participation

	2009	2010	2011	2011/12 *
Number of trainings	19	27	30	28
Number of training days	42	56	59	71
Number of person days	793	816	775	969
Participants SSH	90	142	142	108
SSH/DROIT		2		
SSH/ESPO				2
SSH/IACCHOS-ESPO		38	68	40
SSH/ILC		8	24	13
SSH/ILSM		12	14	9
SSH/IMMAQ		23	18	12
SSH/INCAL		2	2	
SSH/IPSY		54	14	25
SSH/ISPOLE		3	2	6
SSH/JURI				1
Participants SSS	52	54	27	36
SSS/ASS				1
SSS/DDUV				1
SSS/IONS		1	7	11
SSS/IREC		18	11	8
SSS/IRSS		23	7	7
SSS/LDRI		5		5
St Luc - varié		7	2	3
Participants SST	54	72	87	124
SST/ELI		56	51	81
SST/ICTM		1	4	7
SST/IMCN		7	1	
SST/IMMC			2	5
SST/ISV		8	29	29
SST/LOCI				2
Other			176	153
UCL-other	28	9		
UCL-admin			2	2
UCL students	69	37	62	65
Académie Louvain	28	16	28	21
External	49	115	84	65
Total	359	445	432	421

* New accounting period 1 September 2011 to 31 August 2012

We routinely monitor the quality of our courses and act upon improvement opportunities (see section on quality). The complete listing of trainings given in 2011/12 is contained in the Appendix.

Consulting

Consulting

This is one of our main missions. In general, we first focus on providing methodological assistance to our clients such that they can solve their problems by themselves. This can be just a piece of *advice* or a short *assistance*. This type of consultancy is available without charge to researchers in the three sectors (covered by the financial contribution).

On occasion, the complexity or the amount of the statistical work requires that the SMCS consultant spends a larger amount of time on a project. The consultancy thereby evolves into *collaboration*. This requires additional funding by the client. Moreover, if appropriate, the consultant should be mentioned as a co-author or in the acknowledgements of publications based on the work.

Statistics

Table 2. Origin of consulting projects

Client split	2009	2010	2011*	2011/12
Research	183	182	122	325
University Hospital		12	3	
Master's projects	70	55	40	78
Admin	3	4	9	9
External clients	7	9	4	14
Total	263	262	178	426

* from 1 January to 31 August 2011

Table 2 shows that from 1 September 2011 to 31 August 2012, the SMCS worked on 426 projects. If we consider that about half of the projects in 2010 fell into the period between September and December, we obtain an approximate figure for the period from 1 September 2010 to 31 August 2011 of 309. This shows that the number of requests increased substantially.

As expected, most of the projects concerned university research. Some, usually larger, projects involved the university administration and external clients. Example: A national survey of the public perception of the telecommunications market requested by the Belgian telecommunications regulator (IBPT). This project alone required more than 500 hours of work.

Table 3. Projects by institute

Origin of request	2009	2010	2011*	2011/12
SSH	152	127	82	166
SSH/IPSY-PSP		99	61	119
SSH/ILSM-LSM		7	8	10
SSH/IACCHOS-ESPO		8	3	19
SSH/IMMAQ		5	6	5
SSH/ISPOLE			2	1
SSH/JURI-DRT		1		2
SSH/ILC		5	2	7
SSH/INCAL-FIAL		2		3
SSS	58	75	37	90
ASS				2
IONS		13	9	19
IREC		22	11	23
IRSS		12	7	7
Cliniques-MEDE		13	4	11
DDUV			2	1
FASB				7
FSM		12	2	15
FSP				1
LDRI		3	2	4
SST	39	41	48	149
SST/AGRO				18
SST/ELI		27	21	69
SST/EPL				1
SST/ISV		11	19	45
SST/ICTEAM			2	4
SST/IMMC		1	5	4
SST/IMCN		1		1
SST/LOCI		1	1	3
SST/SC				4
Other	7	10	7	7
Admin		1	6	6
AL/UCL other		9	1	1
Number of projects	256	253	174	412
Number of hours		769	> 600	1672

* from 1 January to 31 August 2011

Table 3 shows that requests come from all three sectors and that the volume increased in each of them. The largest increase is observed in SST where a proximity service started in September 2011 (a consultant holds regular office hours for clients in ELI and ISV).

Computing services

Statistical Computing

Servers and Statistical Software

Servers

The SMCS maintains two servers, a statistical computing server and a software sharing server for smaller or single user. Moreover the SMCS works together with the SGSI on several activities to reduce barriers to using appropriate statistical software for university members.

February 2012, we replaced our statistical computing server by a dual server of which each part is equipped with a 12 core Intel Xeon X5675 processor, 96 GB of RAM, rapid disks for a total of 2100 GB. Moreover, Tesla GPU cards C2075 are coupled both systems. These cards enable the system to perform certain computations in a highly parallel fashion (448 processors). This server system and its storage are hosted by the CISM (UCL high performance computing platform) who is in charge of the operating system and the user management. The SMCS takes care of the statistical software on these machines. Currently, SAS, R and Stata-MP are available. The new system therefore offers a lot more performance to the benefit of a growing user community. Moreover, the dual machine setup assures that the system remains accessible during most maintenance operations. The two servers are called smcs1 and smcs2.

The statistical computing server was mainly used by people from ELI, IMMAQ, IPSY and IRSS (the table 4 provides more details about the users of the two servers). Most of them are SAS users. The average CPU charge was 43% on smcs1 and 13% on smcs2. One overload spike (490%) was observed on smcs1 and could be traced back to a programming error. The maximum CPU charge on smcs2 was 88%. This means that there is still room on the servers to accommodate additional users and software.

More data analysts at UCL should consider using this server system. It offers more performance, storage, and data security than local PC-based systems.

Our second system is a Windows terminal server which hosts smaller statistical applications like HLM, Lisrel,

MPlus, PASS, and UCINET. The idea behind this service is resource sharing. Some specialized statistical programs are initially purchased and used by single individuals or work groups. However, use may be limited and these programs may also be of interest to other researchers at UCL. So, instead of installing them on local systems we promote an installation on our terminal server, as long as the license permits it. We can give the main user priority access while allowing others to use the program when it is available. The software sharing server also allows hosting statistical software which is no longer used but which has to be kept for follow up or future work.

Access to the sharing server was opened in late 2010 to people who agreed to experiment with using statistical software on a remote computer. There now are 32 users (29 from SSH and 3 from SSS). The high number of users from SSH is expected since some of the installed programs come from IPSY. We encourage other university members to contribute statistical software for their own use and for the benefit of others.

The hardware for this server is scheduled for replacement in 2013.

Table 4. Users by institute

User origin	Computing server	Software sharing server
SSH	32	29
SSH/IPSY	10	19
SSH/ILSM	2	
SSH/IACCHOS	4	2
SSH/IMMAQ	16	8
SSS	13	3
IREC	3	2
IRSS	9	
DDUV	1	
LDRI		1
SST	18	0
SST/ELI	16	
SST/ISV	2	
Number of users	63	32

Computing services

General Access to Statistical Software

Use the right tool for the job. As a hammer is not appropriate to put in screws, a specific statistical software package is not appropriate for just any task in data analysis and study design. Researchers need access to a variety of statistical tools and this at minimum global cost (acquisition, training, distribution, maintenance).

The SMCS therefore promotes the idea that every university member who requests it should have free and un-bureaucratic access to basic statistical software.

We therefore actively participate in the Big Five initiative launched by a new sub-committee of the GSI (general computing commission). This initiative aims at making the access to SPSS, STATA, SAS (via Enterprise Guide), JMP, and R as easy as possible for university members. SPSS, STATA, SAS, and JMP are covered by site contracts for either an unlimited or a specific maximum number of users at UCL (note: R is free open software). Up to now, distribution of the four commercial tools involved a co-payment and a series of administrative procedures. We wish to simplify this by eliminating the co-payment and by arranging for a more efficient distribution system.

At the time of writing this report, the GSI had already approved the general outlines of the initiatives and the sub-committee was working out the details. A note describing the modified access procedure will be published in spring 2013.

A part of the difficulty of making the Big Five project work is that the user community is very heterogeneous. Users come from all three sectors, have different hardware, and are subject to various licensing constraints.

Therefore, the SMCS is also exploring other ways to give access to statistical software. In collaboration with the SGSI, we are exploring delivering statistical software via a virtual desktop environment. Ucilla, an experimental server built on the open source solution Ulteo is under development. We hope to open this server to a test public in 2013.

In addition to the Big Five project, the SMCS is also helping the university in determining rational choices for

statistical software. The objective is to have a small number of widely distributed programs for which cover most of the needs of the users and for which we have favorable licenses and good training materials.

Researchers who need specialized tools for tasks not or poorly covered by the general purpose software can still acquire them but this should become the exception and not the rule.

A rationalized acquisition, distribution, maintenance and support program in statistical software will deliver higher quality at lower cost. We are working on it.

Quality

Quality

The SMCS monitors the quality and impact of its services in order to detect opportunities for improvement and rationalization.

Training

The SMCS systematically surveys the participants of its trainings in order to assess the perceived quality of delivery and design. This has already led to the creation of new trainings and a better organization of the group of trainers.

This was only possible by increasing the SMCS team and by involving additional trainers (UCL and external) in the training program. Among the additional trainers were the associated consultants (L. Moreau, IACCHOS; N. Lefèvre, IPSY), some assistants or professors of the ISBA (B. Francq, B. Govaerts, J. Jaeger, C. Legrand, M. Munda, M. Pigeon, R. Rousseau, C. Ritter, C. Taverne, N. Uyttendaele) and some persons of other institutes (J. Ambroise, IREC) or other institution (S. Waltener, FUSL). For the latter members of the training team, the SMCS platform gave them the opportunity to share their specific expertise with a larger audience.

We are now eliciting more information from the participants who enroll in order to better supply them with announcements for future trainings which could correspond to their needs.

Participants who attended a sufficient part of a course now receive a certificate which may serve them in the framework of their doctoral studies or elsewhere.

We now better target our course announcements. Besides sending direct invitations to potentially interested people, we now have improved web pages with detailed course programs.

We also created a common identity for all of our course descriptions. This includes the course structure, teaching philosophy, pre-requisites, and course documentation.

After each course, all participants are invited to fill in a course evaluation survey. The results of these surveys allow us to improve the courses and to extend the course offerings according to the suggestions made by

the participants. These surveys also give an impression of the perceived quality of the course (general, delivery, and adequacy of exercises, organization including timing and course facilities).

Most of our courses are now recognized by the IUFC as « Programme de formation continue qualifiant » which gives them better visibility. Since 2008, the courses of the SMCS also count as continuing education for university personnel and can be part of their appraisal.

Consultancy

With respect to coaching Master's students, we now request that the academic advisors of the students participate in the consulting meetings we hold with their students in order to make them aware of potential systematic knowledge gaps which need to be filled.

During 2011/12 we received occasional complaints that work promised by SMCS consultants was not carried out in a timely manner. Such situations typically happen when projects start as a small request for advice but then develop into larger collaborations without officially changing status. We are working on clearer procedures in order to avoid misunderstandings of this type. In the particular cases which led to complaints we were able to resolve the problems by officially converting them to collaborations which then allowed us to spend the necessary time on them.

Appendix

Appendix

2011-2012

List of Trainings

Analyses et graphiques avec RExcel : 2 demi-journées, les 15 et 22 mars 2012 (Ch. Ritter)
Analyses multivariées en RCommander (FactoMineR) : 4 demi-journées, les 30 et 31 janvier 2012 (C. Tavernier et C. Rasse)
Atelier statistique dans le cadre de l'École Doctorale Physiologie, Physiopathologie et Pharmacologie : 2 x 2h30, le 13 décembre 2011 (A. Guillet)
Cours d'initiation à SAS pour les chercheurs : 6 demi-journées, du 04 au 06 juin 2012 (C. Bugli et C. Rasse)
Cours d'initiation au langage R : 5 demi-journées, du 16 au 20 janvier 2012 (A. Guillet et C. Rasse)
Cours d'initiation au langage R : 5 demi-journées, du 11 au 15 juin 2012 (A. Guillet)
Cours d'initiation au logiciel NVivo : 2 demi-journées, les 22 et 23 septembre 2011 (L. Moreau et N. Lefèvre)
Cours d'initiation au logiciel NVivo : 2 demi-journées, les 24 et 25 janvier 2012 (L. Moreau et N. Lefèvre)
Cours d'initiation SAS/BASE : 5 demi-journées, du 12 au 16 décembre 2011 (C. Rasse et M. Munda)
Data discovery and Statistical modeling with JMP: 4 demi-journées, les 24 et 25 mai 2012 (B. Francq et C. Rasse)
Excel avancé et VBA au service de la statistique : 1 journée. le 10 novembre 2011 (B. Francq)
Expérimentation et expérimentation clinique dans le cadre du cours de conception mécanique en génie biomedical (MECA2355): 2 x 2 heures les 31 octobre et 14 novembre (C. Legrand et C. Rasse)
Formation en bioinformatique à destination de demandeurs d'emploi (en collaboration avec le Forem Formation Biotechnologie) 20.5jours (C. Bugli, B. Govaerts, J. Ambroise, and J. Jaeger).
Formation SAS : programmation de base : 4 demi-journées, 3 et 10 octobre 2011. (formateurs SAS Institute)
Formation SAS: SAS advanced programming : 5 journées, février, mars, avril (formateurs SAS Institute)
Gestion et analyse des données avec Stata : 5 demi-journées, du 21 au 25 novembre 2011. (L. Moreau et A. Guillet)
Introduction à LimeSurvey : 2 demi-journées, le 20 décembre 2011. (S. Waltener et N. Lefèvre)
Introduction aux modèles mixtes, 4 demi-journées, les 14 et 15 mai 2012 (M. Pigeon)
Plans d'expérience (cours Biowin) : 6 demi-journées, 20, 21 et 27 octobre 2011. (C. Rasse et B. Francq)
Plans d'expérience : 6 demi- journées, les 3,4 et 11 mai 2012 (B. Francq et C. Rasse)
Pratique de la statistique avec SAS/Enterprise Guide : 5 demi-journées, du 18 au 22 juin 2012 (C. Bugli et N. Lefèvre)
Pratique de la statistique avec SPSS : 5 demi-journées, du 5 au 9 septembre 2011 (N. Lefèvre et L. Moreau)
Pratique de la statistique avec SPSS : 5 demi-journées, du 9 au 13 janvier 2012 (N. Lefèvre et L. Moreau)
Publishing your work as an R package : 1 demi-journée, le 17 novembre PM (Ch. Ritter)
Techniques statistiques dans l'évaluation de produits médicaux : 4 demi-journées, les 15 et 16 février 2012 (C. Legrand)
Training program in Clinical Study - Biostatistics (Cours ClinET - Biowin) : 6 demi-journées, les 25, 28 et 29 novembre 2011 (C. Legrand, C. Bugli et M. Munda)
Utilisation de R sur un cluster dans le cadre des séminaires du CISM : 1 demi-jour, le 8 décembre 2011 (N. Uyttendaele)
Formation rapide visant l'utilisateur de JMP en ISV: 1 demi-jour, le 1er décembre 2011 (C. Rasse)

List of Seminars

La Statistique au service de la Biologie, Séminaire statistique en UCL/ISV : 1 journée, le 10 février (C. Rasse)
Zakouskis Statistiques, Séminaire statistique en UCL/IMCN : 1 journée, le 11 mai (B. Govaerts et C. Ritter)
Introduction à la méta-analyse, Séminaire statistique en UCL/IPSY : le 14 juin (N ; Lefèvre et M. Courtois – IPSY)

Appendix

Publications and Presentations by SMCS members in 2011-2012

Although the primary mission of SMCS members is to support other research projects, its members are encouraged to participate in scientific meetings, to make presentations, and to publish.

Publications

Baeck, M., Chemelle, J.A., Rasse, C., Terreux, R., Goossens, A. (2011) C16-methylated corticosteroids are less far allergenic than the non-methylated molecules. *Contact Dermatitis*, 64, 305-312.

Cardenas-Flores, A., Cranenbrouck, S., Draye, X., Guillet, A., Govaerts, B., Declerck, S. (2011). The sterol biosynthesis inhibitor molecule fenhexamid impacts the vegetative compatibility of *Glomus clarum*., *Mycorrhiza*, Editions Springer.

Grade, S., Lefèvre, N., & Pesenti, M. (2012). Influence of Gaze observation on random number generation. *Experimental Psychology*.

Nader-Grosbois, N., Lefèvre, N. (2011). « Self-regulation and performance in problem-solving using physical materials or computers in children with intellectual disability », *Research in Developmental Disabilities*, 32, 1492-1505.

Grosbois, N., & Lefèvre, N. (2012). Parents' regulation and self-regulation, and performances in children with intellectual disability in problem solving using physical material or computers. *Research in Developmental Disabilities*, 33, 449-460.

Pollaris, A. (2011). Modèles d'équations structurelles en psychologie : approche didactique et questions spéciales Mémoire supervisé par le SMCS - Promoteur: Christian Ritter et Florence Stinglhamber (co-promoteur).

Presentations

Arnaud Pollaris, travail supervisé par le SMCS (2011), "Examen des pentes de régressions structurales modérées", 18 October 2011, Institut de Recherche en Sciences Psychologiques, UCL.

Herman, Benoît ; Olias Lopez, Alba ; Rasse, Catherine ; Raucent, Benoît. *Experimental comparison of kinematics and control interfaces for laparoscope positioners*. 9th National Congress on Theoretical and Applied Mechanics (Brussels, du 09/05/2012 au 11/05/2012). In: *Proceedings of the 9th National Congress on Theoretical and Applied Mechanics*, 2012. 978-2-8052-0151-6, 8 pages. <http://hdl.handle.net/2078.1/120008>

