

EXECUTIVE SUMMARY

A survey was conducted recently to understand faculty sentiment and ongoing efforts towards collaboration. A total of 135 faculty responded. The key takeaways from the survey conducted are:

1. 86% of the total respondents have active international collaborations excluding their doctoral/ post-doctoral supervisors and 90% believe that international collaboration is important, necessary, and complementary to their research at IITM. Clearly, faculty sentiment and focus on international collaborative research is high.
2. It may be possible to further increase collaboration by focusing on certain segments. For instance, only 40% of the respondents have an active collaboration with doctoral/ post-doctoral supervisors/ Institutions.
3. Another segment to explore would be increasing collaborations with institutions featured in the top 20 globally as there are clear benefits to our internationalization efforts through alliances with them. Currently, 31% of the respondents have an active collaboration with these institutions and 59% have not approached them for a collaboration.
4. The most preferred mode of collaboration is Joint Publications, and most respondents found a combination of Joint Research Projects, Joint Publications and Visits ideal. The popularity of Joint Publications is in keeping with trends worldwide and assumes greater significance with the current preference for online collaboration given the travel restrictions that are in place.
5. There is scope to improve the number of publications with international co-authorship. Currently, 15% of the faculty who participated in the survey had 60% or more papers published in the last five years with at least 1 international co-author whereas 38% are at 10% or less (this includes 18 faculty who have not published papers with an international co-author).
6. 94% of the respondents feel that increased collaborations help in improving visibility for their research and overall publication statistics. On the other hand, only half of the faculty feel there is a direct link between citations and collaborations. Data published in various journals and presented in this report indicate that citations and collaborations are indeed correlated. The annexure to this report focuses on the QS World University Rankings where we compare IIT Madras with institutions of a similar standing.

The Office of Global Engagement has been restructured into 3 verticals to make the most of existing opportunities and help face current as well as expected challenges to internationalization.

- **International Collaborations:**
 - With respect to observations 2, 3, 4 and 5 we have proposed certain initiatives to assist faculty in their efforts to collaborate with their global counterparts.
 - Multiple co-funded international mobility programs with partner universities
 - Putting together exciting online programs
 - The following initiative is also proposed to assist with improving opportunities for further collaborations with respect to visits and joint publications (ref observation 4 and 5).
 - Extended visits during the semester and virtual faculty on roll
 - There is an opportunity to have more collaborations with QS top 20 institutes (ref Observation 3). However, certain concerns need to be addressed as there is a lower rate of success among those who reached out. Of those that approached QS top 20 institutes for collaboration only 31% were successful. A lack of research and mobility funding were the top cited reasons followed by lack of interest. We propose to:

- Share a comprehensive list of funding options available for research and mobility across premier institutions globally
- Maintain a database of existing collaborations for ease of establishing connections
- Provide faculty with a dedicated point of contact to assist in establishing a connection in their choice of institute.
- These initiatives would also assist with observations 2,4 and 5

- **International Academic Programs:**

It is proposed to:

- Have a targeted Joint Master's program
- Online classes from both universities
- Short periods of physical presence at each university
- Joint project guidance and
- Physical exams to make the program rigorous

These initiatives would serve as an opportunity to connect with institutions of choice and attract global talent in terms of faculty and students. They would be a part of the strategy to further strengthen ties which would inevitably lead to more collaborative outputs (Please refer observations 2, 4 and 5).

In addition, these could also evolve from strong alliances and further serve as a feeder for further collaborative initiatives between faculty.

- **International Conference Secretariat:**

We plan to have:

- Multiple online conferences a year and will also include
- A flipped conference model and
- Flexible keynote lectures.

These would be opportunities to connect with institutions, researchers, policy makers and other organizations which would assist faculty in forming alliances in subjects of interest (observations 2 and 3). These in turn, would again serve as occasions to improve opportunities to increase joint publications (observation 4) and also provide opportunities for international co-authorship (observation 5).

It is evident that there have been great efforts made by faculty to collaborate with peers in institutions of a similar standing across the world. It is envisaged that in keeping with global trends, numbers will continue to increase in terms of international faculty collaborations and co-authorship of research publications. These alliances in turn will help us to attract the best international faculty and students and cement our position globally.

INTRODUCTION

It is the mission of the Office of Global Engagement to enrich the experience of students and faculty at IITM by working towards making it a destination of choice for the brightest scientific minds across the world. This mission assumes greater significance with our recognition as an Institute of Eminence.

Why is global engagement important?

- Augmentation of the existing faculty with the best in the world to teach Indian students
- International students bringing their experiences to create a diverse experience for our students who may not be able to travel
- Access to a student-pool beyond our under-graduate courses
- Increased opportunities for collaboration and research
- Global recognition as a result of increased citations, international faculty, and student enrolment
- An opportunity to improve our ranking on the internationalisation parameters and as a result, our overall global rankings

Why was a survey necessary?

As a part of ongoing efforts to understand our current levels of internationalization, a survey was conducted in August 2020. This report aims to present the highlights of this survey of 135 respondents across 16 departments.

Participants shared information regarding:

- Collaborations including and excluding international doctoral/ post-doctoral supervisors
- Preferred modes of collaboration – Joint publications, visits, etc.
- The countries where these institutions are located
- Views on international collaborations
- Collaborations with QS 20 institutes
- Views on impediments to collaboration
- Opinion on the effect of citations on collaboration
- Percentage of papers published in the last 5 years with at least 1 international co-author

** 135 of 591 faculty responded. This is considered as the total for the purpose of this report.*

It was thought that it might be helpful to also include information regarding the impact of internationalization on the QS rankings to better understand the whole picture. Readers interested in reading the same may refer to the annexure.

We would like to thank the faculty that took the time to participate in the survey. We would also request those who were unable to respond, to help us with data in the next survey, so we can present a more accurate and comprehensive report.

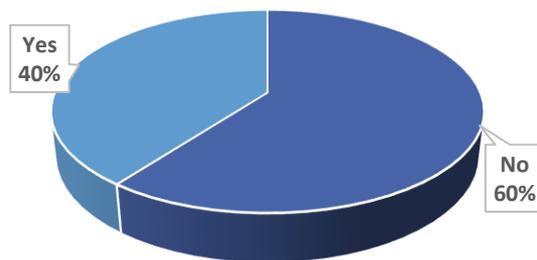
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AN OVERVIEW OF THE SURVEY RESULTS

Collaborations

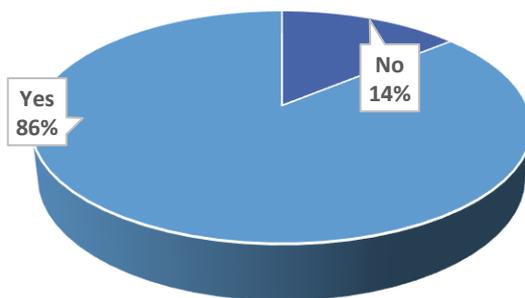
Do you have an active collaboration with your international doctoral/post-doctoral supervisor?



Department	No	Yes
Aerospace Engineering	1	4
Applied Mechanics	3	5
Biotechnology	11	4
Chemical Engineering	10	3
Chemistry	1	2
Civil Engineering	10	8
Computer Science and Engineering	6	1
Electrical Engineering	5	2
Engineering design	3	2
Humanities & Social Sciences	6	
Management Studies	6	
Mathematics	1	2
Mechanical Engineering	8	6
Metallurgical and Materials Engineering	2	5
Ocean Engineering	1	1
Physics	7	9
Grand Total	81	54

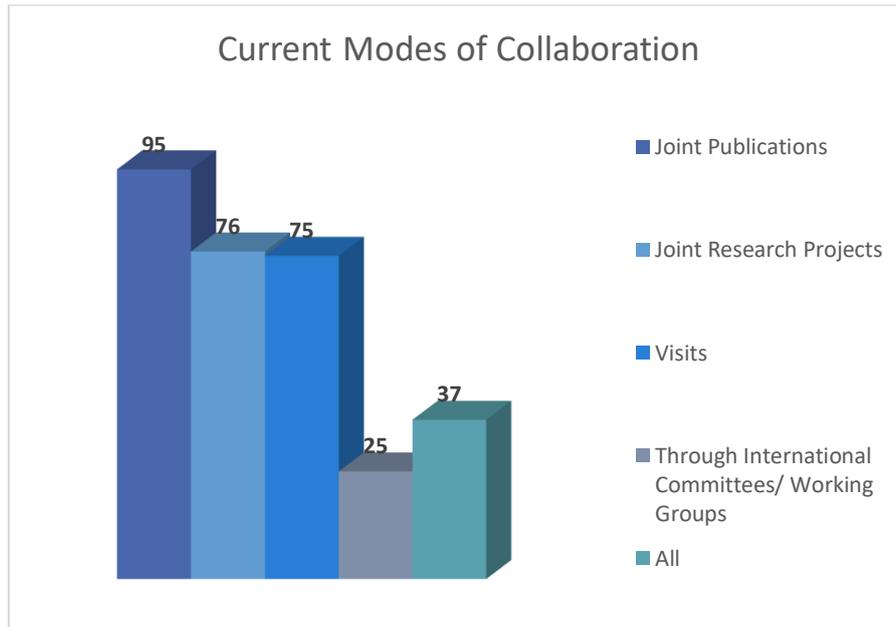
- There is a definite opportunity to reach out to doctoral/ post-doctoral supervisors in departments highlighted in the 'No' category, as this is the easiest way to establish new international collaboration

Do you currently have active international collaboration(s), excluding your doctoral/post – doctoral supervisor/institute?



Department	No	Yes
Aerospace Engineering	1	4
Applied Mechanics		8
Biotechnology	4	11
Chemical Engineering	4	9
Chemistry	1	2
Civil Engineering		18
Computer Science and Engineering	1	6
Electrical Engineering		7
Engineering design	1	4
Humanities & Social Sciences	2	4
Management Studies	1	5
Mathematics		3
Mechanical Engineering	1	13
Metallurgical and Materials Engineering	1	6
Ocean Engineering		2
Physics	1	15
Grand Total	18	117

- Every department is doing well in this parameter



- Joint publications are the most popular mode of collaboration across departments
- Most respondents (30) preferred a combination of Joint Research Projects, Joint Publications and Visits

Gauging Sentiment

Questions were asked about respondent's views to understand their interest in collaborating. It was found that most respondents views are positive.

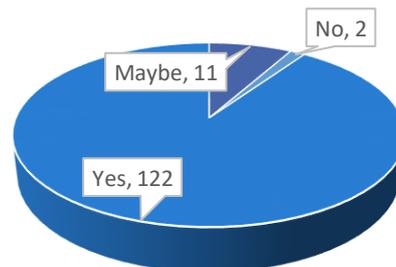
If you are not collaborating with international partners, do you wish to have an international collaboration?

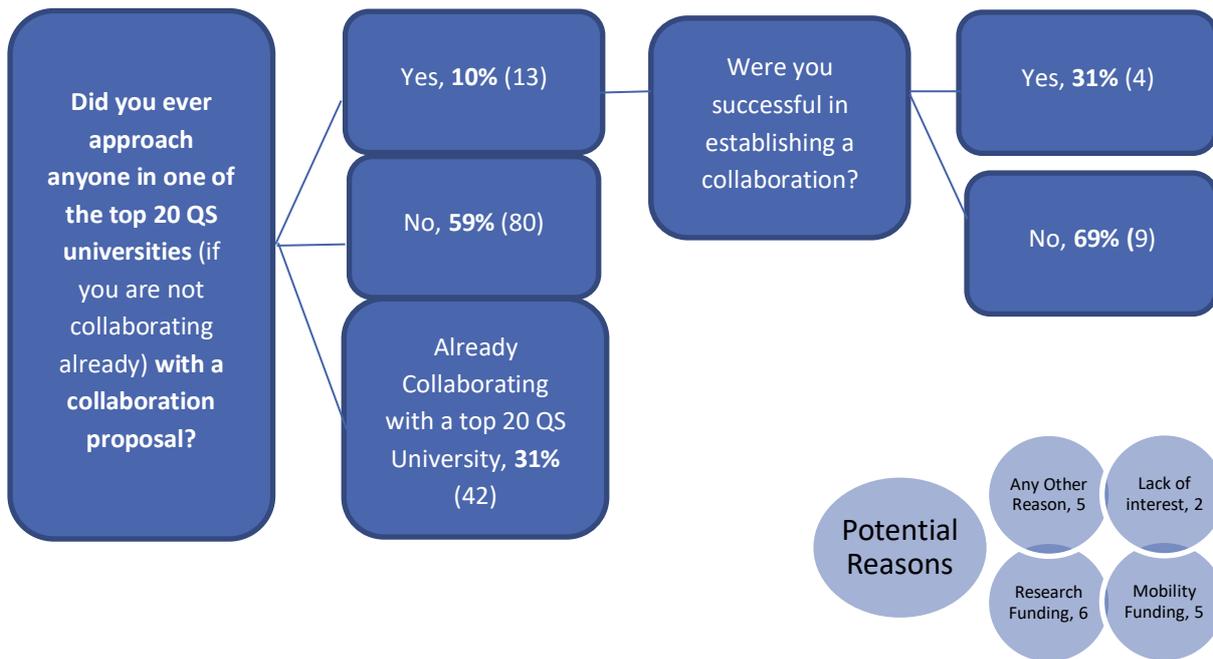


79% of the respondents are already collaborating and 93% of the remaining respondents wish to do so

Most faculty who responded think that international collaboration is crucial to their research at IITM. However, **only 31%** are already collaborating with a **QS 20 University**. **80** respondents have **not approached** these universities

Do you think international collaboration is important, necessary, and complementary to your research at IITM?





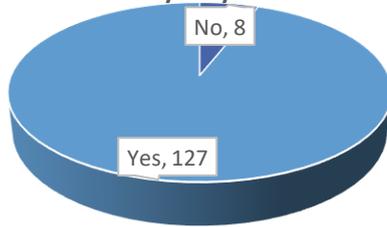
Department-wise

Department	Already collaborating with Top 20 QS university	Not Approached	Have Approached	Already Collaborating
Aerospace Engineering	60%	40%	0%	100%
Applied Mechanics	25%	63%	13%	100%
Biotechnology	33%	53%	13%	73%
Chemical Engineering	31%	69%	0%	46%
Chemistry	33%	67%	0%	100%
Civil Engineering	50%	44%	6%	89%
Computer Science and Engineering	43%	57%	0%	71%
Electrical Engineering	0%	100%	0%	86%
Engineering design	0%	60%	40%	80%
Humanities & Social Sciences	0%	67%	33%	50%
Management Studies	17%	67%	17%	67%
Mathematics	0%	100%	0%	100%
Mechanical Engineering	36%	57%	7%	86%
Metallurgical and Materials Engineering	29%	57%	14%	71%
Ocean Engineering	50%	50%	0%	100%
Physics	38%	50%	13%	88%
Grand Total	31%	59%	10%	79%

There is an opportunity here to marry-up across departments because **107 faculty are already collaborating** but **only 42** of these collaborations are **with QS top 20 universities**.

Exploring the link between Citations, Co-Authors and Collaboration

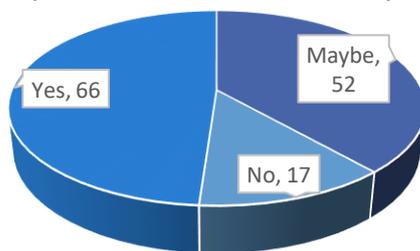
Do you think having international collaboration would help in getting more visibility for your research?



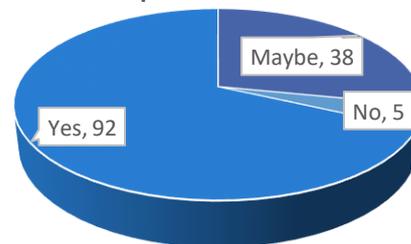
94% (127) of the respondents felt that international collaboration would help in getting more visibility for their research. However, **38%** were unconvinced about the direct link between citations and collaborations.

28% were tentative in their view of whether international collaborations help in improving overall publication statistics

Do you think citations for papers have a direct relation with collaboration (either national or international)?



Do you think that international collaborations help in improving the overall publication statistics?



Percentage of Papers Published in the Last 5 Years with at least 1 International Co-author

Department	<10%	11 to 59%	>60%	Total
Aerospace Engineering	20%	60%	20%	5
Applied Mechanics	50%	38%	13%	8
Biotechnology	47%	53%	0%	15
Chemical Engineering	54%	38%	8%	13
Chemistry	100%	0%	0%	3
Civil Engineering	39%	44%	17%	18
Computer Science and Engineering	14%	57%	29%	7
Electrical Engineering	43%	57%	0%	7
Engineering design	40%	40%	20%	5
Humanities & Social Sciences	33%	67%	0%	6
Management Studies	50%	50%	0%	6
Mathematics	0%	33%	67%	3
Mechanical Engineering	57%	43%	0%	14
Metallurgical and Materials Engineering	14%	57%	29%	7
Ocean Engineering	0%	100%	0%	2
Physics	6%	44%	50%	16
Grand Total	38%	47%	15%	135

*While **94% (127)** of the respondents felt that international collaboration would help in getting more visibility for their research **only 21** of them had more than 60% of their papers published in the last 5 years with at least 1 international co-author

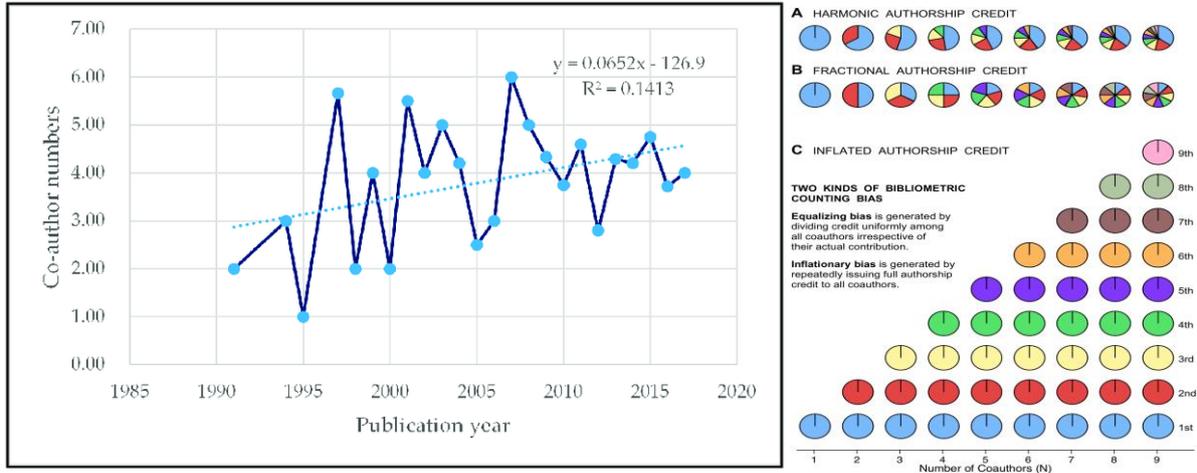
***38%** of the faculty who responded (51) had less than 10% of their papers published with at least 1 international co-author including **19 respondents at 0** (14%)

*In Chemistry, MS, ME and Chemical Engineering **over 50% of the respondents are at <10%**

*Depts where **over 25%** of the faculty had **more than 60%** of their papers with at-least 1 international co-author are Mathematics, Physics, CSE and Metallurgical & Material Engineering. These numbers, put into context, are low and Physics is the only department where a considerable number are over 60% (8)

THE IMPORTANCE OF RESEARCH COLLABORATION

The Relationship between Co-authors and Citations

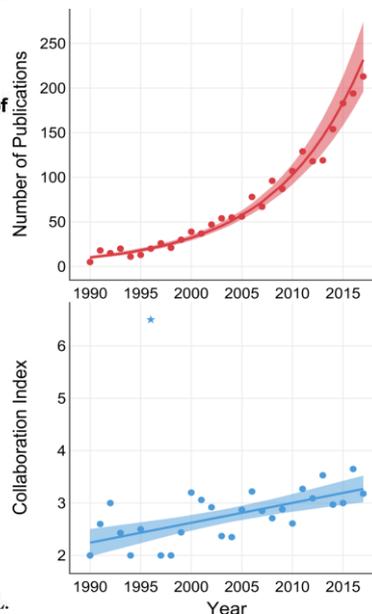
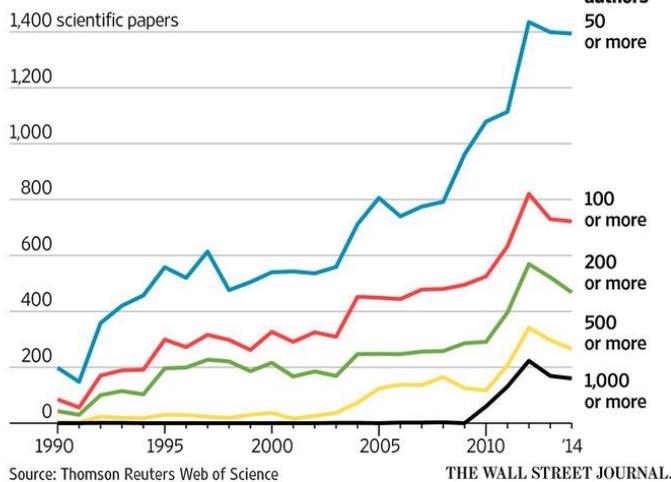


Over the years, the co-author numbers have been rising. As more researchers collaborate, it is also becoming increasingly popular to have over 50 co-authors sharing credit on a research paper.

The Relationship Between the Number of Co-authors and Funding

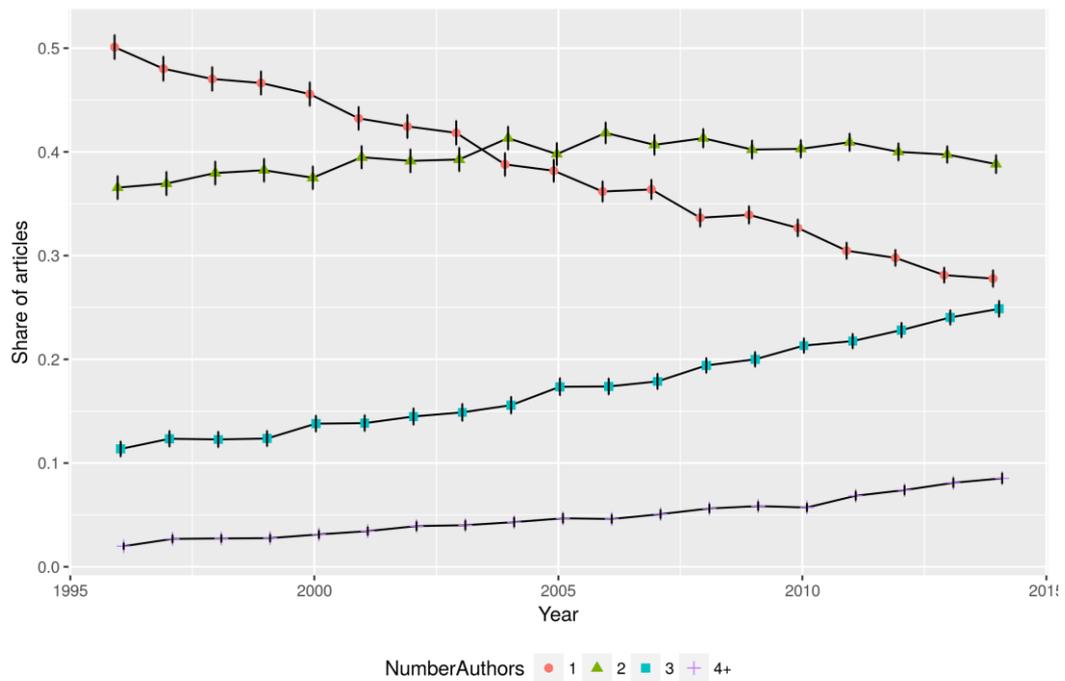
Credit Inflation

More and more scientists are sharing credit as co-authors on research papers, with a sharp increase in reports whose author counts exceed 1,000 people.



Source: Elsevier and ISI Web of knowledge; various reports and research papers.

Multiple-authorship in economics journals

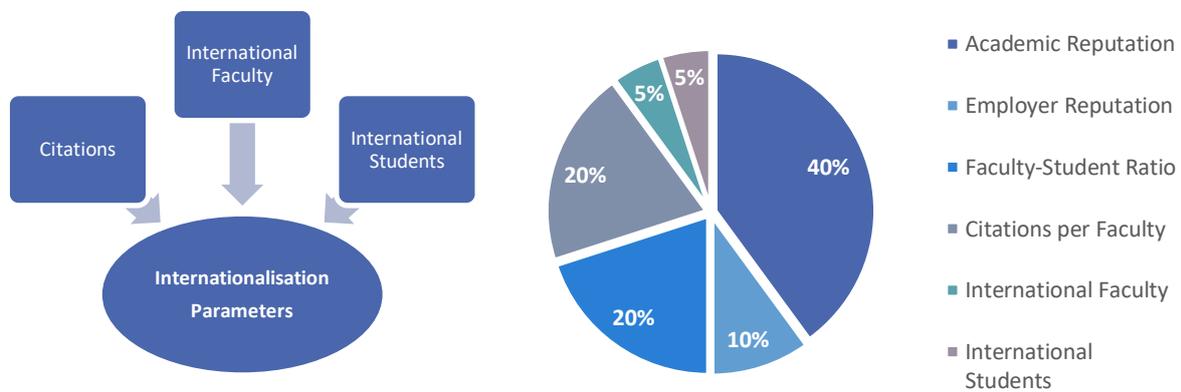


Notes: number of economic research articles published in the top 255 journals, classed by number of authors and divided by the yearly total number of articles. 95% confidence intervals as vertical lines. Source: own calculations based on Scopus data

ANNEXURE – QS RANKINGS

How does internationalisation affect ranking?

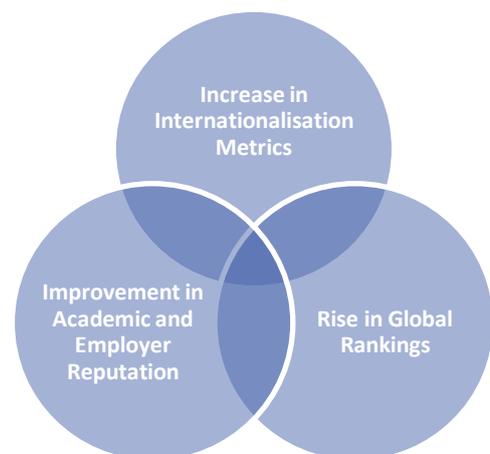
In the  , Citations per faculty, International Faculty and International Students carry a weightage of 30% together. Improvement in these parameters through internationalization will help our overall ranking to improve and hence help us to attract the best talent. The other parameters used to arrive at the final rank are Academic Reputation, Employer Reputation and Faculty-Student ratio.



* Quacquarelli Symonds (QS)

It is also our endeavor to move up in the QS Asia and QS WUR by Subject which will be introduced in more detail as well.

By studying the results of the survey we can develop a roadmap to scale up our efforts in improving our position in Citations and International Collaborations. These would be drivers for improving our global rankings.

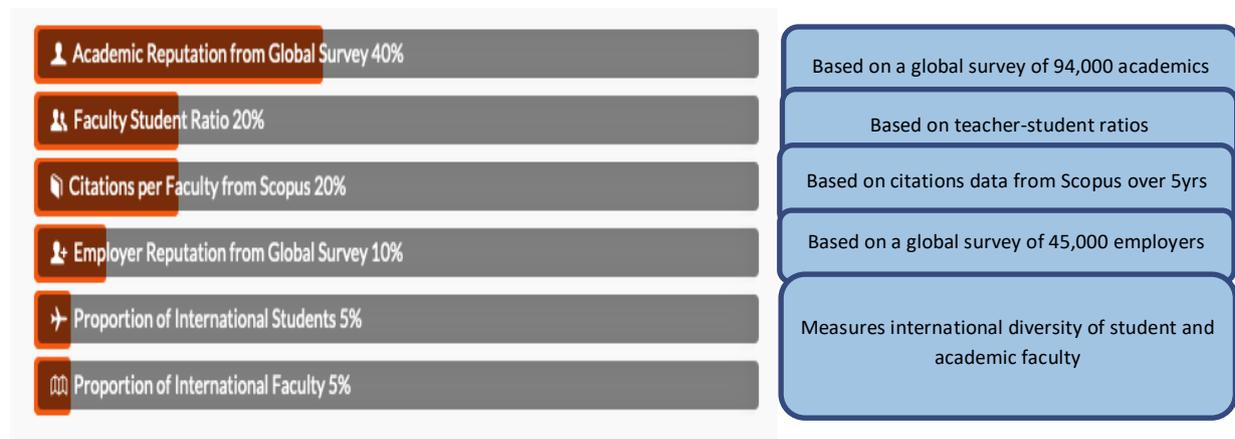


ANNEXURE 1.1 - QS WORLD UNIVERSITY RANKINGS (WUR)

QS World University Rankings are annual university rankings published by the British **Quacquarelli Symonds** (QS). The rankings compare the top 800 universities across four broad areas of interest to prospective students: **research, teaching, employability, and international outlook.**

These four key areas are assessed using six indicators, each of which are given a different percentage weighting. Four of the indicators are based on ‘hard’ data, and the remaining two on major global surveys – one of academics and another of employers – each the largest of their kind.

Components of the QS WUR:



Overall QS World Ranking Scores



IITM is in the **3rd position** amongst the IITs and in the **4th position** in India

We have fallen in rank in 2020 from **264 to 271** with an overall score of **36.1**

This is in line with other IITs (barring IITB which has moved up 10 places to 152 and IITKGP which moved up 14 places to 281)

There is a **gap of 119 ranks** between IITM and IITB because of lower Faculty Student, Employer and Academic Reputation scores

*Sourced from data from QS WUR Rankings 2020

AR	ER	FS	CPF	IF	IS
Academic Reputation	Employer Reputation	Faculty Student Ratio	Citations per Faculty	International Faculty	International Students

2020	2019	Institution	AR	ER	FS	CPF	IF	IS	Overall Score
1	1	MIT	100	100	100	99.8	100	94.1	100
2	2	Stanford University	100	100	100	98.6	99.8	67.7	98.4
3	3	Harvard University	100	100	98.7	99.6	86.3	62.2	97.4
152	162	IITB	54.5	71.2	45.8	54.6	3.4	1.6	49.4
182	172=	IITD	46.8	63	23.3	80.6	3.3	1.5	46.2
184	170	IISc	33.3	16.2	53.2	100	1.5	1.8	45.9
271=	264=	IITM	35.3	47.3	28	56.4	3.4	1.6	36.1
281=	295=	IITKGP	26.6	41.1	21.6	78.4	5.3	1	35.2
291=	283=	IITK	29.9	32.4	14.1	82.3	1.9	1.3	34.8
383=	381=	IITR	13.7	19.6	11.7	93.8		3	28.8
474=	487	University of Delhi	37.1	43.7	12.1	15.6	1.7	1.8	25
491=	472=	IITG	11.7	15.2	18.7	71.2		1.5	24.3

* Data from 2020 QS WUR - Top 3 Universities globally and Indian Universities in the top 500

Citations per Faculty

- We are at a **score of 56.4** compared to the IIT average of 73.9 and top 20 university average of 82.4
- Focus here will yield quicker results as the weightage is high and the effort needed as well as cost is lower

International Faculty

- Our **score is 3.4** which is also one of the highest scores among Indian Universities. However, there is a sizeable difference with the top 3 universities which have scores over 80.
- IITKGP is slightly higher at 5.3

International Students

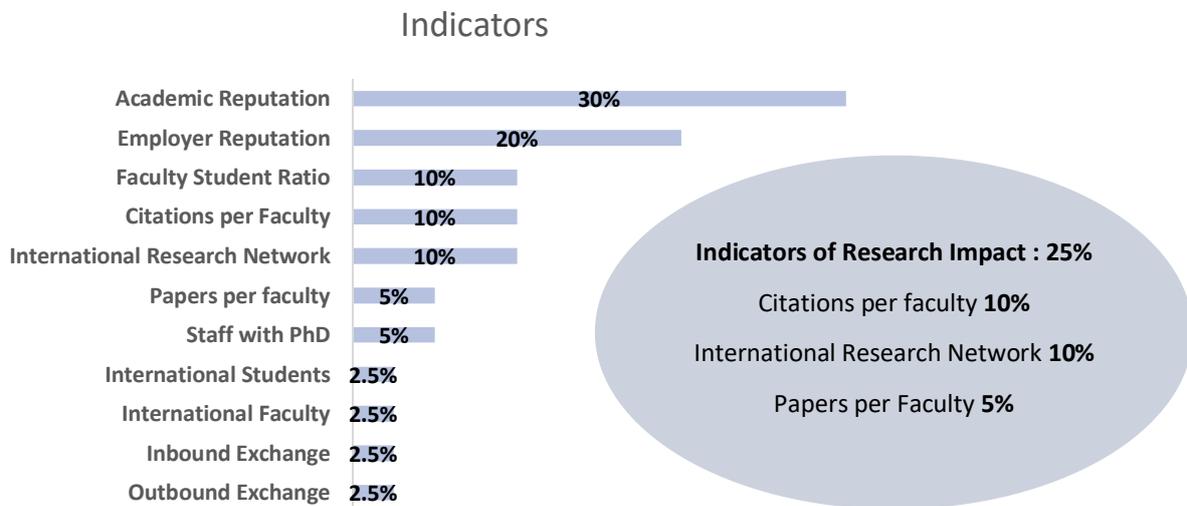
- IITM has a **score of 1.6** which can be improved with a focus on programmes like the International Joint Masters. However, this does not seem to be easy if we look at the difference in scores between the 1st and 2nd places Universities on the list (94.1 vs 67.7)

*For the purpose of this report we have used the 2020 rankings (instead of the latest 2021 QS WUR publication) to maintain a similar base for comparison with QS WUR-Asia and the QS WUR Subject-wise. The 2021 rankings have not yet been published for those.

*QS also publish the QS WUR-Asia and the QS WUR Subject-wise.

ANNEXURE 1.2 - QS WUR ASIA

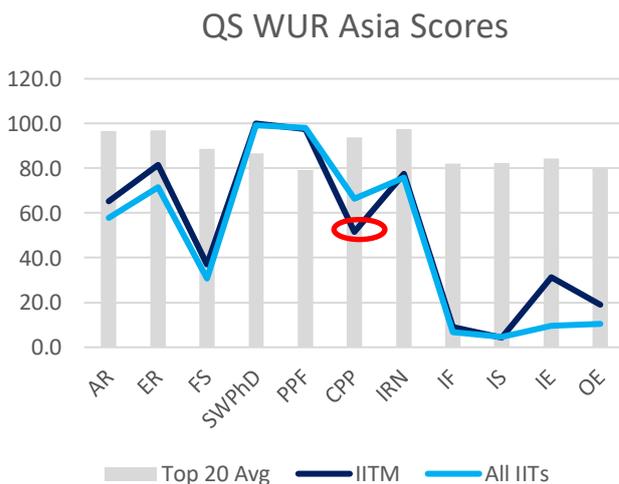
Components of the QS Asia Rankings:



Research:

Citations and Papers per faculty evaluate the **dual dimensions of impact and productivity**. Data was acquired from Scopus ‘using a publications window of papers published between 2013-17 and a six-year citation window from 2013-2018’. The International Research Network indicator uses the Margalef index to assess the **degree of international diversity in terms of research collaboration** and offers insight into the extent to which a university’s research activities are global.

*QS WUR Asia 2020 Report, Pg. 20



IITM is in the **3rd position** amongst the Indian Universities and the IITs

We have **fallen** in rank in 2020 from **48 to 50** with an overall score of **65.2**. This is in line with the other IITs

There is a **gap of 16 places** between IITM and IITB because of **lower** Faculty Student, Employer and Academic Reputation scores.

*Sourced with data from QS WUR Asia Rankings 2020 Report

AR	ER	FS	SWPhD	PPF	CPP	IRN	IF	IS	IE	OE
Academic Reputation	Employer Reputation	Faculty Student Ratio	Staff with PhD	Papers per faculty	Citations per Faculty	International Research Network	International Faculty	International Students	Inbound Exchange	Outbound Exchange

2020	2019	Institution	AR	ER	FS	SWPhD	PPF	CPP	IRN	IF	IS	IE	OE	Overall
1	1	NUS	100.0	100.0	95.4	97.3	71.3	100.0	100.0	100.0	99.4	100.0	100.0	100.0
2	3=	NTU	99.6	99.7	98.1	67.1	75.9	100.0	100.0	100.0	99.4	100.0	100.0	98.8
3	2	HKU	100.0	98.0	94.7	96.3	60.8	97.1	99.4	100.0	100.0	100.0	100.0	98.6
34	33	IITB	83.9	94.7	58.1	94.4	91.9	69.1	83.2	9.3	4.4	11.0	12.9	77.0
43	40	IITD	78.0	91.3	31.1	100.0	99.6	67.3	77.2	8.8	4.0	4.4	8.1	71.3
50	48	IITM	65.1	81.4	37.1	100.0	97.4	51.6	77.4	9.1	4.3	31.2	18.9	65.2
56	53	IITKGP	55.1	76.2	28.9	100.0	99.3	69.6	87.5	15.7	1.5	1.3	16.8	62.5
65	61	IITK	60.2	67.0	18.9	100.0	99.9	61.9	59.2	4.1	3.0	4.9	5.1	57.0
90	86	IITR	33.2	48.9	15.7	100.0	99.9	79.6	84.3		11.3	1.2	3.8	49.1
112	107	IITG	29.0	40.9	25.1	100.0	98.8	64.6	62.0		3.8	12.4	8.2	43.5

*Top 3 Universities in Asia and IITs, Source: QS WUR Asia Rankings 2020 Report

Papers per Faculty	•We are at a score of 97.4 which is well above the average of the top 20 Universities at 79.3
Citations per Paper	•Our score is 51.6 which is below the IIT average of 66.2 and the top 20 average of 93.8
International Research Network	•IITM has a score of 77.4 which is above the IIT average of 75.8 but below the top 20 average of 97.5

ANNEXURE 1.3 - QS WUR SUBJECT WISE

Indicators and weightages differ slightly here with the introduction of an H-index and the metric of Citations per Paper.

<p>Academic Reputation</p> <p>Based on a survey</p> <p>Academics select narrower subject disciplines of expertise</p> <p>10 domestic & 30 international institutions chosen for research excellence in chosen area</p>	<p>Employer Reputation</p> <p>Based on a survey</p> <p>Employers identify 10 domestic & 30 international institutions excellent for graduate recruitment</p> <p>They also identify disciplines of recruitment preference</p>
<p>Citations per Paper</p> <p>Choice of measurement due to the impracticality of gathering faculty numbers reliably broken down by discipline</p> <p>Minimum publication threshold set to avoid anomalies from small nos. of highly cited papers</p>	<p>H-index or Hirsch Index</p> <p>Way of measuring both the productivity and impact of the published work of a scientist /scholar based on the set of the academic's most cited papers & the number of citations received in other publications</p>

Methodology to Assess Large Research Collaborations:

In 2016, QS introduced an improvement to the way research papers with authors from an exceptionally large number of institutions are assessed. Situations such as these occur most frequently in scientific subjects such as high-energy physics, cosmology, or genomics, where large-scale international collaborations are common.

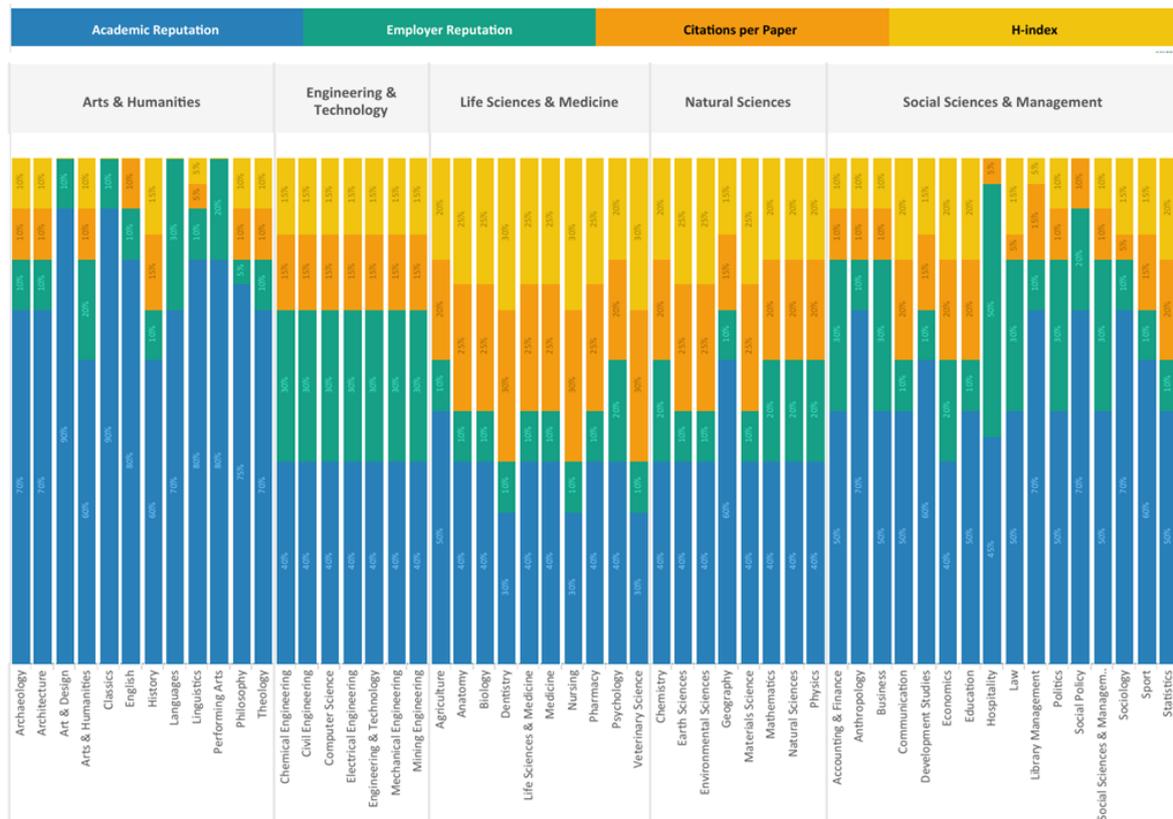
If each institution involved in papers such as these receives full credit for the citations, even very important and worthwhile papers can end up having a disproportionately large impact on the ranking results. Yet it is equally undesirable to give each institution a share of the credit, as this could discourage research collaborations among groups of any size.

With the support of the QS Global Academic Advisory Board, the solution adopted was to omit any paper with more than 99.9% of the average number of institutional affiliations for the subject in question. This replaces the previous approach of omitting all papers with more than 10 institutional affiliations, which unfairly penalized certain scientific fields, such as medicine.

Weightages:

As research cultures and publication rates vary significantly across academic disciplines, the QS World University Rankings by Subject applies a different weighting of the above indicators in each subject. For example, in medicine, where publication rates are very high, research citations and the h-index account for 25% of each university's total score. On the other hand, in areas with much lower publication rates such as history, these research-related indicators only account for 15% of the total ranking score. Meanwhile in subjects such as art and design, where there are too few papers published to be statistically significant, the ranking is based solely on the employer and academic surveys.

Further details can be found on the [QS Intelligence Unit](https://www.iitmadras.ac.in/qs-intelligence-unit) website.



*Data from QS Subject Rankings Methodology

The Citations per Paper and H-index weightages together are between **20% to 40%** depending on the subject

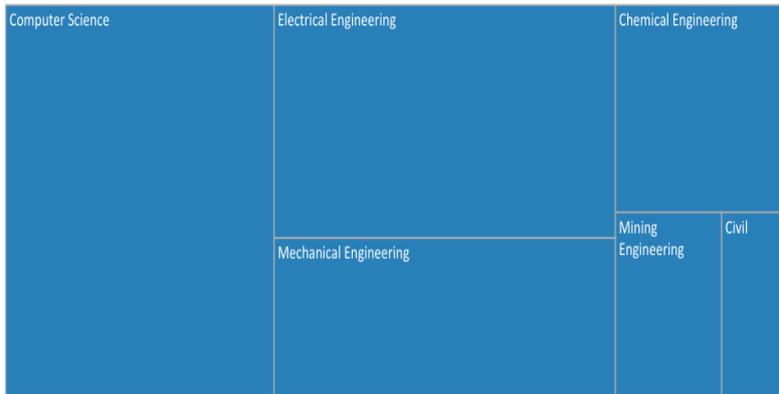
Research Metrics for Engineering & Technology:

These charts show the number of paper affiliations and citations indexed – which serves as a proxy for the scale of global research in the discipline. The resulting paper threshold for each discipline is also depicted, representing the minimum number of papers an institution must have published in the last five years in order to qualify for our tables in that subject.

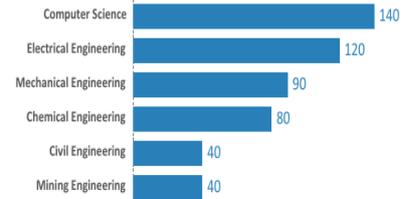
Subject Area
Engineering & Technology

Year 2020

Papers Indexed by Subject - Year 2020

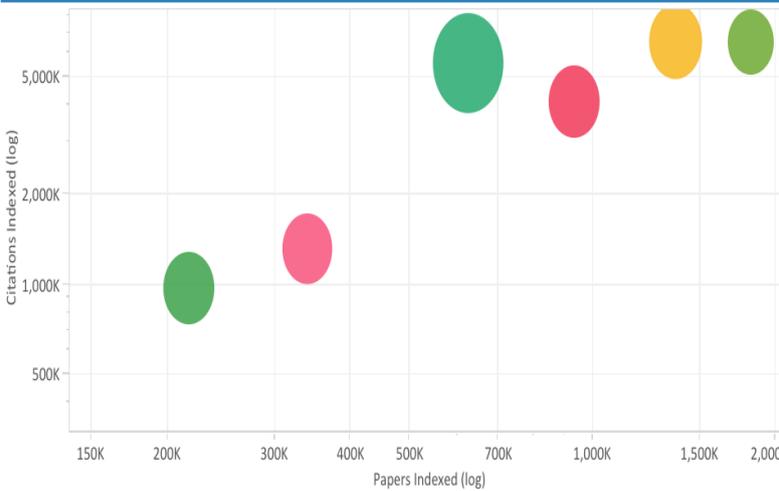


Paper Threshold by Subject



Engineering & Technology

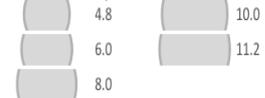
Papers and Citations Indexed - By Subject - Logarithmic Scale - Year 2020



Subject

- Chemical Engineering
- Civil Engineering
- Computer Science
- Electrical Engineering
- Mechanical Engineering
- Mining Engineering

Citations per Paper



*Data from QS Subject Rankings Methodology

Engineering & Technology

QS Engineering & Technology Scores



IITM has moved up to the **88th** position in the rankings from 95. Other IITs have advanced similarly

We are **4th among the IITs** as well as institutes from India.

CPP and H scores are below the IIT average
We are in the top 100 in all subcategories except Computer Science & Chemical. We are absent from the Mineral & Mining Engineering list.

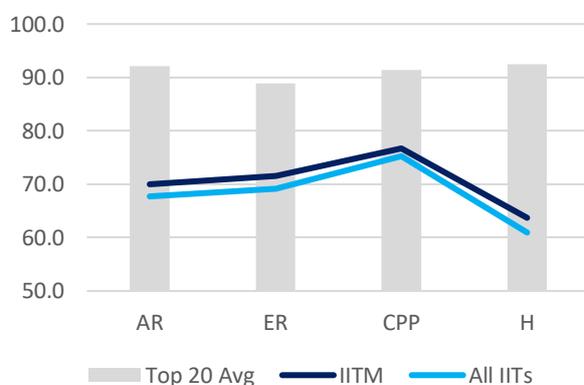
*Sourced with data from QS WUR Subject-wise Rankings 2020

2020	2019	Institution	AR	ER	CPP	H	Score
1	1	MIT	100	98.1	95.1	95.9	98.1
2	2	Stanford University	97	94.7	99.9	93.8	96.3
3	4	University of Cambridge	95	98	91.9	85.9	94.1
44	53=	IITB	84.7	82.3	80.4	75.4	81.9
47=	61=	IITD	83.1	80.4	82.3	77.9	81.4
86=	113=	IITKGP	79.3	73.7	82	77.9	77.8
88=	95=	IITM	82.1	76.4	76.5	69.8	77.7
96=	125=	IITK	80.9	71.8	79.5	70.8	76.4
156=	197=	IITR	71.7	66.7	83.2	75.4	72.5
233=	278=	IITG	69.2	63.4	78.4	69.8	68.9

* Data from 2020 QS WUR Subject - Top 3 Universities globally and IITs

Natural Sciences

QS Natural Sciences Scores



Chemistry, Physics, Mathematics, Earth & Marine Sciences, Environmental Sciences, Geography and Material Sciences come under this category

IITM stands **2nd among the IITs** and **3rd among universities from India** (behind IISc)

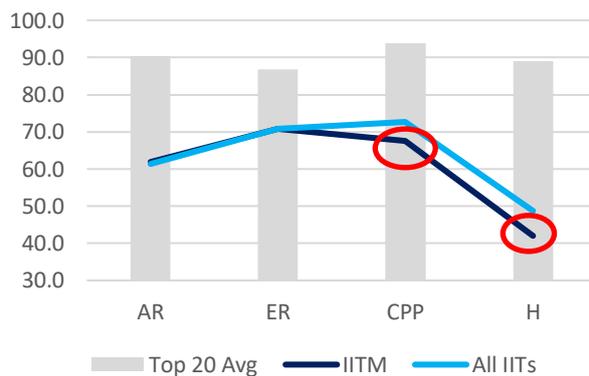
*Sourced with data from QS WUR Subject-wise Rankings 2020

2020	2019	Institution	AR	ER	CPP	H	Score
1	1	MIT	98.1	98.3	92.7	98.6	97.2
2=	3	Harvard University	96.9	100	94.1	93.1	96.2
2=	2	Stanford University	95.4	95.1	95.1	100	96.2
108=	132=	IITB	74.9	78.4	79.1	73.9	76.2
195=	238=	IITM	70.0	71.5	76.7	63.7	70.4
207	231=	IITD	72.2	75.2	74.2	55.6	69.9
210=	253=	IITK	71.7	68.4	75.6	61	69.7
258=	283=	IITKGP	68.4	68.1	75.5	55.6	67.2
368=	391=	IITR	61.9	61.7	74.4	53.1	62.6
401-450	451-500	IITG	55.1	60.5	71.2	63.7	

*Data from 2020 QS WUR Subject - Top 3 Universities globally and IITs

Social Sciences & Management

QS Social Sciences & Management Scores



IITM has **moved up** in the rankings to **347**

We stand in **4th place among the IITs** and in the **8th place among universities from India** featured in the list which include University of Delhi, JNU and the IIMs

Lower AR, ER & CPP scores place us behind IITD & IITB

IITM is ahead of IIMC with better ER & CPP scores

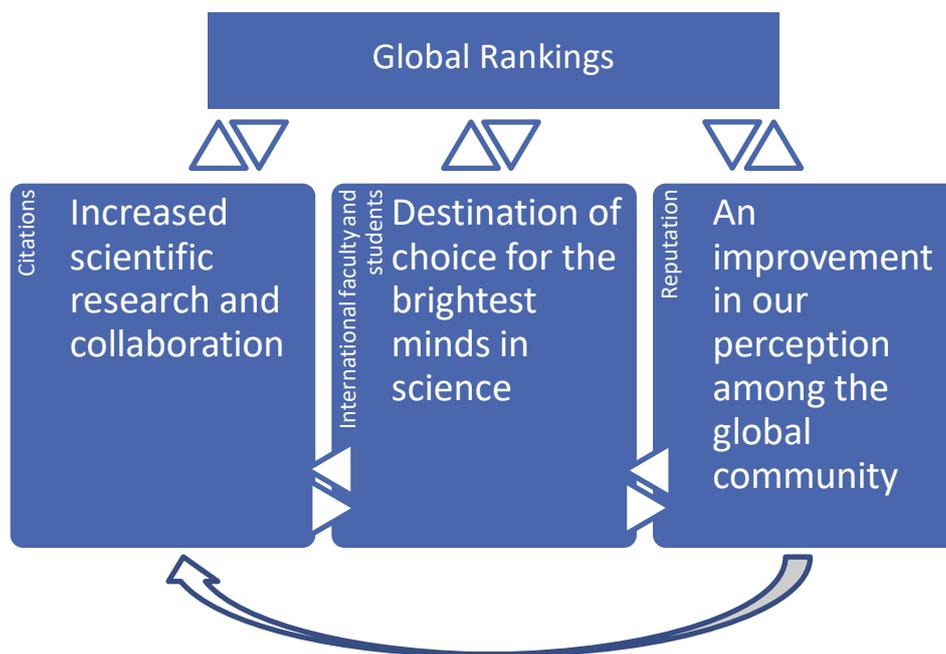
*Sourced from data from QS WUR Subject-wise Rankings 2020

2020	2019	Institution	AR	ER	CPP	H	Score
1	1	Harvard University	97.5	100	97.7	100	98.5
2	2	LES	100	87.9	93.9	89.8	94.7
3	3	Stanford University	94.2	93	99.1	97.2	94.6
183=	231=	IITD	66.4	75.8	79.2	54	69.3
203=	241=	IITB	68	77.4	70.9	42	68.5
331=	401-450	IITKGP	59.6	69.4	77.9	54	63.8
347=	401-450	IITM	61.8	70.8	67.6	42.0	63.1
401-450		IITK	59.5	68.1	60.6	42	
451-500		IITR	53.2	63	79.8	58.3	

* Data from 2020 QS WUR Subject - Top 3 Universities globally and IITs

ANNEXURE 1.4 – COLLABORATIVE RESEARCH & GLOBAL RANKINGS

It is evident that an increase in **Citations per faculty, Citations per Paper, Papers per Faculty, International Research Network and Hirsch index** would help us to advance in the QS rankings which are an indicator of our competitiveness globally. In the wake of COVID-19, these assume even greater significance in our endeavor to be a destination of choice for research and collaboration, teaching and studying internationally. An improvement here would positively impact our reputation academically, among employers and within the student community and increase scores in those parameters as well. More importantly, a better position would help us to attract the brightest minds from across the world to forge ahead in our quest for excellence.



'The extent of COVID-19's influence on the WUR is difficult to predict. While there is an argument the pandemic could potentially weaken international student and faculty ratios, which are collectively weighted 10 percent within the rankings, universities are also research institutions. Potentially, the highly publicized research output of many previously lesser known universities could strengthen Academic Reputation, and increased collaboration, with the desire to work towards global benefit, may strengthen citations.'

QS-World-University-Rankings-2021 Report- Page 6,7