

Experience from the GII-GRIN- SCIE Conference Rating system

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Meeting of the Informatics National Associations
Informatics Europe, Hamburg – October 26th, 2022

Agenda

- Motivation and brief history
- Technical structure
- Perspective on the future

<https://scie.lcc.uma.es/>

Motivation

- Research assessment in Italy and Spain mostly uses a **bibliometric** approach
- Conferences are still not adequately considered by Scopus, ISI/WoS
- As a consequence
 - the evaluation exhibits a systemic bias
 - the evaluation disincentivizes publications at major conferences, reducing the impact of national research
- This happens at many levels
 - Habilitation of candidates
 - Selection of candidates for positions in universities
 - Evaluation of university research output

Consequences of the limited consideration of conferences

- Researchers and institutions are evaluated in an incorrect way
- Researchers are incentivized to optimize the metrics used at the national level
 - The impact of their research is reduced
- In Spain the GGS rating has obtained official recognition and it had a significant impact on publication profile
- In Italy, there was no official recognition
 - There was an impact, but reduced compared to Spain
 - The rating has been extensively used by selection committees

Brief history

- A committee was formed in 2014 by [GII](#) and [GRIN](#)
- A first version was published in 2015
- An agreement with [SCIE](#) was activated in 2017
- Four releases (all available on the Web site)
 - 2015
 - 2017
 - 2018
 - 2021

Design principles

- (1) Based on an **algorithm**
- (2) **Transparent**
- (3) Built starting from **freely available data**
- (4) **Multiple sources** (but not too many)

Benefits: Periodic updates, Verifiability

The algorithm

- (1) Source selection
- (2) Entity resolution
- (3) Evaluation of primary class and IF
- (4) Combination of primary class and IF
- (5) Aggregation of indexes

(1) Sources

- **CORE**

- Classification into 4 classes: A*, A, B, and C
- Created by a committee, based on the consideration of citations and expert opinions
 - Partial access to decision criteria
- 1,526 events considered
 - some local (Australian) events have been excluded
- **67 A*, 215 A, 421 B, 823 C**

- **MAS** - Microsoft Academic Search Conference Ranking

- Citations and Field rating
- Good coverage of computer science, around 2,000 events extracted

- **LiveShine**, built from data extracted from Google Scholar

- Citations and h-index for each conference
- Around 1,000 venues
- Profile different from MAS

(2) Entity resolution

- **Entity resolution** is applied to analyze the correspondence between events extracted from distinct sources
 - To recognize events that changed their name, DBLP is used
- Result: **2,831 events** in the 2018 version

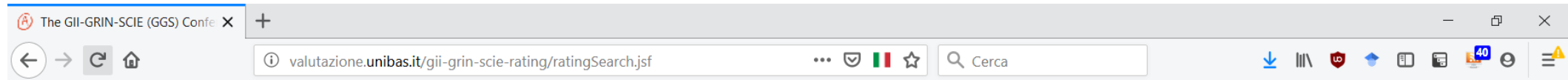
(3) Primary class, IF and (4) their combination

- Each event in CORE gets the class in the ranking (A* -> A++)
- For each event in MAS and LiveShine
 - the primary class is based on the ordering on FieldRating/h-index
 - the IF is the average number of citations per paper
 - The combination of primary class and IF produces a classification on 7 levels
A++/A+/A/A-/B/B-/C

(5) Aggregation of indexes

- For events that are associated with several elements, you get the best result
- A **consensus** approach is used to combine the class returned by each source
- Each event is finally associated with one of 7 classes **A++, A+, A, A-, B, B-, W**
 - W represents «Work in progress»
 - It does not necessarily mean that the event has a low profile; possibly there is limited coverage in the sources
- Population 2018:
 - **32 A++; 50 A+; 82 A; 93 A-; 205 B; 161 B-; 2,172 W**
- It is then grouped into 4 classes:
 - Class 1 (82: A++,A+), Class 2 (175: A, A-), Class 3 (366: B, B-), Work in progress (W)

Web access to the GGS rating



The GII-GRIN-SCIE Conference Rating



Explore the GII-GRIN-SCIE (GGS) Conference Rating

Mirror@www.conorzio-cini.it - Mirror@valutazione.unibas.it - Mirror@gii-grin-scie-rating.scie.es

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Download [The GGS Conference Rating 2018](#) (Excel .xlsx file) - last updated: May, 30th 2018

This initiative is sponsored by [GII](#) (Group of Italian Professors of Computer Engineering), [GRIN](#) (Group of Italian Professors of Computer Science), and [SCIE](#) (Spanish Computer-Science Society). For details about the rating algorithm and the process, see the [Conference Rating description page](#).

Search Conferences

Name [Search](#) Sample: *int*conf*data*

Acronym [Search](#) Sample: vldb or *ubi*

Class [Search](#) Sample: 1 or 2 or 3

Rating [Search](#) Sample: A++ or A+ or A or A- or B or B-

Collected Ratings [Search](#) Sample: A++, A++, A++ or A+, A, A

▼ **Legenda**

Class	Ratings	Size	Description
Class 1	A++, A+	32 + 50 = 82 conferences	excellent, top notch conferences
Class 2	A, A-	82 + 93 = 175 conferences	very good events
Class 3	B, B-	205 + 161 = 366 conferences	events of good quality
-	Work in Progress	2172 conferences	work in progress

Detailed info

The GII-GRIN-SCIE (GGS) Confe X

valutazione.unibas.it/gii-grin-scie-rating/ratingSearch.jsf

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Search Conferences

Name Search Sample: "int*conf*data"

Acronym Search Sample: vldb or "ubi"

Class Search Sample: 1 or 2 or 3

Rating Search Sample: A++ or A+ or A or A- or B or B-

Collected Ratings Search Sample: A++, A++, A++ or A+, A, A

Legenda

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Your search returned 1 results.

Title	Acronym	GGS Class	GGS Rating	Qualified Classes	Collected Classes
EUROPEAN CONFERENCE ON SOFTWARE MAINTENANCE AND REENGINEERING	CSMR	3	B	CORE:C, LiveSHINE:A-, MA:A-	A-, A-, C

Detailed Ratings (click to expand)

CORE:											
Acronym	Title										Class
CSMR	European Conference on Software Maintenance and Reengineering										C

LiveSHINE:										
Acronym	Conference	Class	H-Index	RankH-Index	ClassH-Index	AvgCitations	RankAvgCitations	ClassAvgCitations	Publications	Citations
CSMR	European Conference on Software Maintenance and Reengineering	A-	45	217	A-	17,01	244	A-	501	8520

Microsoft Academic:										
Acronym	Conference	Class	FieldRating	RankFieldRating	ClassFieldRating	AvgCitations	RankAvgCitations	ClassAvgCitations	Publications	Citations
CSMR	Conference on Software Maintenance and Reengineering	A-	66	368	B	18,8	437	A	809	15209

Excel file

GII-GRIN-SCIE-Conference-Rating-30-mag-2018-11.54.45-Output - Excel

Accedi

File Home Inserisci Layout di pagina Formule Dati Revisione Visualizza Sviluppo Guida Cosa vuoi fare? Condividi

Taglia Copia Copia formato Incolla Appunti

Arial 10

Carattere

Testo a capo

Generale

Unisci e allinea al centro

Formattazione condizionale

Formatta come tabella

Stili cella

Inserisci Elimina Formato

Celle

Somma automatica

Riempimento

Cancella

Ordina e filtra

Trova e seleziona

Modifica

A2 0

	A	B	C	D	E	F	G	H
		Title	Acronym	GGIS Class	GGIS Rating	Qualified Classes	Collected Class	All Qualified Classes
1	0	3-D DIGITAL IMAGING AND MODELLING	3DIM	Not Rated	ted (discontinued)	CORE:C	C	CORE:[C]
2	1	INTERNATIONAL CONFERENCE ON 3D IMAGING, MODELING, PROCESSING, VISUALIZATION AND TRANSMISSION	3DIMPVT	Work in Progress	Work in Progress	MA:C	C	MA:[C]B
3	2	INTERNATIONAL SYMPOSIUM ON 3D DATA PROCESSING VISUALIZATION AND TRANSMISSION	3DPVT	Work in Progress	Work in Progress	CORE:C, MA:B	B, C	CORE:[C], MA:[B-A]
4	3	3DTV-CONFERENCE: THE TRUE VISION - CAPTURE, TRANSMISSION AND DISPLAY OF 3D TV CONTENT	3DTV CON	Work in Progress	Work in Progress	MA:C	C	MA:[C]D
5	4	IEEE SYMPOSIUM ON 3D USER INTERFACES	3DUI	3	B-	CORE:B, LiveSHINE:B, MA:B, B, C	B, B, C	CORE:[B], LiveSHINE:[B]
6	5	INTERNATIONAL CONFERENCE ON 3D VISION	3DV	Work in Progress	Work in Progress	MA:C	C	MA:[C]C
7	6	INTERNATIONAL CONFERENCE ON 3G MOBILE COMMUNICATION TECHNOLOGIES	3G	Work in Progress	Work in Progress	CORE:C	C	CORE:[C]
8	7	INTERNATIONAL CONFERENCE ON P2P, PARALLEL, GRID, CLOUD, AND INTERNET COMMUNICATIONS	3PGCIC	Work in Progress	Work in Progress	LiveSHINE:C	C	LiveSHINE:[C]D
9	8	ADVANCES IN MODEL-BASED SOFTWARE TESTING	A MOST	Work in Progress	Work in Progress	MA:B-	B-	MA:[C]A
10	9	ASIAN SOLID-STATE CIRCUITS CONFERENCE	A SSCC	Work in Progress	Work in Progress	MA:C	C	MA:[C]D
11	10	INTERNATIONAL WORKSHOP ON ADVANCED ARCHITECTURES AND ALGORITHMS FOR AAA-IDEA	AAA-IDEA	Work in Progress	Work in Progress	CORE:C	C	CORE:[C]
12	11	INTERNATIONAL SYMPOSIUM ON APPLIED ALGEBRA, ALGEBRAIC ALGORITHMS AND EFFICIENT COMPUTATION	AAAAAECC	Work in Progress	Work in Progress	CORE:B	B	CORE:[B]
13	12	SYMPOSIUM OF ASIAN ASSOCIATION FOR ALGORITHMS AND COMPUTATION	AAAC	Work in Progress	Work in Progress	CORE:C	C	CORE:[C]
14	13	CONFERENCE ON ARTIFICIAL INTELLIGENCE	AAAI	1	A++	CORE:A++, LiveSHINE:AA++, A++, A++	CORE:[A++], LiveSHINE:[A++]	CORE:[A++], LiveSHINE:[A++]
15	14	ALGORITHMIC APPLICATIONS IN MANAGEMENT	AAIM	Work in Progress	Work in Progress	CORE:C, LiveSHINE:C, MA:C, C, C	C, C, C, C	CORE:[C], LiveSHINE:[C], MA:[C], C, C
16	15	ADAPTIVE AGENTS AND MULTI-AGENTS SYSTEMS	AAMAS	1	A+	CORE:A++, LiveSHINE:AA++, A+, A	CORE:[A++], LiveSHINE:[AA++], A+, A	CORE:[A++], LiveSHINE:[AA++], A+, A
17	16	TRUST IN AGENT SOCIETIES	AAMAS-TRUST	Work in Progress	Work in Progress	LiveSHINE:B	B	LiveSHINE:[B]B
18	17	ABSTRACT STATE MACHINES, ALLOY, B AND Z	ABZ	Work in Progress	Work in Progress	CORE:C, LiveSHINE:C	C, C	CORE:[C], LiveSHINE:[C]
19	18	AIAA/CEAS AEROACOUSTICS CONFERENCE	AC	Work in Progress	Work in Progress	MA:B	B	MA:[B]D
20	19	ADVANCED COURSE ON ARTIFICIAL INTELLIGENCE	ACAI	Work in Progress	Work in Progress	CORE:C	C	CORE:[C]
21	20	APPLIED COMPUTING CONFERENCE	ACC	Work in Progress	Work in Progress	CORE:C	C	CORE:[C]
22	21	INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING, CONTROL, AND TELECOMMUNICATIONS	ACCTT	Work in Progress	Work in Progress	MA:C	C	MA:[C]D
23	22	ASIAN CONFERENCE ON COMPUTER VISION	ACCV	3	B	CORE:B, MA:B	B, B	CORE:[B], MA:[B]B
24	23	ACM INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTER ENTERTAINMENT (FACE (DIMEA))	FACE (DIMEA)	Work in Progress	Work in Progress	CORE:B, LiveSHINE:C	B, C	CORE:[B], LiveSHINE:[C]
25	24	AUSTRALASIAN CONFERENCE ON COMPUTING EDUCATION	ACE	Work in Progress	Work in Progress	LiveSHINE:C	C	LiveSHINE:[C]C
26	25	WORKSHOP ON ALGORITHMS, COMBINATORICS, AND GEOMETRY	ACG	Work in Progress	Work in Progress	CORE:C	C	CORE:[C]
27	26	ADVANCES IN COMPUTER-HUMAN INTERACTION	ACHI	Work in Progress	Work in Progress	CORE:C, MA:C	C, C	CORE:[C], MA:[C]D
28	27	ALGORITHMS AND COMPLEXITY IN DURHAM	ACID	Work in Progress	Work in Progress	CORE:C	C	CORE:[C]

GII-GRIN-SCIE-Conference-Rating

Pronto

Impostazioni di visualizzazione

110%

Lessons learned

- Entity resolution is crucial, high quality sources like DBLP are essential
- Using automatic tools introduces some potential bias, but it provides the “strength of numbers”
- The fact that sources are proprietary leads to fragility
 - 2 of the 3 sources used by GGS are not fully accessible today and the 2021 release is expected to be the last
- Being algorithmic is a strong point for making it acceptable by evaluators and official procedures
 - it is also a weakness in order to receive strong support by IE
- Availability of ML and modern data fusion may allow the development of novel solutions
 - e.g., Aida <https://skm.kmi.open.ac.uk/the-aida-dashboard/>

Looking forward

- Open citations may lead to higher quality tools
 - citations must not be the only tool to evaluate researchers
 - but they facilitate the identification of important venues.
- CORE has improved and can play an important role
 - It adopts a careful approach, aims at transparency, it involves an international community
 - it still focuses only on core computer science, which is an issue for the community I belong to in Italy, which also works on computer architecture, robotics, bioinformatics
- For journals, classification by Scopus shows clear anomalies
 - GRIN is planning to propose a revision of Scopus Subject Categories, to clean them up and remove journals that are out of place
 - GII may contribute to this initiative
 - Could IE also contribute?

Final remarks

- Conferences have good chances to remain the center of research publications for many research domains
- Many previous defects of conference publications have been solved
 - Multi-phase reviewing
 - Often reviews that are deeper than what an author gets from major journals
 - An acceptance process that is more transparent than what we see in journals
- Having conferences that publish into journals appears an interesting option
 - But, commercial entities do not always follow this and keep a “conference” classification for what is formally a journal