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Criteria for the Evaluation of Research Outputs

Group of Experts for Evaluation
Area 02 – Physical Science
(GEV02)

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1. Introduction

This document describes the organization of the Group of Experts for Evaluation for the Physical Science Area (from now on, the GEV02) and the criteria the Group will use in evaluating research outputs. The document is divided in eight parts. Section 2 lists the Scientific Sectors of Activity (*Settori Scientifico-Disciplinari)*, the Academic Recruitement Fields *(Settori Concorsuali)* and the ERC Sectors which are relevant for the GEV02. Section 3 summarizes the internal operating rules of the GEV02. Section 4 describes the evaluation criteria for the research outputs. Section 5 describes the peer review process and the guidelines for the selection of external reviewers. Section 6 describes the bibliometric criteria: the databases, the bibliometric metrics and indicators chosen by the GEV02, the algorithm and the calibration procedure. Section 7 defines the typologies of research outputs admitted to the evaluation of GEV02 and case-specific evaluation rules. Finally, Section 8 describes how the GEV02 plans to solve potential conflicts of interest between GEV02 members and authors.

2. GEV scientific areas

The GEV02 will take care of the evaluation of the research outputs submitted by researchers belonging to the Scientific Sectors (*Settori Scientifico-Disciplinari* - SSD), Academic Recruitment Fields (*Settori Concorsuali* - SC) and ERC Sectors (ERC) listed in Tables 1-3.

Area 02 – Physical Sciences
Settori scientifico-disciplinari **(SSD) – Scientific Sectors**
FIS/01 Experimental Physics
FIS/02 Theoretical Physics, Mathematical Models and Methods
FIS/03 Physics of Matter
FIS/04 – Nuclear and Subnuclear Physics
FIS/05 – Astronomy and Astrophysics
FIS/06 – Physics of the Earth and of the Circumterrestrial Medium
FIS/07 – Applied Physics

Table 1. Scientific Sectors - *Settori scientifico- disciplinari* **(SSD) for Area 02**

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Area 02 – Physical Sciences
Settori concorsuali (SC) – **Academic Recruitment Fields**
02/A1 – Experimental Physics of Fundamental Interactions
02/A2 – Theoretical Physics of Fundamental Interactions
02/B1 - Experimental Physics of Matter
02/B2 - Theoretical Physics of Matter
02/D1 - Applied Physics, Physics Teaching and History of Physics
02/C1 - Astronomy, Astrophysics, Earth and Planetary Physics

Table 2. Competition Sectors - *settori concorsuali* (SC) for Area 02

Area 02 – Physical Sciences
ERC Sectors (ERC)
PE2 Fundamental constituents of matter: particle, nuclear, plasma, atomic, molecular, gas, and optical plasma
PE2_1 Fundamental interactions and fields physics
PE2_2 Particle physics
PE2_3 Nuclear physics
PE2_4 Nuclear astrophysics
PE2_5 Gas and plasma physics
PE2_6 Electromagnetism
PE2_7 Atomic, molecular physics
PE2_8 Ultra-cold atoms and molecules
PE2_9 Optics, non-linear optics and nano-optics
PE2_10 Quantum optics and quantum information
PE2_11 Lasers, ultra-short lasers and laser physics
PE2_12 Acoustics
PE2_13 Relativity
PE2_14 Thermodynamics
PE2_15 Non-linear physics
PE2_16 General physics
PE2_17 Metrology and measurement

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PE2_18 Statistical physics (gases)
PE3 Condensed matter physics: structure, electronic properties, fluids, nanosciences
PE3_1 Structure of solids and liquids
PE3_2 Mechanical and acoustical properties of condensed matter
PE3_3 Transport properties of condensed matter
PE3_4 Electronic properties of materials, surfaces, interfaces, nanostructures, etc.
PE3_5 Semiconductors and insulators: material growth, physical properties
PE3_6 Macroscopic quantum phenomena: superconductivity, superfluidity, etc.
PE3_7 Spintronics
PE3_8 Magnetism and strongly correlated systems
PE3_9 Condensed matter – beam interactions (photons, electrons, etc.)
PE3_10 Nanophysics: nanoelectronics, nanophotonics, nanomagnetism, nanoelectromechanics, etc.
PE3_11 Mesoscopic physics
PE3_12 Molecular electronics
PE3_13 Structure and dynamics of disordered systems: soft matter (gels, colloids, liquid crystals, etc.), glasses, defects, etc.
PE3_14 Fluid dynamics (physics)
PE3_15 Statistical physics: phase transitions, noise and fluctuations, models of complex systems, etc.
PE3_16 Physics of biological systems
PE4 Physical and Analytical Chemical Sciences: Analytical chemistry, chemical theory, physical chemistry/chemical physics
PE4_1 Physical chemistry
PE4_2 Spectroscopic and spectrometric techniques
PE4_4 Surface science and nanostructures
PE9 Universe sciences: astro-physics/chemistry/biology; solar systems; stellar, galactic and extragalactic astronomy, planetary systems, cosmology, space science, instrumentation
PE9_1 Solar and interplanetary physics
PE9_2 Planetary systems sciences
PE9_3 Interstellar medium
PE9_4 Formation of stars and planets
PE9_5 Astrobiology
PE9_6 Stars and stellar systems
PE9_7 The galaxy

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PE9_8 Formation and evolution of galaxies
PE9_9 Clusters of galaxies and large scale structures
PE9_10 High energy and particle astronomy – X-rays, cosmic rays, gamma rays, neutrinos
PE9_11 Relativistic astrophysics
PE9_12 Dark matter, dark energy
PE9_13 Gravitational astronomy
PE9_14 Cosmology
PE9_15 Space sciences
PE9_16 Very large data bases: archiving, handling and analysis
PE9_17 Instrumentation – telescopes, detectors and techniques
PE10 Earth System Science: Physical geography, geology, geophysics, atmospheric sciences, oceanography, climatology, cryology, ecology, global environmental change, biogeochemical cycles, natural resources management
PE10_1 Atmospheric chemistry, atmospheric composition, air pollution
PE10_2 Metereology, atmospheric physics and dynamics
PE10_3 Climatology and climate change
PE10_7 Physics of earth's interior, seismology, volcanology
PE10_8 Oceanograpy (Physical, chemical, biological, geological)

Table 3. ERC Sectors (ERC) for Area 02

3. GEV organization

The GEV is organized as follows:

Coordinator: prof. Riccardo Zecchina

Assistant: Vittorio Leproux

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3.1   Sub-GEV composition

Sub-GEV name and relevant SSD	Coordinator	Members
SUBGEV I Experimental Physics, Particle, Nuclear (FIS/01, FIS/04)	Clara Troncon	Angela Bracco, Nadia Pastrone, Laura Patrizii, Monica Pepe, Paolo Spinelli
SUBGEV II Theoretical Physics (FIS/02, FIS/03, FIS/04)	Vincenzo Marinari	Stefano Baroni, Gino Isidori, Alberto Lerda, Roberto Livi, Antonio Marco Saitta, Sandro Stringari
SUBGEV III Astronomy and Astrophysics (FIS/05)	Sabino Matarrese	Paolo De Bernardis, Maria Francesca Matteucci, Lauro Moscardini, Salvatore Sciortino, Paolo Tozzi, Silvia Zane
SUBGEV IV Experimental Physics of Matter (FIS/01, FIS/03)	Vincenzo Guidi	Lorenzo Avaldi, Davide Ceresoli, Elisabetta Comini, Cinzia Giannini, Fabio Sciarrino
SUBGEV V Applied Physics, Fluid Dynamics, Physiscs of Atmosphere, Biophysics, History of Physics (FIS/03, FIS/06, FIS/07, FIS/08)	Roberto Bartolino	Guido Boffetta, Mauro Dalla Serra, Ernesto Lamanna, Giulio Peruzzi, Pier Luigi San Biagio

Table 4. Sub-GEV, scientific sectors, coordinators and members

3.2   Assignment of research outputs within the GEV

The assignment of research outputs to GEV02 is based on the SSD of the author. The GEV02 can decide to change such assignment in case the content of the research outputs appears to be more pertinent to another GEV. In this latter case, the evaluation of the research outputs is done according to the criteria of the selected GEV.

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The assignment of research outputs to the GEV02 members in charge with their evaluation will occur according to the SSD and *PACS numbers* specified by the author. The SSD assigned by the author a single research output may differ from the author's SSD. The GEV02 will divide all research outputs by type of publication and by research area and will assign them to the appropriate Sub-GEV. The Sub-GEV Coordinator will assign the research output to the two most competent members of the Sub-GEV.

If a research output is assigned to more than one GEV (e.g. co-authors indicate different SSD belonging to different GEVs), the research output will be evaluated according to the VQR Guidelines for the GEVs (Section 3.2). If necessary, the Coordinators of the GEVs involved will constitute specific Inter-Area Consensus Groups.

3.3 Operating rules of the GEV

The operating rules of the GEV02 are as follows:

- A GEV02 meeting is called with at least 15 days' notice. The meeting is convened by the Coordinator, who also sets the agenda;

- Decisions within the GEV02 are made by simple majority vote among members. In order to vote, physical presence is not required if presence is assured via web or phone connection;

- The Assistant assigned by ANVUR to the GEV02 attends the GEV02 meetings, with secretariat functions and without voting rights. At the end of each meeting, minutes and a synthetic report outlining the main decisions will be drafted in Italian and in English. The report is approved by the Coordinator and by the GEV02 members, and then sent to ANVUR to be filed.

4. Research outputs evaluation

The evaluation of the research outputs follows the informed peer review methodology, which consists in employing different, and if possible mutually independent, evaluation methods, to be harmonized within the GEV02, which ultimately remains responsible for the final evaluation.

The available evaluation methods are:

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- Peer review evaluation by (normally two) external reviewers selected independently by two different GEV02 members.

- Direct evaluation by the GEV02 members, who can conduct an internal peer review according to the same procedure described for external peer review

- Bibliometric analysis, to be conducted according to the procedure described below in this document. Research outputs subject to bibliometric analysis are not assigned *y* to the merit classes established by the Ministerial Decree (*Decreto Ministeriale* - DM) and by the VQR Call using *automatically* the bibliometric algorithm output. The allocation is instead based on the expert judgment of the GEV02, which can employ any possible knowledge beyond bibliometric indicators, such as the expert judgment of its members and the information contained in the research output descriptive forms.

5. Peer review

Each research output will be sent typically to two external reviewers, independently chosen by the two GEV02 members to whom the research outputs was assigned.

Alternatively, a research output will be evaluated within the GEV02 according to the same procedure, provided that the necessary expertise is available and that no conflict of interest is present.

5.1   The selection of external peer reviewers

The selection of external reviewers, among Italian and foreign scholars, follows the principle of honest institutional cooperation and it's founded on the criteria of correctness, objectivity and impartiality.

Great attention will be devoted to maintaining the anonymity of the reviewers, both in the stage of preparation of the list of reviewers and during evaluation. The results of the evaluation of individual research outputs and the identity of the reviewers in charge will not be made public. A list with the reviewers' names will be published by ANVUR within 30 days after the publication of the VQR Final Report.

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Reviewers will be selected among the most authoritative and scientifically qualified scholars and specialists in the disciplines relevant to the research outputs to be examined. They are expected to have been active in research during the period covered by the VQR.

Starting from a list provided by ANVUR, the GEV02 will prepare an updated list of external reviewers such to adequately satisfy the standards set by the GEV02 in terms of scientific quality and experience. The list will be extended with new reviewers selected by the GEV02. In particular, through the Sub-GEV Coordinators, the Coordinator will invite GEV02 members to suggest new experts who satisfy the required standards and are available for the evaluation. The GEV02 Coordinator will collect suggestions together with information about the reviewers' qualifications, as summarized in a specific proposal form, and add the names to the list.

It will be possible to extend the reviewer list during the evaluation process, on the basis of the needs that may emerge after the research outputs are transmitted by the different Institutions.

In order to reduce potential conflicts of interest, the GEV02 will employ, whenever possible, reviewers who are active in foreign Universities and Institutions.

5.2   Peer evaluation

The evaluation by external or internal reviewers is based on a form prepared by the GEV02, following ANVUR guidelines, together with instructions for reviewers. The evaluation form will allow the reviewer to assign a score to the three evaluation criteria established by the Ministerial Decree (*Decreto ministeriale* – DM) and the VQR Call, namely originality, methodological rigor and attested or potential impact. The form will also include an empty space where a brief comment to the review should be entered. The GEV02 will translate the indications contained in the evaluation form into one of the five classes established by the VQR Call.

In case of differing evaluations between reviewers, the Sub-GEV can decide to use a third reviewer or an internal Consensus Groups. The GEV02 will determine the final score for the research outputs using the consensus report methodology. In case of disagreement within the Consensus Group, the group will be integrated with the sub-GEV Coordinator or the GEV02 Coordinator.

In any case, the GEV02 ultimately remains responsible for the final evaluation.

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6. Bibliometric analysis

The research outputs that can be evaluated bibliometrically are the research outputs published in reviews/journals indexed in the citation databases WoS and Scopus. Specifically:

- Scientific article, also in the form of *Articles*, *Letters* or published *Conference Papers*

- Scientific article of critical literature review (Review)

10% of the articles, already examined by bibliometric analysis, will be also sent to peer review, to evaluate the degree of correlation between the two methods. The article selected for this double evaluation will be chosen by random sampling by the SubGevs.

6.1 Data Bases

The GEV02 uses the databases of Thompson Reuters Web of Science (WoS) and Scopus Elsevier. The authors choose the database they want to be used, as indicated in the research output descriptive form.

6.2 The time windows of citations

Citations will be updated till February 29th 2015.

6.3 The self-citations

Inclusion or exclusion of self-citations in bibliometric evaluations is still an open issue in bibliometric analysis. Building on the suggestions of the ANVUR Bibliometrics Working Group, the GEV02 decided to not exclude self-citations but to examine with particular attention articles which present an abnormal number of self-citations (e.g. 50% of total citations of the article). The final decision on the classes of merit of these research outputs will be based on this additional scrutiny.
The GEV02 has decided to include in its Final Report the results of some randomized sampling tests to verify the quantitative impact of the self-citation phenomenon.

6.4 Bibliometric Indicators

The bibliometric evaluation will use, for all articles published on indexed journals in WOS and Scopus databases, an algorithm which considers the number of citations of the article and the impact indicator Journal Metric (JM) of the hosting journal.
Following the advice of the ANVUR Biblimetrics Working Group, the GEV02, has decided to use more than one Journal Metric (JM) indicator. For each database, one indicator will aim at measuring the popularity of the publication source (citations are considered independently from

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their origin) and another one the prestige (citations are weighted on the basis of prestige of their origin).

The impact indicators proposed for the journal are listed below:

- for WoS (https://www.webofknowledge.com): 5-year Impact Factor (5YIF), popularity indicator, and Article Influence (AI), prestige indicator[1];

- For Scopus (http://www.journalmetrics.com): Impact per Publication (IPP), popularity indicator, and SCImago Journal Rank (SJR), prestige indicator[2].

When submitting research outputs, authors must choose a database and will have the possibility to choose one between the two alternative JM indicators. However the choice of the JM is not compulsory.

If the choice is not done, the GEV02 will procced with a default choice. Considering the need to refer to indicator more commonly known and used as possible,

The defaults chosen JM are the 5-year Impact Factor (5YIF) in case the selected database is WoS and Impact per Publication (IPP) in case it's Scopus.

6.5   The classification algorithm

The algorithm used for the subdivision of articles in 5 classes of merit defined in the VQR Call is based on a combined use of the bibliometric indicator related to the impact of the journal in which the article was published (JM) and the citation indicator measuring the impact of the single paper (CIT). Depending on the year of publication the first or the second indicator can have a greater relative weight. Each article is evaluated within a specific reference category (more details below), relating to the specific year of publication. The evaluation procedure is calibrated in order to ensure that the probabilities ex ante of falling in the different classes are consistently defined with respect to the world wide subject category cohort and for each year, as indicated by the VQR Call:

For each scientific area (Subject Category or All Science Journal Classification):

• Excellent [top 10% of the distribution of the international scientific production];

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[1] The choice of the 5 YIF instead on the more well-known impact factor (IF) is due to its stability and to the fact that the time window coincides with the one of the AI.

[2] The time window for which the citations are considered is of 3 years for both indicators. Moreover, the definition of IPP is the same as the 5YIF while that of the SJR, although not identical, is very similar to that of AI.

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• High [10% - 30% of the distribution of the international scientific production]

• Fair [30% - 50% of the distribution of the international scientific production];

• Acceptable [50% - 80% of the distribution of the international scientific production]

• Limited [80% - 100% of the distribution of the international scientific production]

The indication of the percentiles reflects the classes of merit and does not refer to the expected percentages of the evaluation of the research outputs presented for the VQR. The evaluation of individual research outputs is not comparative: each paper will be assigned to the proper class regardless of the final evaluation of other research outputs. The first step in the evaluation of a given article is the identification of its reference category known as Subject Category (SC) in WoS and All Science Journal Classification (ASJC) in Scopus. A journal can belong to one or more SC, and the indication of which one has to be used for the evaluation of the research output must be done by the author/institution submitting it. This indication is not, however, binding and may be modified by the GEV if the content of the article appears more relevant for another of the SC to which the Journal belongs. A multidisciplinary category is present both in WoS (Multidisciplinary Sciences) and in Scopus (Multidisciplinary) and includes Journals such as Nature, Science, etc., characterized by a plurality of scientific topics. Articles published in a journal that appears only in this category will be reassigned to a specific SC on the basis of the majority of (i) the citations contained in the article and (ii) the citations to the article. The article will eventually keep the JM of the journal and the number of citations received, without affecting the distribution of its final SC. The same procedure will be adopted for the journals appearing only in other multidisciplinary subject categories of WoS and Scopus (ex. *Physics, Multidisciplinary* in WoS).

As mentioned above, the allocation of the article into one of the 5 classes specified in the VQR Call is done according to a calibration procedure for each SC and each year.

6.6   Calibration procedure

The calibration of the bibliometric algorithm depends on the specific SC and on the year analysed. The algorithm differentiates between the *journal article[3]* and *letter* typology from *review* typology, calculating different empiric cumulative distributions for the two cases.

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[3] Published *conference papers* are also considered within this typology.

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The empiric cumulative distribution of the bibliometric indicators JM for journals of the considered SC is calculated for each publication year and a percentile is assigned to each review/journal. Similarly, the cumulative empiric distribution of the number of citations (CIT) of all the articles published in each SC and each year is calculated. A percentile is assigned to each article. At the end of the procedure each article will be labelled by two percentiles (percentile review/journal and percentile citations). The two percentiles identify a point on the area $Q = [0,1]x[0,1]$ in the Cartesian plane, delimited by the percentile of the JM of the journal (axis X) and by the percentile of the citations CIT (axis Y). Q is divided in 5 subareas respecting the percentages of articles in each area as defined in the VQR Call.

This subdivision is realized by straight lines, identified as follows:

$$CIT = A \cdot JM + B_n$$

The angular coefficient of the lines delimiting subareas is by default the same for each line in order to increase the homogeneity of the adopted criteria. The intercepts B_n are calculated by ANVUR, according to the distribution of each SC, to guarantee that the percentages for the different classes of the VQR Call are respected. An example of the subdivision of Q in 5 subareas is given in Figure 1. Despite the distribution of articles changes from one category to another and from year to year, the algorithm allows obtaining a consistent calibration across the different fields.

The slope A of the threshold lines is defined by the GEV02. Its role is extremely important. Depending on its value the final classification is based predominantly on the percentile of citations (when the slope is less than 1) or vice versa on the percentile of the journal metric (when the slope is greater than 1). For example, referring to Figure 1, a horizontal line would correspond to an evaluation based only on the percentile of citations. Building on the existing bibliometric literature[4], extremely high slopes should be avoided, in order not to risk that the JM alone determines the impact of a single article published there. In other words, A should be typically a number smaller than 1, in order to include effectively the information of CIT that refers to the impact of the single research output. This choice is not "absolute", but it depends on different citational practices of the different disciplines and on the year of publication.

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[4] See an example the *San Francisco Declaration on Research Assessment (DORA)* - http://www.ascb.org/dora/ - and IEEE Statement on Appropriate use of Bibliometric Indicators –
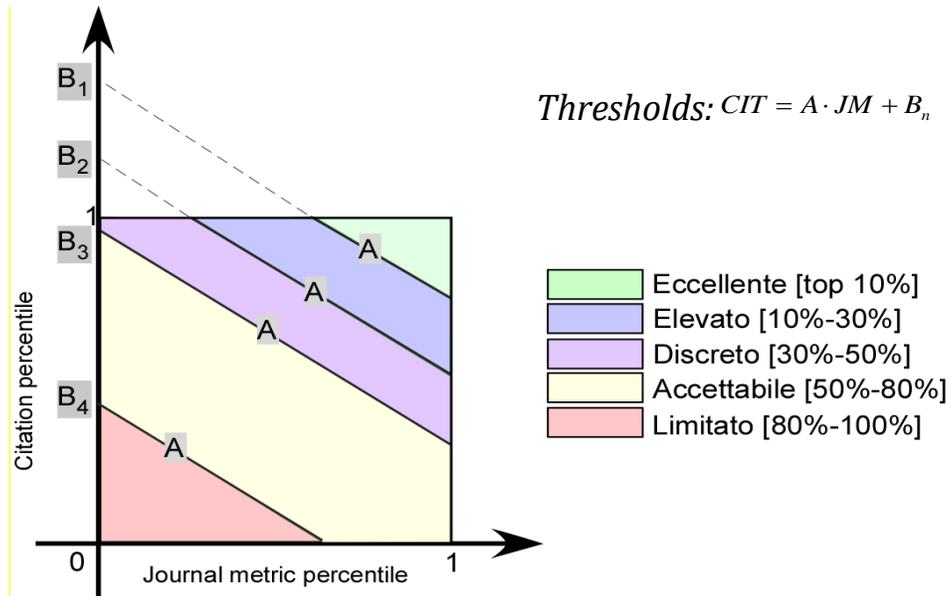www.ieee.org/publications_standards/publications/rights/bibliometrics_statement.html.

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Figure 1. Representation in percentiles of all articles published in a given SC in a particular year. Each publication is placed in the plane according to the percentile indicator of impact of the journal JM (row) and the percentile of the number of citations CIT (column). The plan is divided into five areas according to the percentages shown in the VQR Call. The angular coefficient of the straight lines delimiting the zones is set the same for all the straight lines. B_n intercepts are calculated by ANVUR, depending on the distribution of the particular SC, to ensure that the percentages of the contract are met.

Extensive simulations realized by the ANVUR Bibliometrics Working Group, the GEV02 has observed that the citational data are quite stable up to 2013. Then the suggested slopes to be used according for the different years are:

- 2011: -0.4
- 2012: -0.6
- 2013: -0.9
- 2014: -1.5

These slopes can vary by a maximum of 30% for 2011, 2012 and 2013 in order to account for the specificities of the different SC[5]. Regarding 2014, given that the citational data are less stable,

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[5] Such as, for example, the possibility of classifying in class excellent research outputs which has not received any citations

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most of the research outputs will be sent to peer review. The slopes should in any case belong to $[-2.0, -1.0]$ range.

Figure 2 shows, as example the calibration of a SC by the 4 parallel lines. The angular coefficient chosen is -0.6 in order to privilege the weight given to citations in the final evaluation. As one can easily observe the data points representing the articles of the SC, are not homogenously distributed. By choosing appropriate values for the intercepts B_n, it is possible to guarantee that the percentages of the VQR classes are respected with at least a 10% accuracy. In other words, when the bibliometric algorithm is applied to the journal world production, we obtain the percentages defined in the Ministerial Decree and in the VQR Call. This means that each article submitted to the VQR will be evaluated always according to the percentile of the international scientific production of its area.
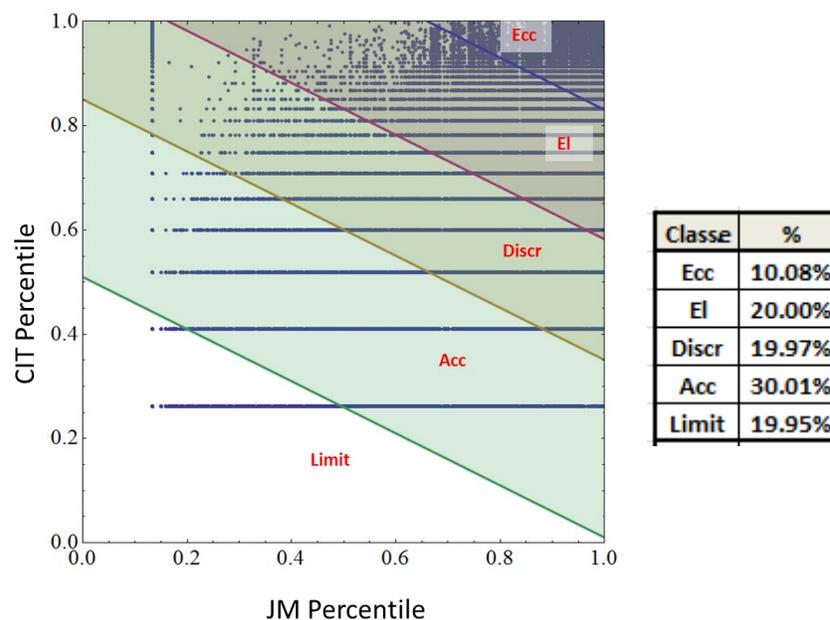

Classe	%
Ecc	10.08%
El	20.00%
Discr	19.97%
Acc	30.01%
Limit	19.95%

Figure 2. Example of application of the bibliometric algorithm to a sample SC. The division of the sub-space Q by parallel lines in order to respect the percentage defined in the call when the algorithm is applied to the world population of the specific SC.

Once the calibration has been done, the class of merit for each research output is obtained as follows. The percentiles of JM of the journal/review where the article has been published and the percentiles of the received citations are calculated in order to identify a point in the square

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described above. According to the area where the point is located, the evaluation is obtained according to the bibliometric algorithm.

There are particular cases which are difficult to classify due to conflicting indicators. When articles are published on highly prestigious journals but receive few citations (bottom right corner, Figure 2) or are published on reviews/journals with a very low JM but with a high citational impact (upper left corner in Figure 2). In these cases of uncertainty the evaluation will follow an *informed peer review* procedure that require a phase of peer evaluation by the GEV02 members or by external reviewers if there are not the required competencies among the GEV02 member. In order to identify these kinds of articles, two lines with positive slopes are drawn to identify two IR regions in the upper left and bottom right corners of Q plane (see Figure 3).

The GEV02, in agreement with the other GEVs, identifies the IR regions by tracing two lines with positive slopes forming two triangles (see example in Figure 3.). The one on the upper left side is delimited by the segment connecting point (0; 0.5) and the intersection between the border line of the "excellent" class zone with the superior border of Q. The bottom right one is a right isosceles triangle which identifies 5% of the research outputs for 2011 and 2012 and 7% for 2013.

Finally, considering the reduced numbers of citation for the articles published in 2014, the GEV02 has decided to submit to *informed peer review* all articles published in 2014 classified by the proposed bibliometric other than "Excellent".
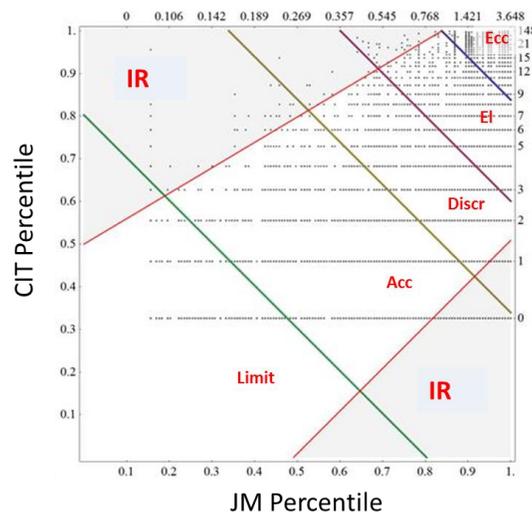

Figure 3. Example the definition of the areas unsure to be managed by informed peer review (IR).

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7. Typologies of evaluated research outputs

With reference to the ANVUR classification included in the VQR 2011-2014 Call, the GEV02 has decided to accept for evaluations only those listed in the following:

- Regarding type 1, Scientific monographs and related products:
  (a) Research monograph
  (f) Critical editions, limited to SSD FIS/08
- Regarding type 2, Journal contributions:
  (a) Scientific article
  (b) *Review essay*
  (c) Letter
- Regarding type 3, Book contributions:
  (a) Chapter or essay
  (b) Conference proceedings with *peer review*
- Regarding type 4, Other scientific products (only if accompanied by documents allowing the identification of the publication date):
  (a) Compositions, interpreting this as devices and/or prototype
  (f) Exhibitions, interpreting this as science popularization initiatives
  (h) Databases and softwares, including algorithms
- Regarding type 5, the Patents granted within the evaluation period (from 1/1/2011 to 31/12/2014)

The GEV will consider not admissible the following publications:

- New editions and translations of works published before 2011
- Introductions and/or postfaces to new editions of publications appeared before 2011
- *Abstracts.*

8. Conflict of interest

GEV02 members will not evaluate or assign to external reviewers or to other GEV02 members:

- Research outputs they have authored or co-authored;

- Research outputs which have been authored or co-authored by spouses and relatives up to the fourth degree of kinship;

- Research outputs submitted by universities of which they have been employees or official associates (even through research centers) since 1/1/2011;

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National Agency for the Evaluation of
Universities and Research Institutes

anvur

Agenzia Nazionale di Valutazione del
sistema Universitario e della Ricerca

Evaluation of Research Quality

VQr

Valutazione Qualità della Ricerca

- Research outputs submitted by research centers controlled by MIUR or other public and private entities that are voluntarily subject to the VQR of which they have been employees or official associates (even through research centers) since 1/1/2011;

- In case of conflict, the research output will be assigned by the Sub-GEV Coordinator to another GEV02 member. In case of conflict involving the GEV02 Coordinator, the research output will be assigned by the VQR Coordinator.

For all the above research outputs there exists a conflict of interest when:

- the institution has a permanent internal division along a territorial or disciplinary dimension (e.g., a local section of a research center, institute, department), only with respect to the research outputs presented by the same internal unit;

- the institution does not have a permanent internal division along a territorial or disciplinary dimension (e.g., a local section of a research center, institute, department), with respect to the research outputs presented by the institution;

- the internal organization is based on several hierarchical levels (e.g., several institutes within a single department) a conflict of interest emerges at the lowest level (e.g., GEV02 members who are affiliated with different institutes belonging to the same department have a conflict of interest only with respect to the research outputs presented by authors belonging to the same institute) .

In case of conflicts of interest, the GEV02 Coordinator, or the sub-GEV Coordinator when appropriate, will assign the research output to another GEV02 member for whom no conflict of interest is present.

In case of conflicts of interest involving the GEV02 Coordinator, the corresponding research outputs will be assigned by the VQR Coordinator or by a person designated by the VQR Coordinator.

In all cases, the GEV02 will maximize the numbers of reviewers coming from institutions different from the one related to the submitted research output.