

<p>Institution: University of Wolverhampton</p>
<p>Unit of Assessment: 36 - Communication, Cultural and Media Studies, Library and Information Management</p>
<p>a. Overview</p> <p>The submitting unit is the Statistical Cybermetrics Research Group (SCRG), which sits within the Research Institute for Information and Language Processing at the University of Wolverhampton. The SCRG, founded in December 2000, is a small but established specialist library and information science (LIS) research group. In its RAE 2008 submission the SCRG had the joint second highest average score in the UK in its panel (Library and Information Management) and the joint highest average score (with Loughborough) for research publication quality alone. The current submission substantially improves on the previous submission, with a larger group of researchers (7, up from 4), a higher proportion (20 out of 28, up from 8 out of 16) of outputs in the single top journal of the discipline (see below), increased contributions to the discipline (e.g., an associate editorship in the top LIS journal), a larger amount of external funding (almost doubled from £298,000 in RAE2008), and more PhD completions (5, up from 1 in RAE2008 – although 2 PhD students submitted in 2007-8 after RAE2008 but before the date allowed to be reported (Dr David Stuart, Dr Nigel Payne), so the total number of PhD students reported for the current period is 3).</p> <p>The SCRG has become the world leading research group in its field (cybermetrics), as evidenced by the fact that most submitted outputs are in the top journal of the discipline, the <i>Journal of the American Society of Information Science and Technology</i> (JASIST), its citations, and contributions to the discipline of its members (see below). During the current REF period, the group developed ground-breaking social science sentiment analysis techniques and analyses of the social web, in addition to leading the world in the fast-growing sub-field of alternative web metrics development. The heart of the submitted group consists of seven researchers, all of whom have published multiple articles in JASIST and at least one other leading information science journal. The wider group also includes full-time and part-time PhD students and a range of honorary positions.</p> <p>b. Research strategy</p> <p><i>The main objectives and planned activities for the current REF period as reported in the RAE2008 have been broadly met, as follows:</i></p> <p>"(a) fast flexible reaction to exploit new internet-based information sources" (RAE2008): this has been achieved through analyses of emerging social network sites MySpace (although now a minor site), YouTube and Twitter, as evidenced through the submissions.</p> <p>"(b) continuing to support previously developed methods" (RAE2008): This has been achieved through maintaining and greatly expanding the software developed, including supporting the websites for them (http://lexiurl.wlv.ac.uk and http://socscibot.wlv.ac.uk), as well as by continuing to develop the link analysis line of research, as evidenced in a minority of the submissions.</p> <p>"(c) collaborating with other researchers to help our methods to be used outside an information science context, particularly in the wider social sciences." (RAE2008): This has been achieved through our collaboratively funded EU projects, and ACUMEN in particular, and with collaborations in the UK with other social scientists, such as with Vis (Sheffield) on YouTube, and with teams at Manchester and Cardiff on Twitter, as well as through the book <i>Introduction to Webometrics</i>, websites (the above two, plus http://mozdeh.wlv.ac.uk for Twitter time series analysis), book chapters and talks.</p> <p><i>The specific targets of RAE2008 have also been broadly met as follows:</i></p> <p>"We aim to attract £100,000 of external funding per year and to support one new PhD student per year" (RAE2008): both were achieved.</p> <p>"Our long-term aim is to become known in Europe as one of the first ports of call for social science internet-based quantitative research methods." (RAE2008): This is still a long term goal and international speaker invitations, software downloads and citation counts to our publications indicate that we have made progress in this direction.</p> <p>"Our secondary aim is to develop avenues to commercially exploit our techniques." (RAE2008): The impact case studies demonstrate this.</p> <p>Strategy 2008-2013 In addition to meeting the RAE2008 goals described above, during 2008-2013 the SCRG developed and pursued a strategy of <i>developing high quality novel research</i> into webometric indicators and social media analysis method and <i>generating theory and methods</i> that</p>

have value for *social science and humanities researchers*, for *policymakers* and for *industry*. The strategy therefore targets three primary audiences: other researchers; research policymakers; and industry. The overall research strategy was driven by the overarching goal of identifying ways to exploit the opportunities provided by the social web in order to generate innovative and useful new research.

- **Developing high quality novel research** Underpinning all of the strategic goals is the objective to ensure that the research produced is world class in all respects through consistent targeting of top-quality journals. More specifically, the group has targeted the top journal of the discipline, JASIST, as widely recognised, for example by US LIS deans [Table 2 in: *College & Research Libraries*, 66(4), 341-377]. Thus, in 2008-2013 the 7 submitted researchers published 96 refereed journal articles, including 29 articles in JASIST, articles in all other major LIS journals, 4 articles in PLOS ONE, and many interdisciplinary articles in good (e.g., ISI-indexed) journals from other fields (e.g., physics, communication science, computing, medical informatics), a book, 11 book chapters, and 8 fully-refereed conference papers.
- **Theory and methods for social science and humanities researchers** One of the goals of the group is to develop and validate quantitative methods for obtaining and analysing data from the web; methods that can be used not only within information science but also by the wider research community. Thus, the methods developed during the current REF period include link analysis (extending the link analysis developed in the previous RAE period to URL citations and title mentions to cope with changing data availability), sentiment analysis (developing a variant aimed at social science research goals rather than commercial objectives) and text extraction (for text time series analysis, the new jointly-developed method Web memetics and for web citation analysis). The strategy for disseminating these methods is threefold. First, journal articles are published describing and validating the methods or applying them to case studies. Second, software tools are published freely online that incorporate the methods. Third, collaborations are undertaken with other researchers on their goals, providing the data access and processing expertise. Although social science and humanities researchers have been the primary targets of this strategy, the research developed has also been used by complex systems physicists studying social science issues and by computational linguists.
- **Indicators for research policymakers** As illustrated in the indicator case study, the group creates methods to give high quality web data to research policymakers and decision-makers, particularly in contexts in which no relevant offline data is available. The strategy for this goal is to continually conduct primary research to develop and assess new indicators and to draw upon this knowledge and customise it for particular client needs.
- **Theory and methods for industry** Successful sentiment analysis applications are illustrated in the sentiment analysis case study.

Five year plan for 2012-2018 The strategy for 2014-2018 is: (a) to seek out new opportunities to research new methods for efficient and effective gathering and analysis of web data for new sources and for new problems; (b) to extend our existing methods and software to increase their power and widen their scope for applications; and (c) to develop an established base to supply contract-based policy-relevant indicators. Whilst (a) and (b) are more pro-active extensions of our successful flexible and responsive 2008-2013 strategies, (c) represents a maturation of our current reactive strategy. Starting in February 2014, the group will have a postdoc focused on (c) with the remit of fulfilling contracts and attracting new research. This will help to ensure wider uptake of our methods and tools in order to make the group more proactive in seeking applications of its research outside of the scientific community. In terms of *people*, a key new goal is to actively encourage existing staff to conduct short exchanges with overseas academic and commercial organisations. Seeking such an exchange will become a mandatory part of annual progress reviews. For *income*, a new goal is to develop a client-base for Webometric indicators, which is the role of the new postdoc mentioned above. For *contribution to the discipline and people*, a new goal is to and to help junior researchers to become recognised within the discipline. This will be achieved by senior staff being encouraged to promote them and support them for prestigious appointments.

c. People:

i. Staffing strategy and staff development

The overall staffing strategy of the group has been to (a) develop existing members of staff into active researchers in the SCRG; and (b) to recruit postdocs on short term contracts (e.g., 2-4 years) for specific externally-funded research projects. In 2013 a new strategy was added, (c) to recruit a postdoc to take charge of short-term contract research and to bid for new short-term contract research.

Staff development strategy, for all staff pursuing a career in research The primary intellectual mechanism used to develop existing members of staff at the University of Wolverhampton (primarily early career researchers, but anyone in principle) into active researchers in the SCRG, is *mentoring*, and in particular the strategy of pairing all staff (from PhD students to experienced researchers) with senior researchers to produce joint research and to learn through practice. This simple strategy, together with the wholehearted staff commitment to it, forms the driving force behind the development of the group. Evidence of successful mentoring is clear in the co-authorship patterns of the submitted outputs. New staff are automatically given a university-wide 2 year *probation* period, which includes formal support for their needs (e.g., *training*, information packs) and formal *appraisal* of their progress and of the extent to which they are being given the support that they need. The *Concordat to Support the Career Development of Researchers* is taken as a guiding principle for the development of strategies for dealing with research careers both university-wide and in routine performance monitoring in SCRG meetings. In May 2012, the University received the European Commission HR Excellence in Research Award, incorporating the QAA Code of Practice for Research Degree Programmes and the Concordat to Support the Career Development of Researchers.

Support for early career researchers New researchers are given the choice of working on their own pre-existing research interests (Buckley, Levitt, Paltoglou, Kousha) or of adapting to work on the key strengths of the group (Sud; formerly Wilkinson, now a senior researcher). This strategy has proven successful in that many of the submissions are jointly authored by junior and senior members of the group. New members of staff are also eligible to apply for university-wide new researcher bursaries of up to £5,000 to fund research expenses. First year staff on teaching contracts are also given 10% teaching remission to help their adjustment.

Sabbatical leave All staff (including fixed-term and part-time) are entitled to apply for sabbatical leave. Requests are judged on merit by the RILP Sabbatical Leave Committee, irrespective of career stage and contract status.

Career progression The university provides clear guidance for promotion through the stages of academic careers for permanent staff. The main stages for permanent staff are from lecturer/senior lecturer to reader and from reader to professor. These are disseminated in the “Pathways to Professorship and Readership” events in the staff development programme. This includes: understanding the criteria needed to meet Professor/Reader status, types of evidence needed, procedures for applying, and CV and covering letter preparation. These criteria are sensitive to the needs of part-time staff. Staff on temporary contracts are encouraged and supported to bid for external funding for new posts and also to apply for permanent positions within the institution.

Postdoctoral researchers Postdocs have been recruited for skills necessary to conduct the research specified in a specific funding proposal. Some of these have subsequently become permanent members of the group (Paltoglou, Levitt, Kousha), others have left for appointments at academic institutions elsewhere (Cai, Prabowo). Postdocs are nurtured primarily through pairing with a senior member of staff, as evidenced by the joint publications, as well as the general activities of the group. The group has a strategy of not giving inessential tasks to junior researchers (e.g., helping senior researchers with routine tasks, organising workshops) so that they can focus on their own research. Postdocs are encouraged to be creative in their research so that they can pursue their own goals in addition to satisfying the criteria of the project that they are working on.

Equal opportunities The SCRG supports the university's equal opportunities strategy of encouraging applications from women and minorities and considering applications on merit, irrespective of gender, ethnicity or disability. Whilst all submitted staff members are male (50% were female in RAE 2008), the submission includes ethnic minority members (3 out of 7) and a disabled member (as in RAE 2008 but a different person) and the wider group includes one gay member. With regards to gender issues, the group employed 2 female postdocs out of 6, in an area (computer-related quantitative research) that has been traditionally male dominated. Two out of the four visiting professors are female. We therefore believe that the overall profile demonstrates a commitment to diversity. All staff are also required “to support the University’s commitment to

equal opportunities and widening access and participation” as part of their job. The SCRG attempts to pro-actively ensure that all members have the ability to fully realise their potential. For example, a visually impaired researcher was given the largest commercially available PC monitor and will have amanuensis support for visually intensive tasks, and meetings are always organised so that staff with childcare needs are not disadvantaged.

Staff exchanges Researchers within the group are also encouraged to initiate academic and other exchanges and these have been taken by Paltoglou (academic exchange with Poland; commercial exchange with Yahoo! Barcelona planned, financed by Yahoo!) and former postdoc Holmberg (Finland). Member Ruth Fairclough (submitted in RAE2008) is on a long-term secondment to central University services to conduct statistical analyses of equal opportunities issues in university recruitment. Although an internal secondment, this is still a skills-based move from a research to a non-research environment. Overseas researchers are also encouraged to visit the SCRG for working visits of 3-6 months and this initiative has attracted researchers from Spain (2) and Malaysia. In addition to exchanges, staff with previous relevant commercial experience are encouraged to apply for all SCRG posts, and these appointed have included Kousha (Journalism) and Mohammadi (PhD student, publishing industry). In addition, and in keeping with the group’s internet orientation, virtual exchanges are promoted in the form of collaboration on specific projects leading to a publication. These are particularly encouraged because the fast-moving nature of the research conducted by most group members means that face-to-face meetings often are not advisable. In the period 2008-2013, 35 of the SCRG’s journal articles had at least one author from another institution, in addition to many conference papers, and most of these collaborations were international (including USA, Canada, South Korea, The Netherlands, Finland, Poland, Germany, Spain, France, Belgium, Austria, Switzerland, Iran, Israel) and conducted purely online.

ii. Research students

The SCRG funds PhD studentships using RAE 2008 money and also supervises self-funded students. Students are given their own computer and desk and have access to the university library facilities. Students are fully financed to travel to at least one conference per year and a second conference if they can make a good case for it. Each student has a main supervisor and a secondary supervisor, with the latter typically having an interest in a minor aspect of the PhD topic. Students meet the main supervisor every month for a 1-1 meeting of about an hour in addition to email contact, when required. They also attend monthly doctoral/research forums that are partly social events and partly formal meetings in which all present a summary of their recent work to the group. Students are encouraged to take advantage of the University research training, which include not only courses for research students, but also general topics, such as how to win research grants.

The SCRG strategy for PhD students is to emphasise the importance of their own research and to give them full control of the direction of the research, with the supervisor being their advisor rather than directing their research. As is the case for junior researchers, PhD students are kept away from routine tasks, such as organising speakers, and are given the time to focus on their own research. Opportunities are made available to get teaching experience but this is typically limited to two lectures per year, a total of 4 hours in front of a class. This is judged to be enough to give the student experience but not too much to impinge on their research time.

Research culture The primary mechanism for the development of a research culture is the monthly doctoral forum, which is attended by all PhD students and postdoctoral researchers and normally about three of the permanent staff, depending on teaching and other commitments. This is a two hour social event (lunch) followed by two hours in which each person summarises their current research process and responds to questions from others. This is a popular and apparently highly successful mechanism to foster a collaborative research culture within the SCRG. A speaker programme is also maintained to stimulate the research culture. The department finances external speakers in fields related to Cybermetrics, mostly from overseas, including (2008-2013) Australia (1), Belgium (2), Canada (1) China (1), Finland (1), France (2), Germany (2), Japan (2), South Africa (1), South Korea (1), Spain (2), UK (11), and USA (7). In addition, the almost constant presence of at least one academic visitor within the SCRG helps the development of a culture of questioning and openness to new ideas. New students also attend university-wide induction events and joint events with the Computational Linguistics Research Group, such as the annual research poster events that are part of the progress monitoring exercise.

Recruitment The SCRG has grown and then maintained a core of about 4 full-time and 2 part-time

Environment template (REF5)

PhD students during the current REF period. Half of these students have been funded by RAE2008, one has been funded by institution money and the rest have been self-financing. The group has been particularly successful in recruiting international students from Iran, a country which has a strong interest in webometrics, and has also helped to co-supervise PhD students with an interest in webometrics at overseas institutions in Finland and Israel.

Equal opportunities The SCRG supports the university's equal opportunities strategy of encouraging PhD applications from women and minorities and considering applications on merit, irrespective of gender, ethnicity or disability. Four out of the eight PhD students during 2008-2013 were female and four were ethnic minorities, giving evidence of some success in this regard. Equal opportunities during studies is ensured by sensitive treatment of problems that disproportionately affect groups of staff, such as ensuring that meetings are at times that are convenient for single parents, that progress reviews are sensitive to extenuating circumstances, and checking that all students are fully comfortable with environments chosen for meetings. The University is in a region with an ethnically diverse population and so has excellent provision for different religious and cultural needs (e.g., Muslim prayer rooms).

Exchanges The SCRG particularly encourages exchanges with PhD students from outside the UK in order to give exposure to different research cultures and approaches. Most of the time at least one overseas researcher (mostly from Spain (5), but also from Belgium, Finland, Israel, and The Netherlands) is visiting the SCRG for a short stay (3-6 months). These researchers are co-located with SCRG PhD students. SCRG PhD students wishing to visit other institutions, commercial or academic, are fully funded for up to two weeks (travel and accommodation) and travel is funded for longer visits.

Monitoring and support PhD students are monitored by the Student Monitoring Board (SMB) of the Research Institute in Information and Language Processing. This involves each student writing a brief monthly progress report to be checked at the monthly SMB meetings. There is also an annual review of each individual student that is conducted by an academic external to the supervisory team that evaluates both evidence of student progress and supervision effectiveness. Students also have one additional major event, a confirmation of research stage that is a formal check by another external person that their research is on track. No students dropped out of their PhD or failed to complete on time during the current REF period but there is a formal "at risk" procedure for identifying students that are likely to face problems. This is triggered either by the annual progress review or by the monthly SMB checks.

Career and skills development The institution's Staff Development Programme runs regular events to support students with skills development and future career development (e.g., "An introduction to teaching for PG research and non-academic staff", "NVivo9 Training"). In addition, the learning resources centre provides excellent free support for academic writing skills (which some of our overseas students have needed) and statistical and mathematical issues (available if needed, but not used yet). One-to-one careers advice is also given by the Careers and Employment service.

d. Income, infrastructure and facilities

Evidence of successful generation of research income

The following are the four main large international projects that attracted external funding. The first two are part of the strategy to develop indicators for research policymakers, the third is part of the strategy to develop theory and methods for other researchers, and last is part of the strategy to develop theory and methods for industry.

- Cascades, Islands or Streams? (2012-13). Digging Into Data project with US and Canadian partners, internationally funded with the UK component from JISC. (£100k to the SCRG)
- Academic Careers Understood through Measurement and Norms (ACUMEN - 2011-2014). Large international FP7 EU funded project (£200k to the SCRG).
- CyberEmotions (2009-2013). Large FP7 EU project on sentiment analysis in social media involving nine European organisations (£250k to the SCRG)
- Critical Events in Evolving Networks (CREEN 2005-2008). Large international EU FP6 complex systems project. (£250,000 to the SCRG, £50,000 in 2008).

The SCRG also developed and participated in seven smaller projects on web indicators or social web data for social science goals and 6 commercial sales (£1,000 each) of its SentiStrength software (not HESA reported).

Scholarly infrastructure supporting research To support its strategy to research web indicators

Environment template (REF5)

and the social web, the SCRG curates and maintains collections of web data for its own and other researchers, typically collected as part of a research project. When possible, these collections are made available freely online. Examples include The Academic Web Link Database Project (<http://cybermetrics.wlv.ac.uk/database/>), social web texts from the CyberEmotions project (<http://www.cyberemotions.eu/data.html>), and others (<http://cybermetrics.wlv.ac.uk/resources.htm>). The SCRG develops, disseminates free (mostly) and supports (for its own and other researchers) a variety of research computer programs to gather and analyse data, including SocSciBot (web crawler, link and text analysis), Webometric Analyst (link analysis, social web text downloading and analysis, academic data set downloading and analysis), Mozdeh (Twitter downloading and time series analysis). These programs are updated regularly (between monthly and twice yearly) to add extra research capabilities. These programs are a key reason why SCRG members are able to rapidly conduct cutting edge quantitative research into web-based issues.

Organisational infrastructure supporting research The cybermetrics group is part of the Research Institute for Information and Language Processing (RIILP) in combination with the Computational Linguistics Research Group. This initiative exploits an overlap in interests, for example in the processing of web and blog data to extract trends and for opinion mining, and in three joint research-funding bids. This collaborative venture also gives wider support to the postdoctoral researchers in both teams, specifically in terms of direct access to relevant disciplinary expertise. Although too small for formal groupings, within the SCRG there are two informal clusters: for sentiment analysis and for scientometrics.

Operational infrastructure supporting research within the submitting unit The group is physically co-located with technology researchers and computer scientists working on external funding projects in the Faculty of Science and Engineering. Its location ensures that it has full support for its computing needs for web research in terms of computer power, technicians, and bandwidth. In addition to each researcher having their own PC or laptop there are three shared remotely-accessed large PCs for anyone to use for long term data gathering and large-scale analysis. The SCRG has full access to the university pool of IT support for installing, maintaining and troubleshooting computers and software, including all network connections. Permanent staff and postdocs are located in offices with other teaching and research staff in a modern (year 2000) purpose-built building. During 2008-2010 PhD students and postdocs from the group were located in a spacious office with one computer and two desks per PhD student, near the offices of the permanent staff. During 2011-2013 postdocs were allocated their own offices with one computer and two permanent desks each. All staff and students are provided with all software needed – this normally consists of standard office software, plus statistics packages and the SCRG's own software. In 2009 the SCRG was awarded £80,000 by the University for equipment, which was spent on computers for on-going large-scale data collection and for sentiment analysis experiments.

Infrastructure balancing strategy The operational infrastructure for the SCRG is funded 100% by the University and the scholarly infrastructure is generated as a by-product of research and so has no resourcing implications. Hence the group's main specific efforts are put into maintaining the organisational infrastructure: collaborating to maintain its light and cheap research institute, RIILP. The SCRG finances 2 days per month of administrative support for RIIP and provides a senior staff member to chair its student management board (a total of about 1 day per month).

e. Collaboration and contribution to the discipline or research base

Collaboration The SCRG has collaborated with over 30 other universities in Europe, the USA and Canada in joint funded projects, publications and research funding applications, from a Nobel Laureate at Stanford to a research manager in Poland. The large collaborations revolve around international funded research projects (see above and the case studies) and funding applications but smaller projects, often unfunded, are particularly encouraged. In addition, *Paltoglou* is Chair of the EU Cost Action MUMIA, and *Levitt* is Secretary (2012-) of the Association of Blind and Partially Sighted Teachers and Students.

Research advisory committees *Kousha*: Elsevier's Scopus Content Selection & Advisory Board. (2009-11); Scopus journal selection reviewer (2012-).

Professional subject associations *Levitt*: Chair (2013–2014) and UK representative (2013-) of American Society for Information Science & Technology (ASIS&T) European Chapter. Co-chair (2008–2009) of International Information Issues ASIS&T SIG. Co-founder and chair (2010–2011) of ASIS&T Metrics SIG.

Environment template (REF5)

Editorial positions *Thelwall*: Associate editor of Journal of the American Society for Information Science & Technology (JASIST) (Board member, 2005-2008, Associate editor, 2009-); Editorial board of the journals Scientometrics (2007-), Cybermetrics (2003-), Online Information Review (2004-2011), Journal of Information Science (2006-), Journal of Informetrics (2007-); member of 10 conference programme committees. *Kousha*: Editorial board member of Scientometrics, Information Science & Technology (Persian), Librarianship (University of Tehran), Science Cultivation (Persian); committee member for the International Society of Scientometrics and Informetrics (ISSI) conference (2009, 2011), COLLNET International Conf. on Webometrics, Informetrics & Scientometrics (2007-), ASIS&T (2013). *Levitt*: Committee member for ISSI 2009, ISSI 2011, ISSI 2013 and 5 other conferences. *Wilkinson*: Editorial board member for the journal Cybermetrics; committee member for the "Complex Interactions in Social Media" track at Hypertext 2012, 23rd ACM Conference on Hypertext and Hypermedia.

Examination of doctorates *Thelwall*: 12 (also 5 tenure/promotion, 1 professorship, 1 habilitation); *Kousha*: 2; *Wilkinson*: 1; *Paltoglou*: 2; *Buckley*: 3.

Organisation of workshops The SCRG hosted a two day Webometrics Workshop in 2008 that attracted 16 PhD students and a joint ASIS&T European Chapter and Metrics SIG PhD student workshop in April 2012 attracting 14 PhD students, mainly from Europe. Jointly with other CREEN consortium members it organised a day-long workshop at the NetSci08 conference and jointly organised half-day open workshops at 7 universities and research institutes in Europe (Warsaw, ETH Zurich, CINDOC (Madrid), Leiden, Wolverhampton, Bremen, Tallinn). The SCRG organised a Scientometrics Festival in Wolverhampton with 4 international speakers in December 2013.

Refereeing *Thelwall*: Reviewer for 35 journals, 22 conferences, AHRC (UK), ESRC (UK), Medical Research Council (UK), Social Sciences and Humanities Research Council (Canada): Over 600 conference and journal reviews completed 2008-2013. *Kousha*: Reviewer for JASIST, American Sociological Review, Scientometrics, Journal of Information Science, and 5 other journals. 152 papers reviewed (50 Persian). *Levitt*: Reviewer for Journal of Informetrics and 2 other journals. ESRC Peer Review College (2010-). *Wilkinson*: Referee for JASIST and 2 other journals, and 1 conference. *Paltoglou*: 22 journal and conference papers reviewed.

HEI consultancies *Levitt*: bibliometric analysis for Manchester University.

Awards and fellowships and similar *Thelwall* Research Associate at Oxford University, Docent at Abo Akademi University, Visiting Professor at UCM (Madrid); Honorary Researcher at KNAW, Netherlands (2007-2010), credited as the joint 6th top information scientist in the world by peer-judgements of research excellence (Li et al. 2010, Journal of Informetrics), and the most prolific information scientist in the world for the top journal JASIST (Mukherjee, JASIST 2009). *Levitt*: Honorary research fellow at UCL (2011-).

Invited keynotes and lectures *Thelwall*: Keynote/invited workshop speaker 2008-2013: NatGen conf., London 2012; Interdisciplinary Insights at Oxford 2012; 11th Int. Conf. on Applications of Natural Language to Information Systems, Alicante 2011; Altmetrics11 Workshop Koblenz, 2011; EC3 U. of Granada 2011; SIEE 2011 Marrakesh; SoNet-2010 Workshop. Czech Republic 2010 (x2); Workshop on Computational Approaches to Subjectivity and Sentiment Analysis, Lisbon 2010; Social Networks In Cyberspace, Wolverhampton 2010; Recent Advances in Natural Language Processing: Events in emerging text types Workshop, Bulgaria 2009; Communication Science and Network Science Workshop Amsterdam 2009; SIGUSE Workshop ASIST USA 2008; Information behaviour on the Internet, Finland 2008. Invited short courses given in UK, China, Russia, USA and Spain. Invited talks given at 30 universities, Yahoo!, Inbenta (Spain) and Yandex (Moscow); annual lectures given to Oxford University MA students and to Rotterdam MA students. *Levitt*: Invited speaker for 3 conference panels. *Paltoglou*: Invited speaker at 2 summer schools.

Other *Thelwall*: 1 book and 85 refereed journal articles in 2008-2013, h-index 50 in Google Scholar, 9,155 citations in Google Scholar; *Kousha*: 9 refereed journal articles in 2008-2013, h-index 24 in Google Scholar; *Levitt*: 8 refereed journal articles in 2008-2013, h-index 7 in Google Scholar; Doctoral forum committee for ISSI, 2011 and 2013. *Wilkinson*: 6 refereed journal articles in 2008-2013, h-index 13 in Google Scholar; *Paltoglou*: 17 refereed journal articles and 14 fully refereed computing conference papers in 2008-2013, h-index 12 in Google Scholar; *Buckley*: 7 refereed journal articles and 3 fully refereed computing conference papers in 2008-2013, h-index 6 in Google Scholar; *Sud*: 4 refereed journal articles in 2008-2013, h-index 4 in Google Scholar.