



# **Weighing International Academic Awards**

Center for World-Class Universities Shanghai Jiao Tong University Shanghai, China January 20, 2015





- Methodology
- Results



## Backgrounds

- Awards are prevalent in all societies and at all times as societal symbols of recognition. Even in the rational academic world, there is an elaborate and extensive system of awards. (Frey, 2006)
- Numerous academic awards have been established to provide incentives and motivation for new academic work and to reward for past excellent academic accomplishment to individuals.



## Backgrounds

- Academic awards, especially prestigious international academic awards, have played important roles in seeking excellence by assessing and ranking academic institutions, such as Shanghai Ranking, U.S. National Research Council (NRC)'s Assessment of Research-Doctorate Programs.
- However, little is known about the reputations of academic awards.



### Research purposes

- To establish a comprehensive and balanced list of international academic awards.
- To weigh their relative reputations in relation to one another.



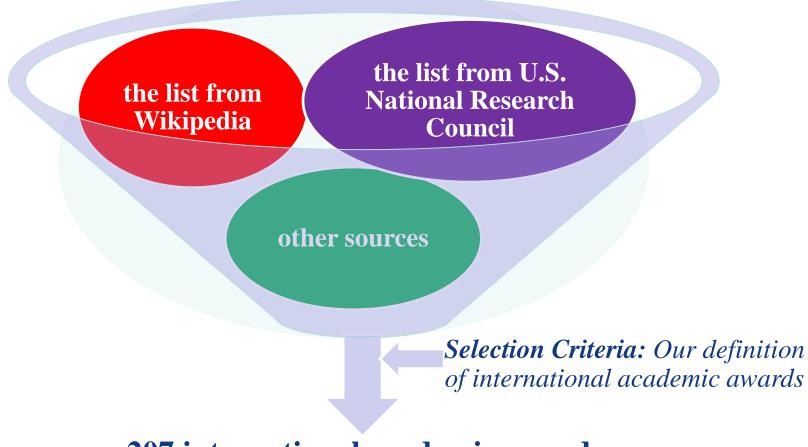
### International academic awards

- Awards are granted to individuals who have made highly recognized academic contribution.
- Awards are granted without restrictions on *nationality*, and generally regardless of *race*, *gender*, *age*, *religion*, *ethnicity*, *disability*, *language*, *or political affiliation*.
- Awards included can generally be regarded as research awards. Some types of awards not included are *scholarship awards, teaching awards, prestigious fellowships or memberships, public service awards, travel or conference grants, and student awards.*





### Preliminary selection



207 international academic awards





### Preliminary selection

	Field and Subject	Number of Awards	Percentage of Awards
Multidisciplinary Fields		21	10.1%
Life Sciences and Medic	ine	36	17.4%
	Astronomy	8	3.9%
	Chemistry	12	5.8%
Natural Sciences	Earth Sciences	15	7.2%
	Mathematics	13	6.3%
	Physics	15	7.2%
	Cross-disciplinary	8	3.9%
	Chemical Engineering	6	2.9%
	Civil Engineering	5	2.4%
F · · 0 ·	Electrical and Information Engineering	13	6.3%
Engineering Sciences	Energy Science and Engineering	4	1.9%
	Environmental Science and Engineering	8	3.9%
	Materials Science and Engineering	6	2.9%
	Mechanical Engineering	4	1.9%
	Cross-disciplinary	7	3.4%
0.10.	Economics	11	5.3%
Social Sciences	Law	7	3.4%
	Political Science	8	3.9%
	Total	207	100.0%



### Reputation survey - benchmark award



- The Nobel Prizes have become a prevailing worldwide metaphor for supreme achievement - of all sorts.
- "As the *ne plus ultra* among awards in science, the Nobel prizes still serve as the gold standard for gauging the visibility, prestige, and affluence of all other awards." (Zuckerman, 1992)



- Reputation survey questionnaires
- Reputation surveys have been carried out subject by subject.
- The preselected awards conferred in a particular subject were included and listed in the same survey questionnaire.
- The preselected awards in multidisciplinary fields and cross-disciplinary subjects were included and listed in questionnaires of all the concern fields or subjects.
- For each questionnaire, survey respondents were asked to evaluate quantitatively the relative reputations of their familiar awards as compared with the Nobel Prize.



- Reputation survey questionnaires
- For each award included in a questionnaire, a five-point scale was provided for respondents to choose from:

<b>Reputation Level</b>		<b>Reputation Score</b>
Highest (Nobel Prizes)	•	 1
High	•	 0.75
Average	•	 0.5
Low	•	 0.25
Negligible	•	 0



### Reputation survey - respondents

- Since awardees are the ones who are most familiar with the status of relevant awards and most qualified to judge the reputations of relevant awards, respondents to the questionnaire in a specific subject/field were the awardees who had won awards included in this questionnaire.
- Considering the age of the awardees, awardees from 1990 to 2013 inclusive were actually chosen as survey respondents.
- As for the recipients who had won awards granted in multidisciplinary and cross-disciplinary fields, they were included in groups of respondents by relevant awarding subjects.



- Reputation survey online survey
- The survey questionnaires were sent out to respondents by "Email Collector" of the Survey Monkey, which is the world's most popular online survey software.
- The surveys on the reputation of the preselected 207 international academic awards were conducted between March 2013 and April 2014.



### Survey responses

	Field and Subject	Total Number of Scientists Surveyed	Total Number of Respondents	Response Rate
Life Sciences and Medic	ine	669	68	10.2%
	Astronomy	77	17	22.1%
	Chemistry	192	36	18.8%
Natural Sciences	Earth Sciences	163	21	12.9%
	Mathematics	134	27	20.1%
	Physics	244	38	15.6%
	Chemical Engineering	90	13	14.4%
	Civil Engineering	65	7	10.8%
	Electrical and Information Engineering	207	28	13.5%
Engineering Sciences	Energy Science and Engineering	175	32	18.3%
	Environmental Science and Engineering	107	20	18.7%
	Materials Science and Engineering	118	22	18.6%
	Mechanical Engineering	39	9	23.1%
	Economics	119	18	15.1%
Social Sciences	Law	85	11	12.9%
	Political Science	83	24	28.9%





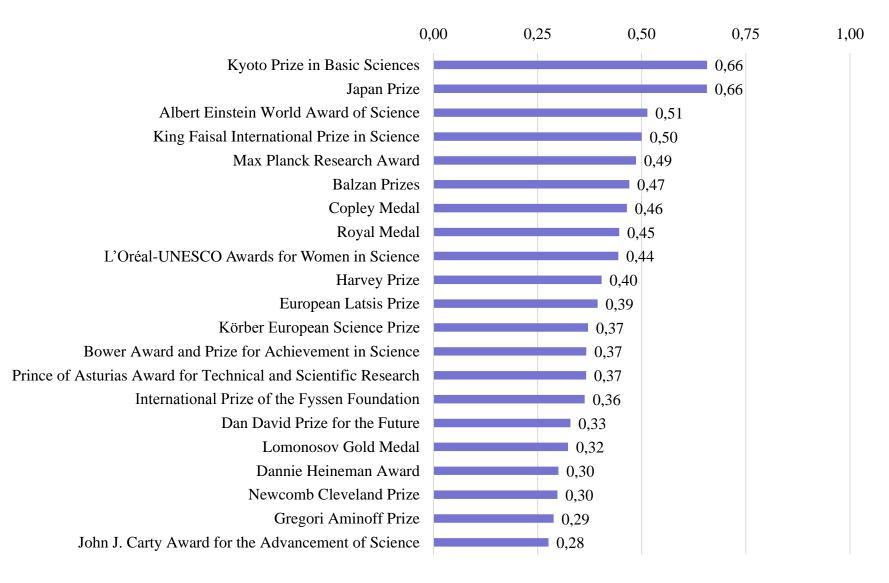
#### Awards in multidisciplinary fields

Award Name	Awarding Organization	Starting Year	Amount of Prize
Kyoto Prize in Basic Sciences	The Inamori Foundation	1985	JPY 50,000,000
Japan Prize	The Japan Prize Foundation	1985	JPY 50,000,000
Albert Einstein World Award of Science	World Cultural Council	1984	USD 10,000
King Faisal International Prize in Science	The King Faisal Foundation	1984	USD 200,000
Max Planck Research Award	Alexander von Humboldt-Stiftung Foundation and the Max Planck Society	2004	EUR 750,000
Balzan Prizes	International Balzan Prize Foundation	1962	CHF 750,000
Copley Medal	The Royal Society	1731	GBP 5,000
Royal Medal	The Royal Society	1826	GBP 5,000
L'Oréal-UNESCO Awards for Women in Science	UNESCO & L'Oréal Foundation	1998	USD 100,000
Harvey Prize	Technion - Israel Institute of Technology	1972	USD 75,000
European Latsis Prize	European Science Foundation	1999	CHF 100,000
Prince of Asturias Award for Technical and Scientific Research	The Prince of Asturias Foundation	1981	EUR 50,000
Bower Award and Prize for Achievement in Science	Franklin Institute	1990	USD 250,000
Körber European Science Prize	Körber Foundation	1985	EUR 750,000
International Prize of the Fyssen Foundation	The Fyssen foundation	1980	EUR 60,000
Dan David Prize for the Future	Dan David Foundation	2002	USD 1,000,000
Lomonosov Gold Medal	Russian Academy of Sciences	1959	
Dannie Heineman Award	The Göttingen Academy of Sciences and Humanities	1961	
Newcomb Cleveland Prize	American Association for the Advancement of Science	1923	USD 25,000
Gregori Aminoff Prize	The Royal Swedish Academy of Sciences	1979	SEK 100,000
John J. Carty Award for the Advancement of Science	National Academy of Sciences	1932	USD 25,000





#### Reputation of awards in multidisciplinary fields







#### Awards in life sciences and medicine

Award Name	Awarding Organization	Starting Year	Amount of Prize
Nobel Prize in Physiology or Medicine	Karolinska Institutet	1901	SEK 8,000,000
Albert Lasker Basic Medical Research Award	Albert and Mary Lasker Foundation	1946	USD 250,000
The Canada Gairdner International Award	The Gairdner Foundation	1959	CAD 100,000
Lasker~DeBakey Clinical Medical Research Award	Albert and Mary Lasker Foundation	1946	USD 250,000
The Shaw Prize in Life Science and Medicine	The Shaw Prize Foundation	2004	USD 1,000,000
The Canada Gairdner Global Health Award	The Gairdner Foundation	2009	CAD 100,000
Wolf Prize in Medicine	Wolf Foundation	1978	USD 100,000
The Kavli Prize in Neuroscience	The Norwegian Academy of Science and Letters	2008	USD 1,000,000
Crafoord Prize in Biosciences	The Royal Swedish Academy of Sciences	1984	SEK 4,000,000
The Louis-Jeantet Prize for Medicine	Louis-Jeantet Foundation	1986	CHF 700,000
Robert Koch Award	The Robert Koch Foundation	1960	EUR 100,000
Lasker~Koshland Special Achievement Award in Medical Science	Albert and Mary Lasker Foundation	1994	USD 250,000
King Faisal International Prize for Medicine	The King Faisal Foundation	1982	USD 200,000
Robert Koch Gold Medal	The Robert Koch Foundation	1974	
Paul Ehrlich and Ludwig Darmstaedter Prize	The Paul Ehrlich Foundation	1952	EUR 100,000
Heineken Prize for Medicine	The Royal Netherlands Academy of Arts and Sciences	1988	USD 200,000
Darwin Medal	The Royal Society	1890	GBP 1,000
International Prize for Biology	Japan Society for the Promotion of Science	1985	JPY 10,000,000





#### Awards in life sciences and medicine

Award Name	Awarding Organization	Starting Year	Amount of Prize
The Louisa Gross Horwitz Prize	Columbia University	1967	unpublicized
Heineken Prize for Biochemistry and Biophysics	The Royal Netherlands Academy of Arts and Sciences	1964	USD 200,000
Benjamin Franklin Medal in Life Science	Franklin Institute	1998	
Breakthrough Prize in Life Sciences	Breakthrough Prize in Life Sciences Foundation	2013	USD 3,000,000
Rosenstiel Award	Brandeis University	1971	USD 30,000
Wiley Prize in Biomedical Sciences	The Wiley Foundation	2002	USD 35,000
TWAS Prize in Biology	The World Academy of Sciences, TWAS	1986	USD 15,000
International Cosmos Prize	Expo'90 Foundation	1993	JPY 40,000,000
The Massry Prize	University of Southern California	1996	USD 40,000
ASBMB-Merck Award	American Society for Biochemistry and Molecular Biology	1981	USD 5,000
Pearl Meister Greengard Prize	Rockefeller University	2004	USD 100,000
TWAS Prize in Medical Sciences	The World Academy of Sciences, TWAS	1988	USD 15,000
Crafoord Prize in Polyarthritis	The Royal Swedish Academy of Sciences	2000	SEK 4,000,000
J. Allyn Taylor International Prize in Medicine	Robarts Research Institute	1985	USD 25,000
The Danone International Prize for Nutrition	Danone Institute	1997	EUR 120,000
Jessie Stevenson Kovalenko Medal	National Academy of Sciences	1952	USD 25,000
Judson Daland Prize for Outstanding Achievement in Clinical Investigation	n American Philosophical Society	2001	USD 50,000
Tobias Prize	The Royal Swedish Academy of Sciences	2008	SEK 100,000



#### Reputation of awards in life sciences and medicine

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Nobel Prize in Physiology or Medicine						1,00
Albert Lasker Basic Medical Research Award					0,72	
The Shaw Prize in Life Science and Medicine				0,60		
Lasker~DeBakey Clinical Medical Research Award				0,60		
The Canada Gairdner International Award				0,60		
The Canada Gairdner Global Health Award				0,58		
Wolf Prize in Medicine				0,56		
The Kavli Prize in Neuroscience				0,55		
Crafoord Prize in Biosciences			0,5			
Robert Koch Award			0,49			
The Louis-Jeantet Prize for Medicine			0,49			
Lasker~Koshland Special Achievement Award in Medical Science			0,48			
King Faisal International Prize for Medicine			0,47			
Robert Koch Gold Medal			0,47			
Heineken Prize for Medicine			0,44			
Paul Ehrlich and Ludwig Darmstaedter Prize			0,44			
International Prize for Biology			0,43			
Darwin Medal			0,43			
The Louisa Gross Horwitz Prize			0,43			
Heineken Prize for Biochemistry and Biophysics			0,41			
Benjamin Franklin Medal in Life Science			0,39			
Breakthrough Prize in Life Sciences			0,39			
Rosenstiel Award			0,38			
Wiley Prize in Biomedical Sciences			0,38			
TWAS Prize in Biology			0,36			
International Cosmos Prize			0,35			
The Massry Prize			0,34			
ASBMB-Merck Award			0,34			
Pearl Meister Greengard Prize			0,34			
TWAS Prize in Medical Sciences		0,				
Crafoord Prize in Polyarthritis		0,3	0			
J. Allyn Taylor International Prize in Medicine		0,30	0			
The Danone International Prize for Nutrition		0,29	)			
Jessie Stevenson Kovalenko Medal		0,26				
Judson Daland Prize for Outstanding Achievement in Clinical Investigation		0,24				
Tobias Prize		0,18				



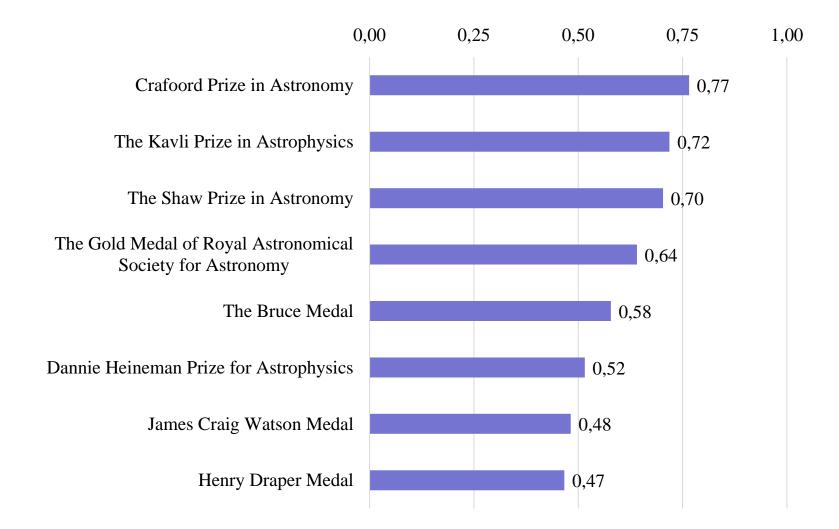


#### Awards in astronomy

Award Name	Awarding Organization	Starting Year	Amount of Prize
Crafoord Prize in Astronomy	The Royal Swedish Academy of Sciences	1985	SEK 4,000,000
The Kavli Prize in Astrophysics	The Norwegian Academy of Science and Letters	2008	USD 1,000,000
The Shaw Prize in Astronomy	The Shaw Prize Foundation	2004	USD 1,000,000
The Gold Medal of Royal Astronomical Society for Astronomy	Royal Astronomical Society	1824	
The Bruce Medal	Astronomical Society of the Pacific	1898	
Dannie Heineman Prize for Astrophysics	American Institute of Physics and American Astronomical Society	1980	USD 10,000
James Craig Watson Medal	National Academy of Sciences	1887	USD 25,000
Henry Draper Medal	National Academy of Sciences	1886	USD 15,000



#### Reputation of awards in astronomy





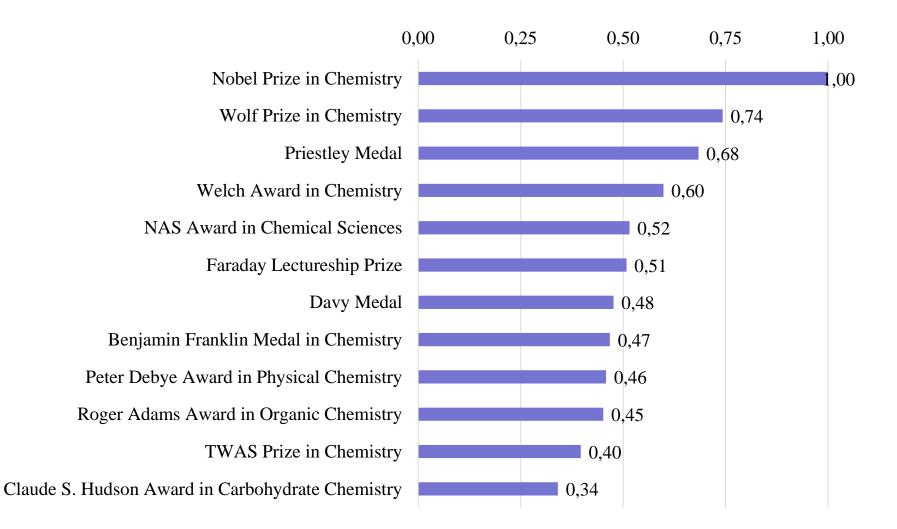


#### Awards in chemistry

Award Name	Awarding Organization	Starting Year	Amount of Prize
Nobel Prize in Chemistry	The Royal Swedish Academy of Sciences	1901	SEK 8,000,000
Wolf Prize in Chemistry	Wolf Foundation	1978	USD 100,000
Priestley Medal	American Chemical Society	1923	
Welch Award in Chemistry	The Welch Foundation	1972	USD 300,000
NAS Award in Chemical Sciences	National Academy of Sciences	1979	USD 15,000
Faraday Lectureship Prize	Royal Society of Chemistry	1869	GBP 5,000
Davy Medal	The Royal Society	1877	GBP 1,000
Benjamin Franklin Medal in Chemistry	Franklin Institute	1998	
Peter Debye Award in Physical Chemistry	American Chemical Society	1962	USD 5,000
Roger Adams Award in Organic Chemistry	American Chemical Society	1959	USD 25,000
TWAS Prize in Chemistry	The World Academy of Sciences,TWAS	1985	USD 15,000
Claude S. Hudson Award in Carbohydrate Chemistry	American Chemical Society	1946	USD 5,000



#### Reputation of awards in chemistry







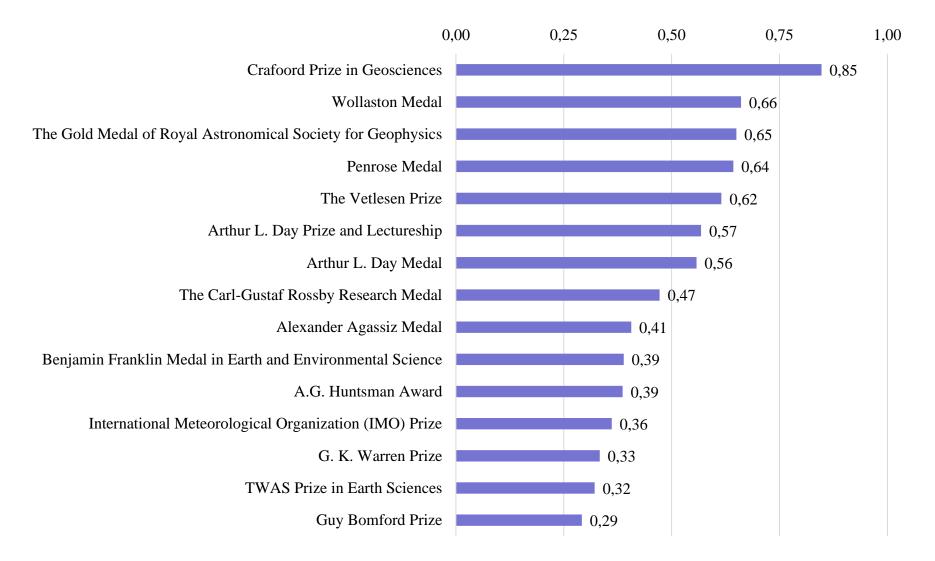
#### Awards in earth sciences

Award Name	Awarding Organization	Starting Year	Amount of Prize
Crafoord Prize in Geosciences	The Royal Swedish Academy of Sciences	1983	SEK 4,000,000
Wollaston Medal	The Geological Society of London	1831	
The Gold Medal of Royal Astronomical Society for Geophysics	Royal Astronomical Society	1903	
Penrose Medal	Geological Society of America	1927	
The Vetlesen Prize	Columbia University's Lamont-Doherty Earth Observatory	1960	USD 250,000
Arthur L. Day Prize and Lectureship	National Academy of Sciences	1972	USD 20,000
Arthur L. Day Medal	Geological Society of America	1948	
The Carl-Gustaf Rossby Research Medal	American Meteorological Society	1960	
Alexander Agassiz Medal	National Academy of Sciences	1913	
Benjamin Franklin Medal in Earth and Environmental Science	Franklin Institute	2000	
A.G. Huntsman Award	Bedford Institute of Oceanography	1980	
International Meteorological Organization (IMO) Prize	World Meteorological Organization	1956	CHF 10,000
G. K. Warren Prize	National Academy of Sciences	1969	USD 10,000
TWAS Prize in Earth Sciences	The World Academy of Sciences,TWAS	2003	USD 15,000
Guy Bomford Prize	International Association of Geodesy	1975	





#### Reputation of awards in earth sciences





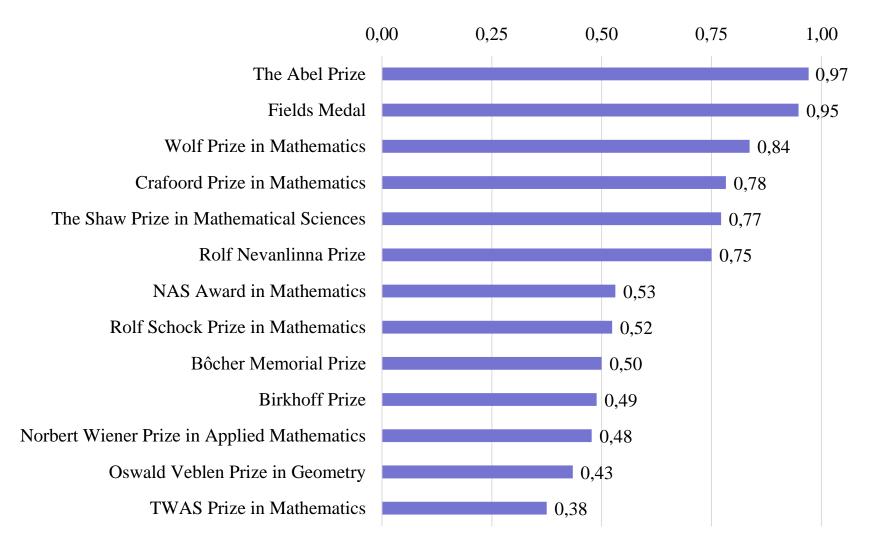


#### Awards in mathematics

Award Name	Awarding Organization	Starting Year	Amount of Prize
The Abel Prize	The Norwegian Academy of Science and Letters	2003	NOK 6,000,000
Fields Medal	International Mathematical Union	1936	CAD 15,000
Wolf Prize in Mathematics	Wolf Foundation	1978	USD 100,000
Crafoord Prize in Mathematics	The Royal Swedish Academy of Sciences	1982	SEK 4,000,000
The Shaw Prize in Mathematical Sciences	The Shaw Prize Foundation	2004	USD 1,000,000
Rolf Nevanlinna Prize	International Mathematical Union	1982	EUR 10,000
NAS Award in Mathematics	National Academy of Sciences	1988	USD 5,000
Rolf Schock Prize in Mathematics	The Royal Swedish Academy of Sciences	1993	SEK 500,000
Bôcher Memorial Prize	American Mathematical Society	1923	USD 5,000
Birkhoff Prize	American Mathematical Society & Society for Industrial and Applied Mathematics	1968	USD 5,000
Norbert Wiener Prize in Applied Mathematics	American Mathematical Society & Society for Industrial and Applied Mathematics	1970	USD 5,000
Oswald Veblen Prize in Geometry	American Mathematical Society	1964	USD 5,000
TWAS Prize in Mathematics	The World Academy of Sciences,TWAS	1985	USD 15,000



#### Reputation of awards in mathematics







#### Awards in physics

Award Name	Awarding Organization	Starting Year	Amount of Prize
Nobel Prize in Physics	The Royal Swedish Academy of Sciences	1901	SEK 8,000,000
Wolf Prize in Physics	Wolf Foundation	1978	USD 100,000
Isaac Newton Medal	Institute of Physics	2008	GBP 1,000
Max Planck Medal	German Physical Society	1929	
Fundamental Physics Prize	The Fundamental Physics Prize Foundation	2012	USD 3,000,000
Dannie Heineman Prize for Mathematical Physics	American Physical Society & American Institute of Physics	1959	USD 10,000
Lorentz Medal	The Royal Netherlands Academy of Arts and Sciences	1927	
Henri Poincaré Prize	International Association of Mathematical Physics	1997	
Stern-Gerlach Medal	German Physical Society	1993	
Benjamin Franklin Medal in Physics	Franklin Institute	1998	
UNESCO's Niels Bohr Gold Medal	UNESCO	1998	
Physics Frontiers Prize	The Fundamental Physics Prize Foundation	2013	USD 300,000
New Horizons in Physics Prize	The Fundamental Physics Prize Foundation	2013	USD 100,000
TWAS Prize in Physics	The World Academy of Sciences, TWAS	1985	USD 15,000
Rumford Medal	The Royal Society	1800	GBP 1,000



#### Reputation of awards in physics

	0,00	0,25	0,5	0	0,75	1,00
Nobel Prize in Physics						1,00
Wolf Prize in Physics					0,72	
Isaac Newton Medal				0,57		
Max Planck Medal				0,56		
Fundamental Physics Prize				0,55		
Dannie Heineman Prize for Mathematical Physics				0,54		
Lorentz Medal				0,54		
Henri Poincaré Prize				0,50		
Stern-Gerlach Medal			0,	,47		
Benjamin Franklin Medal in Physics			0,4	46		
UNESCO's Niels Bohr Gold Medal			0,4	15		
Physics Frontiers Prize			0,38			
New Horizons in Physics Prize			0,35			
TWAS Prize in Physics		0,	33			
Rumford Medal		0,26				

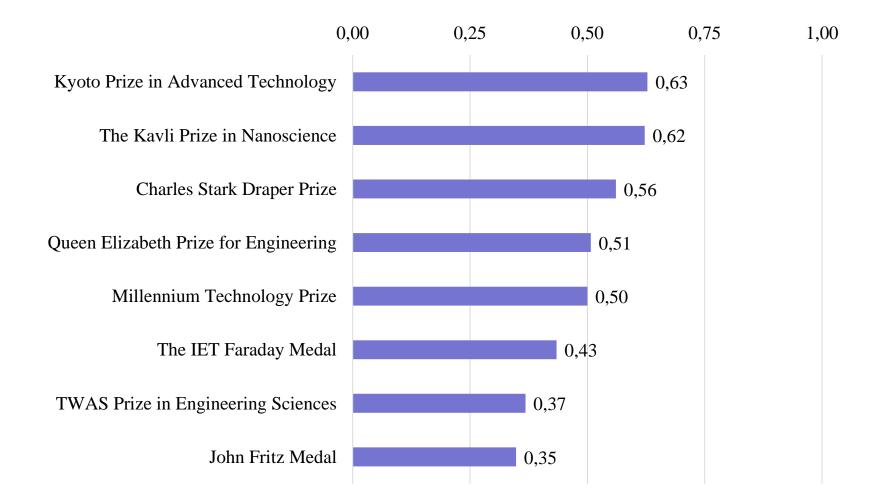


#### Awards in cross-disciplinary field of engineering sciences

Award Name	Awarding Organization	Starting Year	Amount of Prize
Kyoto Prize in Advanced Technology	The Inamori Foundation	1985	JPY 50,000,000
The Kavli Prize in Nanoscience	The Norwegian Academy of Science and Letters	2008	USD 1,000,000
Charles Stark Draper Prize	National Academy of Engineering	1989	USD 500,000
Queen Elizabeth Prize for Engineering	The Queen Elizabeth Prize for Engineering Foundation	2013	GBP 1,000,000
Millennium Technology Prize	Technology Academy Finland	2004	EUR 1,000,000
The IET Faraday Medal	Institution of Engineering and Technology, IET	1922	
TWAS Prize in Engineering Sciences	The World Academy of Sciences,TWAS	2003	USD 15,000
John Fritz Medal	American Association of Engineering Societies	1902	



#### Reputation of awards in cross-disciplinary field of engineering sciences







#### Awards in chemical engineering

Award Name	Awarding Organization	Starting Year	Amount of Prize
R.H. Wilhelm Award in Chemical Reaction Engineering	American Institute of Chemical Engineers	1966	USD 3,000
Alpha Chi Sigma Award for Chemical Engineering Research	American Institute of Chemical Engineers	1966	USD 5,000
Founders Award for Outstanding Contributions to the Field of Chemical Engineering	American Institute of Chemical Engineers	1958	USD 3,000
Professional Progress Award in Chemical Engineering	American Institute of Chemical Engineers	1948	USD 4,000
Jacques Villermaux Medal	European Federation of Chemical Engineering	1999	
Dieter Behrens Medal	European Federation of Chemical Engineering	1999	



#### Reputation of awards in chemical engineering

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R.H. Wilhelm Award in Chemical Reaction Engineering			0,56		
Alpha Chi Sigma Award for Chemical Engineering Research			0,54		
Founders Award for Outstanding Contributions to the Field of Chemical Engineering			0,52		
Professional Progress Award in Chemical Engineering			0,50		
Jacques Villermaux Medal			0,50		
Dieter Behrens Medal		0,33			



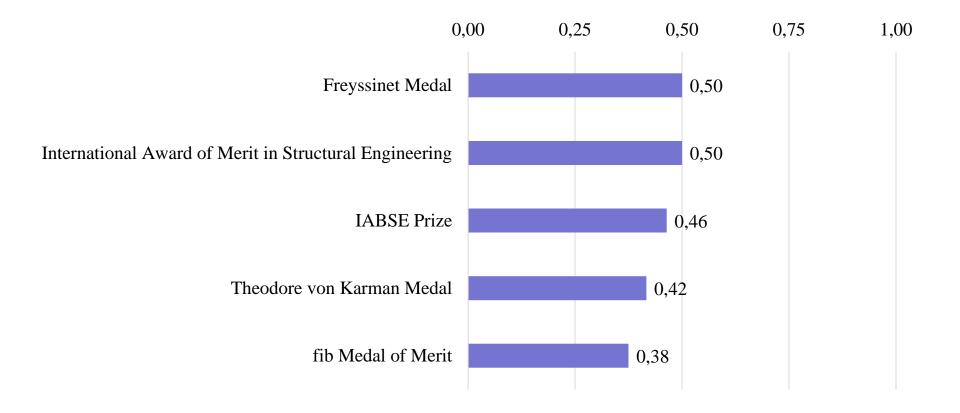


#### Awards in civil engineering

Award Name	Awarding Organization	Starting Year	Amount of Prize
Freyssinet Medal	The International Federation for Structural Concrete, fib	1970	
International Award of Merit in Structural Engineering	International Association for Bridge and Structural Engineering, IABSE	1976	
IABSE Prize	International Association for Bridge and Structural Engineering, IABSE	1983	unpublicized
Theodore von Karman Medal	American Society of Civil Engineers	1960	
fib Medal of Merit	The International Federation for Structural Concrete, fib	1970	



### Reputation of awards in civil engineering







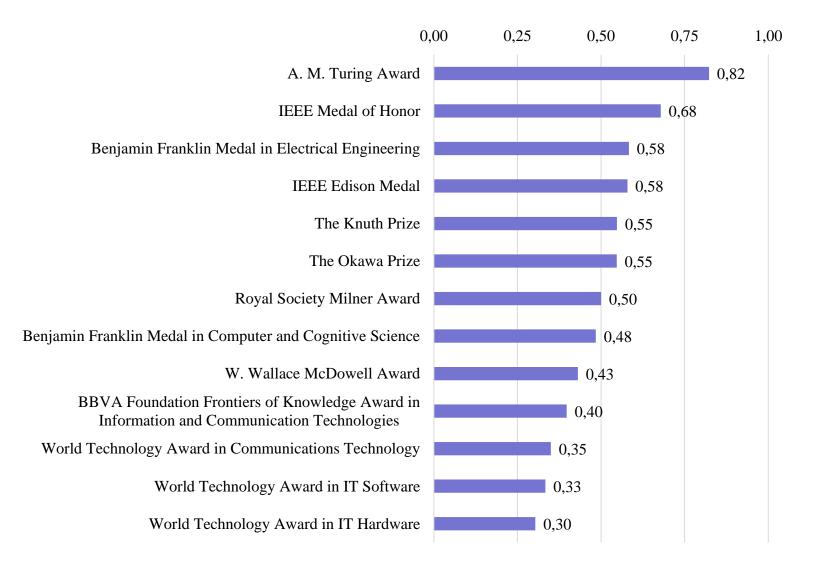
#### Awards in electrical and information engineering

Award Name	Awarding Organization		Amount of Prize
A. M. Turing Award	Association for Computing Machinery	1966	USD 250,000
IEEE Medal of Honor	Institute of Electrical and Electronics Engineers	1917	unpublicized
Benjamin Franklin Medal in Electrical Engineering	Franklin Institute	2000	
IEEE Edison Medal	Institute of Electrical and Electronics Engineers	1909	unpublicized
The Okawa Prize	The Okawa Foundation	1992	JPY 10,000,000
The Knuth Prize	ACM-SIGACT & IEEE-TCMFC	1996	USD 5,000
Royal Society Milner Award	The Royal Society	2006	GBP 5,000
Benjamin Franklin Medal in Computer and Cognitive Science	Franklin Institute	1999	
W. Wallace McDowell Award	IEEE Computer Society	1966	USD 2,000
BBVA Foundation Frontiers of Knowledge Award in Information and Communication Technologies	BBVA Foundation	2008	EUR 400,000
World Technology Award in Communications Technology (for individuals)	The World Technology Network	2000	
World Technology Award in IT Software (for individuals)	The World Technology Network	2000	
World Technology Award in IT Hardware (for individuals)	The World Technology Network	2000	





#### Reputation of awards in electrical and information engineering





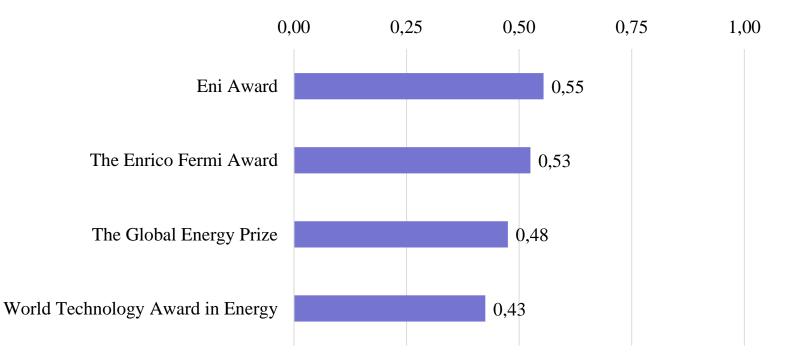


#### Awards in energy science and engineering

Award Name	Awarding Organization	Starting Year	Amount of Prize
Eni Award	Eni S.p.a.	1987	EUR 200,000
The Enrico Fermi Award	U.S. Department of Energy's Office of Science	1956	USD 50,000
The Global Energy Prize	The Global Energy Non-Profit Partnership	2003	USD 1,100,000
World Technology Award in Energy (for individuals)	The World Technology Network	2000	



#### Reputation of awards in energy science and engineering





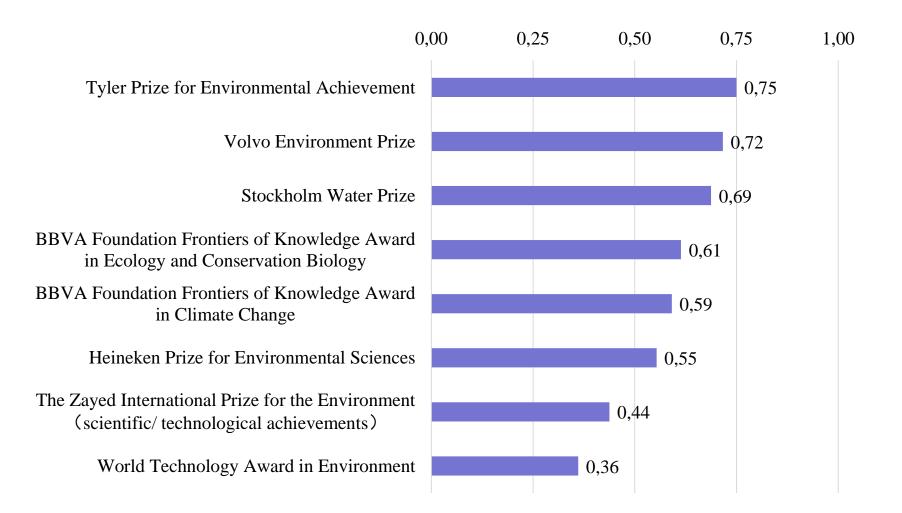
#### Awards in environmental science and engineering

Award Name	Awarding Organization	Starting Year	Amount of Prize
Tyler Prize for Environmental Achievement	The University of Southern California	1974	USD 200,000
Volvo Environment Prize	The Volvo Environment Prize Foundation	1990	SEK 1,500,000
Stockholm Water Prize	Stockholm International Water Institute	1991	USD 150,000
BBVA Foundation Frontiers of Knowledge Award in Ecology and Conservation Biology	BBVA Foundation	2008	EUR 400,000
BBVA Foundation Frontiers of Knowledge Award in Climate Change	BBVA Foundation	2008	EUR 400,000
Heineken Prize for Environmental Sciences	The Royal Netherlands Academy of Arts and Sciences	1990	USD 200,000
The Zayed International Prize for the Environment (scientific/ technological achievements)	Zayed International Foundation for the Environment	2001	USD 300,000
World Technology Award in Environment (for individuals)	The World Technology Network	2000	



### Reputation of awards in environmental science and engineering

**Results** 



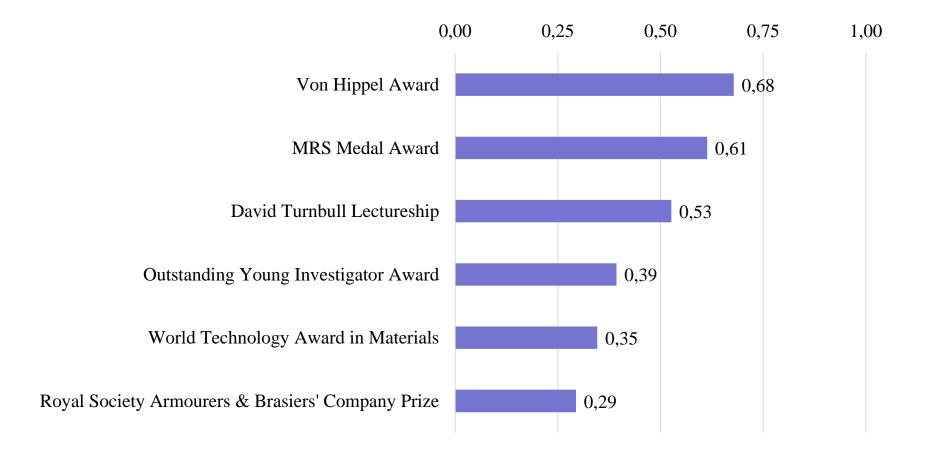


#### Awards in materials science and engineering

Award Name	Awarding Organization	Starting Year	Amount of Prize
Von Hippel Award	Materials Research Society, MRS	1976	USD 10,000
MRS Medal Award	Materials Research Society, MRS	1990	USD 5,000
David Turnbull Lectureship	Materials Research Society, MRS	1992	USD 5,000
Outstanding Young Investigator Award	Materials Research Society, MRS	1991	USD 5,000
World Technology Award in Materials (for individuals)	The World Technology Network	2000	
Royal Society Armourers & Brasiers' Company Prize	Materials Research Society, MRS	1985	GBP 2,000



#### Reputation of awards in materials science and engineering





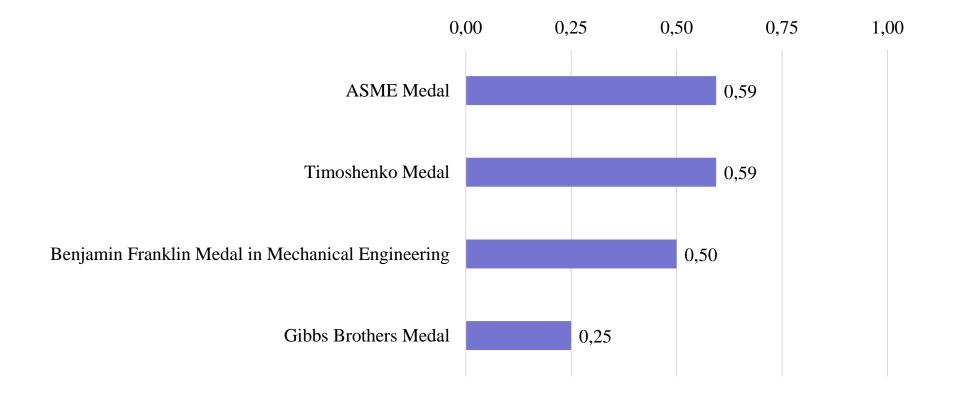


#### Awards in mechanical engineering

Award Name	Awarding Organization	Starting Year	Amount of Prize
ASME Medal	American Society of Mechanical Engineers	1921	USD 15,000
Timoshenko Medal	American Society of Mechanical Engineers	1957	USD 2,500
Benjamin Franklin Medal in Mechanical Engineering	Franklin Institute	2000	
Gibbs Brothers Medal	National Academy of Sciences	1965	USD 20,000



#### Reputation of awards in mechanical engineering



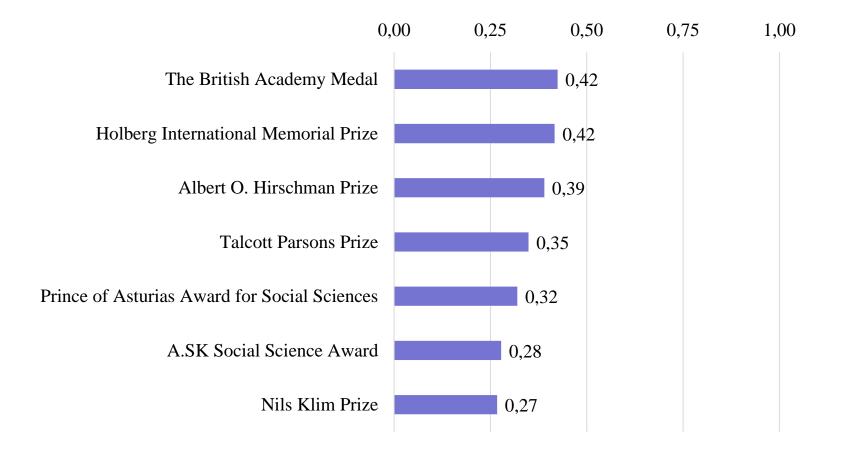


#### Awards in cross-disciplinary field of social sciences

Award Name	Awarding Organization	Starting Year	Amount of Prize
Holberg International Memorial Prize	University of Bergen	2004	NOK 4,500,000
The British Academy Medal	The British Academy	2013	
Albert O. Hirschman Prize	The Social Science Research Council	2007	USD 10,000
Talcott Parsons Prize	American Academy of Arts and Sciences	1974	
Prince of Asturias Award for Social Sciences	The Prince of Asturias Foundation	1981	EUR 50,000
A.SK Social Science Award	WZB Berlin Social Science Center	2007	EUR 100,000
Nils Klim Prize	University of Bergen	2004	NOK 250,000



#### Reputation of awards in cross-disciplinary field of social sciences





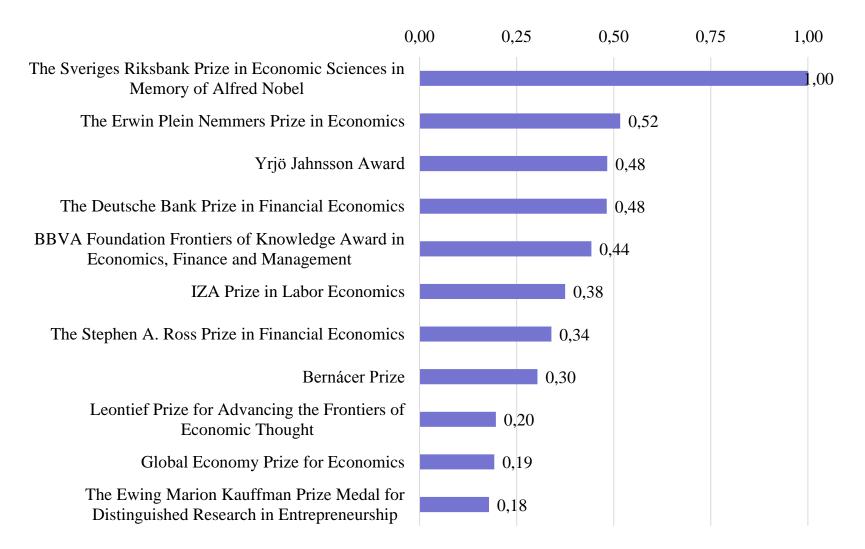


#### Awards in economics

Award Name	Awarding Organization	Starting Year	Amount of Prize
The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel	The Royal Swedish Academy of Sciences	1969	SEK 8,000,000
The Erwin Plein Nemmers Prize in Economics	Northwestern University	1994	USD 200,000
The Deutsche Bank Prize in Financial Economics	Center for Financial Studies and Goethe University Frankfurt	2005	EUR 50,000
Yrjö Jahnsson Award	European Economic Association	1993	EUR 18,000
<b>BBVA Foundation Frontiers of Knowledge Award in Economics, Finance and Management</b>	BBVA Foundation	2008	EUR 400,000
IZA Prize in Labor Economics	Institute for the Study of Labor	2002	EUR 50,000
The Stephen A. Ross Prize in Financial Economics	Foundation for the Advancement of Research in Financial Economics	2008	USD 100,000
Bernácer Prize	Observatorio del Banco Central Europeo	2001	EUR 30,000
Leontief Prize for Advancing the Frontiers of Economic Thought	Global Development And Environment Institute at Tufts University	2000	
<b>Global Economy Prize for Economics</b>	Kiel Institute for the World Economy	2005	
The Ewing Marion Kauffman Prize Medal for Distinguished Research in Entrepreneurship	Ewing Marion Kauffman Foundation	2005	USD 50,000



#### Reputation of awards in economics





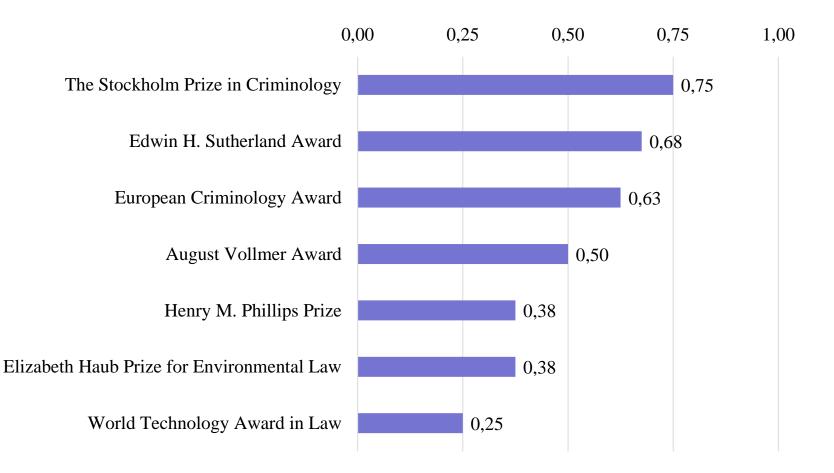


#### Awards in law

Award Name	Awarding Organization	Starting Year	Amount of Prize
The Stockholm Prize in Criminology	Stockholm University	2006	SEK 1,000,000
Edwin H. Sutherland Award	American Society of Criminology	1960	
European Criminology Award	European Society of Criminology	2007	
August Vollmer Award	American Society of Criminology	1960	
Henry M. Phillips Prize	American Philosophical Society	1895	
Elizabeth Haub Prize for Environmental Law	Stockholm University	1974	EUR 4,000
World Technology Award in Law (for Individuals)	The World Technology Network	2000	



#### Reputation of awards in law



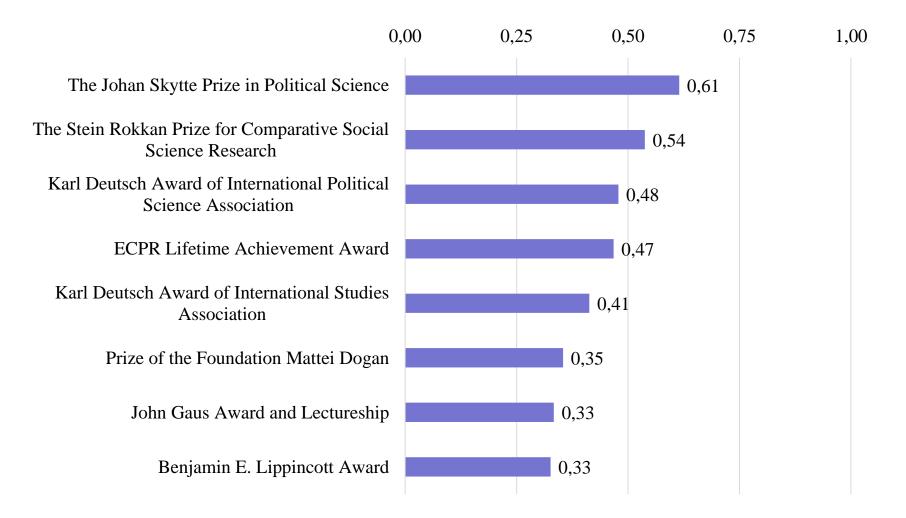


#### Awards in political science

Award Name	Awarding Organization	Starting Year	Amount of Prize
The Johan Skytte Prize in Political Science	Johan Skytte Foundation at Uppsala University	1995	EUR 50,000
The Stein Rokkan Prize for Comparative Social Science Research	International Social Science Council, the University of Bergen and the European Consortium for Political Research		USD 5,000
Karl Deutsch Award of International Political Science Association	International Political Science Association	1997	USD 1,000
ECPR Lifetime Achievement Award	European Consortium for Political Research, ECPR	2005	EUR 5,000
Karl Deutsch Award of International Studies Association	International Studies Association	1985	USD 500
Prize of the Foundation Mattei Dogan	International Political Science Association	2006	USD 5,000
Benjamin E. Lippincott Award	American Political Science Association	1975	USD 1,500
John Gaus Award and Lectureship	American Political Science Association	1986	USD 2,000

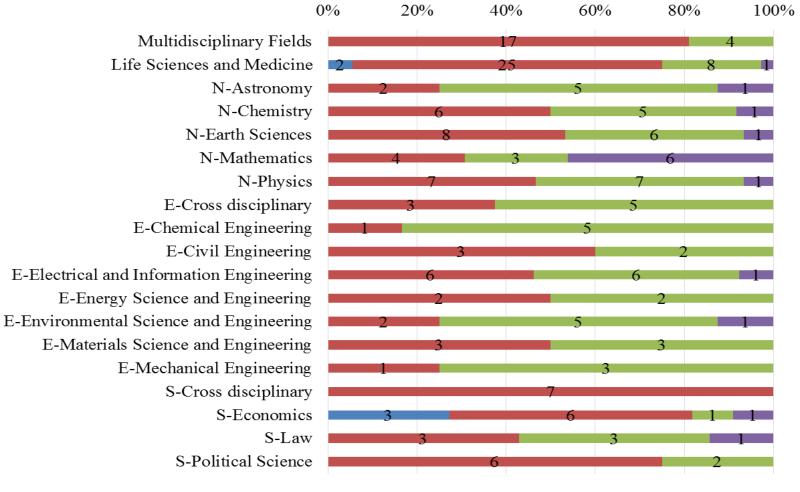


#### Reputation of awards in political science





### Survey results of 207 awards

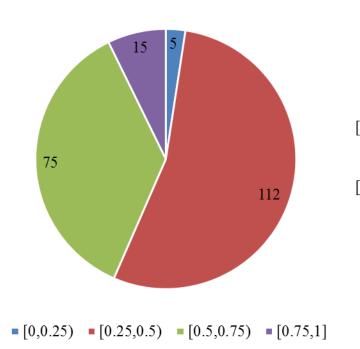


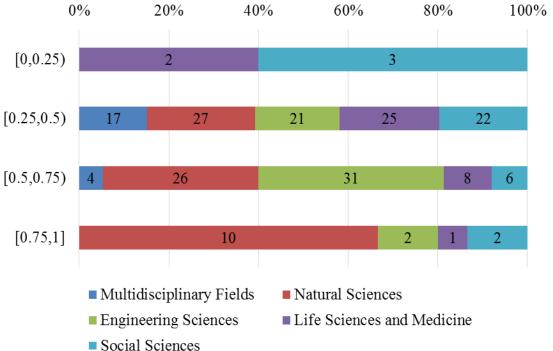
 $\bullet$  [0,0.25)  $\bullet$  [0.25,0.5)  $\bullet$  [0.5,0.75)  $\bullet$  [0.75,1]





### Survey results of 207 awards by broad fields







## Selection criteria for IREG Award List:

- Compared to the Nobel prizes with the highest reputation score of 1, all awards with reputation scores equal or higher than 0.50 are selected and included in the *"IREG List of International Academic Awards"*.
- A few other awards with reputation scores very close to 0.50 and huge amount of prizes are also included.



### Distribution of 95 awards in IREG list



- Multidisciplinary Fields
- Life Sciences and Medicine
- N-Astronomy
- N-Chemistry
- N-Earth Sciences
- N-Mathematics
- N-Physics
- E-Cross-disciplinary
- E-Chemical Engineering
- E-Civil Engineering
- E-Electrical and Information Engineering
- E-Energy Science and Engineering
- E-Environmental Science and Engineering
- E-Materials Science and Engineering
- E-Mechanical Engineering
- S-Economics
- S-Law
- S-Political Science



## Characteristics of 95 selected awards

- Among the 95 selected awards, 46.3% of awards carry no less than USD 100,000 prize money, and 15.8% of awards carry no less than USD 1,000,000 prize money.
- 64.2% of awards were first granted before 1990, and 22.1% of awards were first granted before 1950.
- 32.6% of awards were granted at the high-profile ceremonies with the presence of the Royal members, or the heads of state or government.





# Thank you very much!