

**Further analyses of the recent ranking by
Shanghai Jiaotong University of the top 500
universities in the world
for selected countries and regions in the United
States**

**Australia, China, Hong Kong, India, Israel, Japan, Korea,
Malaysia, Mexico, New Zealand, Russia, Singapore, Taiwan;
Southwest region (Arizona, Arkansas, Louisiana, New Mexico,
Oklahoma, Texas), California, New York, Massachusetts,
Indiana, Illinois, Georgia, Florida, and “HUBS” region
(Delaware, Maryland, New Jersey, Pennsylvania)**

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During 2004, I was fortunate enough to be invited by higher education institutions in Russia, Mexico, Malaysia, South Korea, Beijing, Shanghai, and India. Everywhere I went, I saw enthusiasm, interest, and concern for their research universities. One issue continues to come up in discussions was

**“How good is our research university as compared to the rest
of the world ?”**

In the midst of this global interest, it is not surprising that two independent rankings of world's universities were published in 2004, one by the Times of London and the other by the Shanghai Jiao Tong University (SJTU).
(<http://ed.sjtu.edu.cn/ranking.htm>).

The SJTU rankings have captured attention around the world, including a reference in the December 21 edition of The New York Times
(<http://query.nytimes.com/gst/abstract.html?res=F30E14F838540C728EDDAB0994DC404482>)

In its website (<http://ed.sjtu.edu.cn/rank/2004/Methodology.htm#Meth1>), SJTU shows the following table which outlines the methodology of ranking:

Criteria	Indicator	Code	Weight
Quality of Education	Alumni of an institution winning Nobel Prizes and Fields Medals	Alumni	10%
Quality of Faculty	Staff of an institution winning Nobel Prizes and Fields Medals (pure mathematics)	Award	20%
	Highly cited researchers in 21 broad subject categories	HiCi	20%
Research Output	Articles published in Nature and Science*	N&S	20%
	Articles in Science Citation Index-expanded and Social Science Citation Index	SCI	20%
Size of Institution	Academic performance with respect to the size of an institution	Size	10%
Total			100

The website contains the following sections (<http://ed.sjtu.edu.cn/rank/2004/top500list.htm>):

- Top 500 World Universities
- Ranking Methodology
- Statistics
- Questionnaire
- Frequently Asked Questions
- Ranking Resources

The section on Top 500 World Universities breaks down the rankings as

1. Top 500 World Universities
 - Top 100
 - 101-201
 - 202-301
 - 302-403
 - 404-502
2. Top 100 North & Latin American Universities
3. Top 100 European Universities
4. Top 100 Asia Pacific Universities

Some observations:

First, the fact that in this ranking, SJTU is in the 404-502 category tells me that it is probably as unbiased as can be.

Second, it is interesting how universities in southwest region compare with other large “educational” states: California, New York and Massachusetts. The number on the right is the position of the university in the world ranking. Those in red are in top 100.

Universities in Arizona, Arkansas, Louisiana, New Mexico, Oklahoma, Texas	SJTU Rank	London Times Rank
Univ Texas Southwestern Med Center (M)	36	Not ranked
Univ Texas - Austin	40	15
Rice Univ	75	146
University of Arizona	76	183
Arizona State University	101-152	Not ranked
Baylor Coll Med (M)	101-152	Not ranked
Texas A&M Univ - Coll Station	101-152	105
Univ Texas Health Sci Center – Houston (M)	153-201	Not ranked
University of New Mexico	202-301	Not ranked
University of Houston	202-301	Not ranked
Louisiana State University	202-301	Not ranked
Tulane University	202-301	Not ranked
University of Texas Health Science Center-San Antonio	202-301	Not ranked

University of Texas Medical Branch-Galveston	202-301	Not ranked
University of Oklahoma	302-403	Not ranked
Southern Methodist University	302-403	Not ranked
Texas Tech Univ	302-402	Not ranked
New Mexico State Univ	404-502	Not ranked
Oklahoma State Univ	404-502	Not ranked
Univ of Arkansas, Little Rock	404-502	Not ranked

Universities in California	SJTU Rank	London Times Rank
Stanford Univ	2	7
Univ California - Berkeley	4	2
California Inst Tech	6	4
Univ California - San Diego	13	24
Univ California - Los Angeles	16	26
Univ California - San Francisco (M)	17	20
Univ California - Santa Barbara	35	72
Univ California - Davis	42	182
Univ Southern California	48	180
Univ California - Irvine	55	Not ranked
Univ California - Riverside	101-152	Not ranked
Univ California - Santa Cruz	101-152	175

Universities in New York	SJTU Rank	London Times Rank
Columbia Univ	9	19
Cornell Univ	12	23
Rockefeller Univ	29	Not ranked
New York University	32	79
Rochester University	52	86
State Univ New York - Stony Brook	101-152	136

Yeshiva Univ	153-201	81
State Univ New York - Buffalo	202-301	Not ranked
State Univ New York - Albany	202-301	Not ranked
Syracuse University	202-301	Not ranked
City University of New York – City College	302-403	Not ranked
Polytechnic Univ - Brooklyn	404-502	Not ranked

Universities in Massachusetts	SJTU Rank	London Times Rank
Harvard Univ	1	1
Massachusetts Inst Tech (MIT)	5	3
Boston Univ	86	75
Tufts Univ	99	104
Univ Massachusetts - Amherst	101-152	45
Northeastern University	404-503	
Univ Massachusette - Boston	404-502	
Boston College	404-502	

California is unquestionably the powerhouse in the global research university landscape. Ten universities are in the top 100, of which three are in top 10! Seven campuses in the University of California System are represented in the top 100 and two, Riverside (101-152) and Santa Cruz (101-152) are in the next group but none of the schools in California fall under 150. In addition, powerhouses such as Stanford (2), Cal Tech (6) and University of Southern California (48), all private universities, are of course highly ranked. Nearly all Californian universities have a significant number of Nobel laureates, a heavily weighted factor in the ranking. It should be mentioned that Stanford, USC, UC San Diego, UCLA, UC Davis and UC Irvine have strong to powerful medical schools on their campuses. UC San Francisco is entirely a health science university.

For the Southwest region of the United States (Arizona, Arkansas, Louisiana, New Mexico, Oklahoma, Texas) only four universities are in top 100 globally. It is interesting that a health science center, UT Southwestern Medical Center (UTSWMC), is ranked highest (36), followed by UT Austin,

Rice and University of Arizona. Again, the number of Nobel laureates is a factor. In UTSWMC, there are four Nobel laureates, UT Austin there is one, Rice University has two and University of Arizona has one. The other two large universities in the region, Texas A&M and Arizona State University are ranked in the 101-152 range. No regional university is in top 30, and the highest ranked comprehensive university is UT Austin. An intriguing question would be what could be the outcome if some of the UT “components” (a euphemism for UT campuses) also had powerful medical schools embedded in them.

From a Texas perspective, it would be interesting to monitor all future rankings to see which and when additional universities in Texas move in the top 100, and whether some of the currently ranked universities can move up.

At the end of this report, I have included another region which I am familiar with. I call it the HUBS region, a name which I used for the region when I was still living in the northeast. HUBS region covers four states: Delaware, Maryland, New Jersey and Pennsylvania. The three top universities in the region are all private: Princeton, UPenn and Johns Hopkins. However, Penn State, Pittsburgh, Rutgers, University of Maryland and Carnegie Mellon are all highly ranked by SJTU as well as London Times. Comparison between the Southwest region and the HUBS region poses many interesting questions.

Finally, it should be mentioned that although there are only 4 universities ranked in the top 100 for Massachusetts, the state does have “twin towers”, Harvard and MIT, and the honor of having the world’s top university according this ranking: Harvard University. It is interesting to NOTE that Harvard has the only consistent ranking from SJTU and London Times. Both ranked Harvard as number 1!

Universities of Countries I visited in 2004

Mexican Universities	SJTU Rank	London Times Rank
Univ Nacl Autonoma Mexico	153-201	195

Russian Universities	SJTU Rank	London Times Rank
Moscow State Univ	66	92
St Petersburg State University	302-403	

Malaysian Universities	SJTU Rank	London Times Rank
University of Malaya		89
Science Univ of Malaysia		111

Korean Universities	SJTU Rank	London Times Rank
Seoul Natl Univ	153-201	119
Yonsei Univ	202-301	
Korea Advanced Inst Sci & Tech	302-403	160
Pohang Univ Sci & Tech	302-403	163
Sungkyunkwan Univ	302-403	
Hanyang Univ	404-502	
Korea Univ	404-502	
Kyungpook Natl Univ	404-502	

Korea (None in top 100 globally in SJTU ranking).

China, Taiwan and Hong Kong Universities	Location	SJTU Rank	London Times Rank
Natl Taiwan Univ	China-tw	153-201	102
Chinese Univ Hong Kong	China-hk	202-301	84
Hong Kong Univ Sci & Tech	China-hk	202-301	42
Peking Univ	China	202-301	17
Tsing Hua Univ	China	202-301	62
Univ Hong Kong	China-hk	202-301	39
City Univ Hong Kong	China-hk	302-403	198
Fudan Univ	China	302-403	196
Hong Kong Polytechnic Univ	China-hk	302-403	
Nanjing Univ	China	302-403	192
Natl Tsing Hua Univ	China-tw	302-403	
Univ Sci & Tech China	China	302-403	
Zhejiang Univ	China	302-403	
Jilin Univ	China	404-502	
Natl Cheng Kung Univ	China-tw	404-502	
Shanghai Jiao Tong Univ	China	404-502	

Although none of the universities in the Chinese region are in the top 100, I believe that this is a region on the move. The universities in Hong Kong now play a vital role in the region. What will be the dynamics of these universities in all three regions in the coming decades is truly tantalizing.

India Universities	SJTU Rank	London Times Rank
Indian Inst Sci	202-301	
Indian Inst Tech - Kharagpur	404-502	41 (just IIT)
Univ Calcutta	404-502	

I am very surprised that Indian universities received so little attention. Having just returned from India, and observed how exciting Indian research universities are, I am confident that in the coming decades, the rankings of such universities will be altered significantly.

Other US States and countries of interest

H.U.B.S. States (Delaware, Maryland, New Jersey, Pennsylvania)

Universities	Location	SJTU Rank	London Times Rank
Princeton	NJ	7	9
Univ Pennsylvania	PA	15	28
Johns Hopkins Univ	MD	22	25
Pennsylvania State Univ – College Park	PA	43	138
Rutgers State Univ – New Brunswick	NJ	44	190
Univ Pittsburgh	PA	48	
Univ Maryland Coll Park	MD	57	134
Carnegie Mellon Univ	PA	62	38
Univ Delaware	DE	153-201	
Univ Maryland Baltimore	MD	153-201	
Thomas Jefferson University	PA	202-301	
Univ Medicine and Dentistry, New Jersey	NJ	202-301	
Temple Univ	PA	302-403	
Drexel Univ	PA	404-502	
New Jersey Inst Tech	NJ	404-502	

Florida Universities	SJTU Rank	London Times Rank
Univ Florida	67	
Florida State Univ	153-201	
Univ South Florida	202-301	
Florida International Univ	404-502	
Univ Central Florida	404-502	

Georgia Universities	SJTU Rank	London Times Rank
Emory Univ	101-152	173
Georgia Tech	101-152	65
Univ of Georgia	101-152	

Indiana Universities	SJTU Rank	London Times Rank
Purdue University	71	59
Indiana Univ	101-152	174
Univ of Notre Dame	153-201	
Indiana Univ – Purdue Univ Indianapolis	302-402	

Illinois Universities	SJTU Rank	London Times Rank
Univ of Chicago	10	13
Univ of Illinois Urbana	25	35
Northwestern Univ	30	73
Univ of Illinois Chicago	101-152	
Loyola University	404-502	

Singapore Universities	SJTU Rank	London Times Rank
Natl Univ Singapore	101-152	18
Nanyang Tech Univ	302-403	50

Israeli Universities	SJTU Rank	London Times Rank
Hebrew Univ Jerusalem	90	93
Tel Aviv Univ	101-152	
Weizmann Inst Sci	101-152	

Technion Israel Inst Tech	202-301	158
Bar Ilan Univ	302-403	
Ben Gurion Univ	302-403	
Univ Haifa	404-502	

I expect ranking of Technion will go up next year with 2 Nobel laureates in 2004 in chemistry

Japanese Universities	SJTU Rank	London Times Rank
Tokyo Univ (this is the highest ranked Asian university)	14	12
Kyoto Univ	21	29
Osaka Univ	54	69
Tohoku Univ	69	153
Nagoya Univ	97	167
Hokkaido Univ	101-152	
Kyushu Univ	101-152	
Tokyo Inst Tech	101-152	51
Tsukuba Univ	101-152	
Hiroshima Univ	202-301	
Keio Univ	202-301	
Kobe Univ	202-301	
Okayama Univ	202-301	
Chiba Univ	302-403	
Gifu Univ	302-403	
Gunma Univ	302-403	
Kanazawa Univ	302-403	
Nagasaki Univ	302-403	
Nihon Univ	302-403	
Niigata Univ	302-403	
Tokyo Med & Dent Univ	302-403	
Tokyo Metropolitan Univ	302-403	
Tokyo Univ Agr & Tech	302-403	

Univ Tokushima	302-403	
Waseda Univ	302-403	
Yamaguchi Univ	302-403	
Ehime Univ	404-502	
Himeji Inst Tech	404-502	
Jichi Med Sch	404-502	
Juntendo Univ	404-502	
Kagoshima Univ	404-502	
Kumamoto Univ	404-502	
Nara Inst Sci & Tech	404-502	
Osaka City Univ	404-502	
Shinshu Univ	404-502	
Univ Osaka Prefecture	404-502	

Australian Universities	SJTU Rank	London Times Rank
Australian Natl Univ	53	16
Univ Melbourne	82	22
Univ Queensland	101-152	49
Univ Sydney	101-152	40
Univ New South Wales	153-201	36
Univ Western Australia	153-201	96
Monash Univ	202-301	33
Univ Adelaide	202-301	56
Macquarie Univ	302-403	68
Univ Newcastle	302-403	
Univ Tasmania	302-403	161
Flinders Univ South Australia	404-502	
La Trobe Univ	404-502	142
Murdoch Univ	404-502	
RMIT		55
Curtin Inst of Tech		76

Univ of Tech Sdney		113
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New Zealand Universities	SJTU Rank	London Times Rank
Univ Auckland	202-301	67
Univ Otago	202-301	114
Massey Univ	404-502	108