

Nobel Laureates Meet International Top Talents

Evaluation Report of the Interdisciplinary Lindau Meeting of Nobel Laureates 2005

















Council for the Lindau Nobel Laureate Meetings



Foundation Lindau Nobelprizewinners Meetings at Lake Constance









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The Interdisciplinary Lindau Meeting of Nobel Laureates 2005 marked a decisive step for the annual Lindau Meeting in becoming a unique and significant international forum for excellence, fostering the vision of its Spiritus Rector, Count Lennart Bernadotte.

It brought together, in the heart of Europe, the world's current and prospective scientific leaders, the minds that shape the future drive for innovation. As a distinct learning experience, the Meeting stimulated personal dialogue on new discoveries, new methodologies and new issues, as well as on cutting-edge research matters. The Council for Lindau Nobel Laureate Meetings is grateful for having had the opportunity to host some of the most outstanding researchers from around the world in an atmosphere of shared endeavour and common goals. We were inspired by the spirit of achieving breakthroughs in all directions of research, the volition and the interdisciplinary nature of the discussions.

The Council for Lindau Nobel Laureate Meetings and the Foundation Lindau Nobelprizewinners Meetings at Lake Constance are grateful to all benefactors and partners who have helped to make the Meeting a success.

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Countess Sonja Bernadotte af Wisborg



Manfred Eigen Chemistry



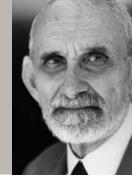
Norman Foster Ramsey Physics



Christiane Nüsslein-Volhard Physiology or Medicine



Peter Agre Chemistry



Robert Floyd Curl, Jr. Chemistry



Alan J. Heeger Chemistry



Klaus von Klitzing Physics



Nicolaas Bloembergen Physics



Paul Josef Crutzen



Frank Wilczek Physics



Richard Robert Ernst Chemistry



John Bennett Fenn Chemistry



Werner Arber Physiology or Medicine



Hamilton Othanel Smith Physiology or Medicine



Paul C. Lauterbur Physiology or Medicine



Ivar Giaever Physics



Aaron Ciechanover Chemistry



Eric F. Wieschaus Physiology or Medicine



Robert Huber Chemistry



Jerome Karle Chemistry



Riccardo Giacconi Physics



Günter Blobel Physiology or Medicine



Kurt Wüthrich Chemistry



Douglas Dean Osheroff Physics



Walter Kohn Chemistry



Christian René de Duve Physiology or Medicine



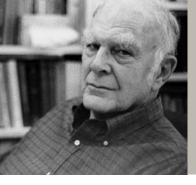
Roderick MacKinnon Chemistry



Charles Hard Townes Physics



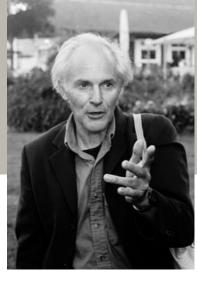
Aaron Klug Chemistry



Frank Sherwood Rowland Chemistry



Yuan Tseh Lee Chemistry



Harold Walter Kroto Chemistry



David Gross Physics



Martinus J. G. Veltman Physics



William Nunn Lipscomb Chemistry



Peter Mansfield Physiology or Medicine



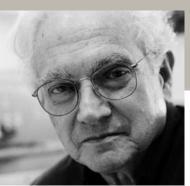
Rudolph Arthur Marcus Chemistry



Richard John Roberts Physiology or Medicine



Brian David Josephson Physics



Marshall Warren Nirenberg Physiology or Medicine



Robert Coleman Richardson Physics



Masatoshi Koshiba Physics



Alan G. MacDiarmid Chemistry



Kary Banks Mullis Chemistry



"They were the most unforgettable moments of my life. The same experience will not be acquired anywhere else in the world. Meeting the Nobel Laureates face to face was the most cherished of all. The talks given by the Nobel Laureates were inspiring and the conversation with the Nobel Laureates was motivational. This once-in-a-lifetime experience became my driving force to go further in my research. In future, I hope more young scientists will be benefited from this meeting as it has benefited me."

Norazlina Mohamed Physiology or Medicine, Malaysia



"I had never imagined a conference with such a high concentration of great minds. And I experienced something unexpected: In the exciting atmosphere created by the get-together of hundreds of interesting people, the Laureates managed to transfer their inspiration and enthusiasm for research to us young students. I returned to my lab in Göttingen with a new motivation for the upcoming work of my Ph.D. thesis."

Sebastian Loth Physics, Germany





"It was a unique experience to meet the elite of chemistry, otherwise only known from literature. Such an interdisciplinary meeting is in contrast to a conference: you have the chance to analyse your own point of view from the view of others."

Udo Beckmann Chemistry, Germany "This meeting gave me a sense of achievement; a novel, noble experience that I can boast of for life long, and motivation to do meaningful research to be a successful scientist. Surprisingly, I found myself fascinated by subjects in which I did not have prior interest."

Anand Kumar Dokania Physics, India



"It was a meeting of superlatives. Coming a week after I completed my PhD, the event was very, very timely because I discovered that my journey in learning science had only just begun. I looked to this 'baptism of science' for a new beginning."

Mary Pik Wai Chin Physics, Malaysia



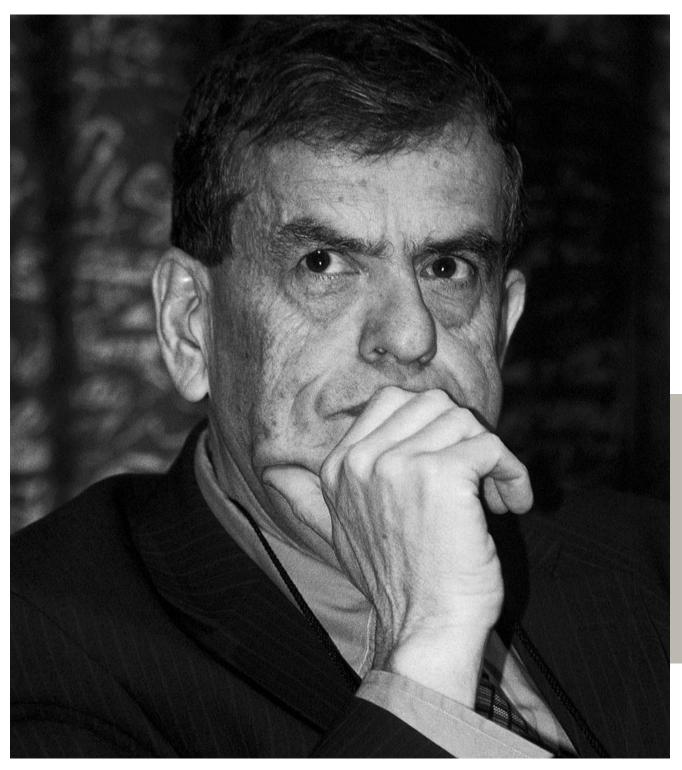
"It was a wonderful meeting! I greatly enjoyed the marvellous experience to meet so many Noble Prize winners. I really enjoyed their lectures and the round table discussions. However the best was to have the chance to talk to them in that amazingly relaxed atmosphere. All events were absolutely marvellous. The location was also great as Lindau is a lovely, beautiful place. It was also exciting to have the chance to meet other young scientists from many different countries. I am very thankful to the Council to have chosen me as one of the 700 young scientists to have this unique opportunity. The whole event was simply fantastic!"

Sónia Alexandra Correia Carabineiro Chemistry, Portugal



"These meetings are most refreshing and stimulating. They get us out of the rut we sometimes drift into."

Werner Arber Physiology or Medicine 1978



"The Lindau Nobel Laureates meetings with students bring two extremes together: The past – the most experienced scientists that have contributed significantly to the understanding of basic life and universe processes, but that may not be the freshest minds anymore, and the future – the least experienced young generation, with the most brilliant fresh, unconventional and daring way of thinking. I was challenged by a young generation, by philosophical and scientific problems I have not thought of, and together, we were forced to take a deep dive into the ocean of our minds, to fly to high skies, in order to carve our ways out."

Aaron Ciechanover Chemistry 2004

"The Lindau Meeting was an outstanding experience. Besides the scientific lectures, the Laureates gave us a taste of the way science is done. Surely there is lot of hard work and perseverance, but there is also much love. I noted that most of them give their best not only for research, but for all other aspects of life. When talking about their research, they were always excited in a way that made them look like youngers. They gave us a lesson for life."

José A. Hoyos Physics, Brazil





"The Lindau Meeting of Nobel Laureates was a highlight of my Fulbright year abroad in Germany. Meeting the Laureates was a truly memorable, once-in-a-lifetime experience – a little like meeting rock stars!"

Hilliary E. Creely Biology, USA



"It was of extreme value to attend the lectures covering a wide variety of problems ranging from top-level developments in the Laureates' laboratories to the influence of science and technology on social issues."

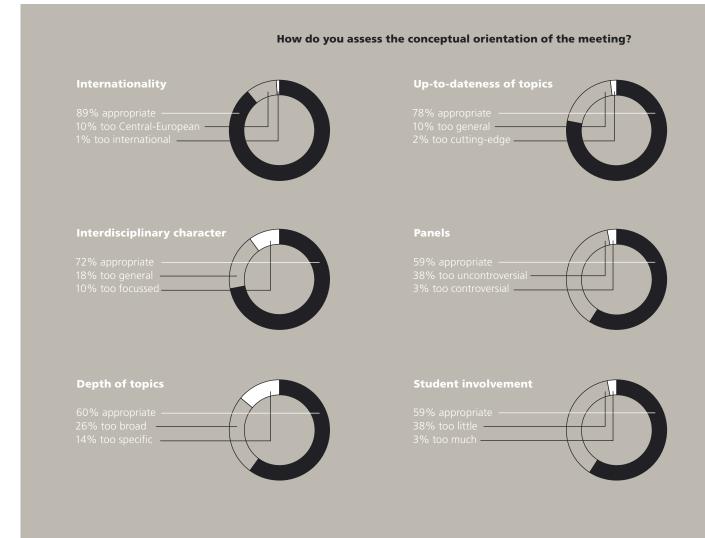
Alexander Dilman Chemistry, Russian Federation

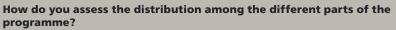


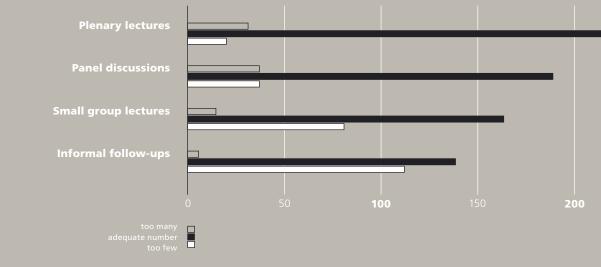
"The Nobel Laureates gave us two main messages during their talks. The first one was that we should never stop being curious, because curiosity is what keeps science going. The second message was never to accept a common theory before having checked it by yourself."

Susanne Fechner Physics, Germany

Answers of Participants





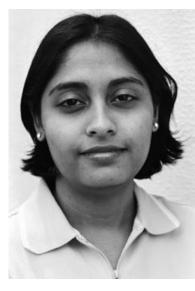






"The lectures of the Nobel Laureates have enabled me to comprehend the main modern problems of science. The large number of students and young scientists also offered a good opportunity for new contacts and discussions. I find the Meeting, its organization, and conditions really excellent."

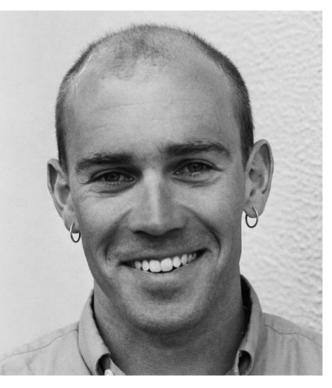
Konstantin Bliokh Physics, Ukraine



"Meeting 44 Nobel Laureates under one roof was like a dream come true. What I liked best about the meeting was that people from all fields physics, chemistry and medicine were brought together, allowing young scientist like me to explore new avenues in science and I also made friends from all over the world. The beautiful Island of Lindau was the perfect venue with its breathtaking view of Lake Constance."

Richa Priyadarshini Biology, India "I never thought that this experience would be so great. I met a lot of people who help understand the things that are related with science. It was very interesting being with people like myself from other countries. I think the organisation of this meeting was excellent, and that helped us to enjoy all the days."

Arturo Cavagnaro Physiology or Medicine, Chile



"When the meeting concluded, I was left with the feeling that science's interaction with society was in need of development. Many of the Laureates suggested that it was up to the participants - as scientifically-trained young researchers, engineers, politicians, individuals - to better define this relationship. The Laureates' pioneering work is a starting point for the integration of science into all aspects of everyday life. From my discussions with the other participants at the Lindau Meetings, I now realize that it is up to us to continue the job."

Matt Richardson Physiology or Medicine, Canada



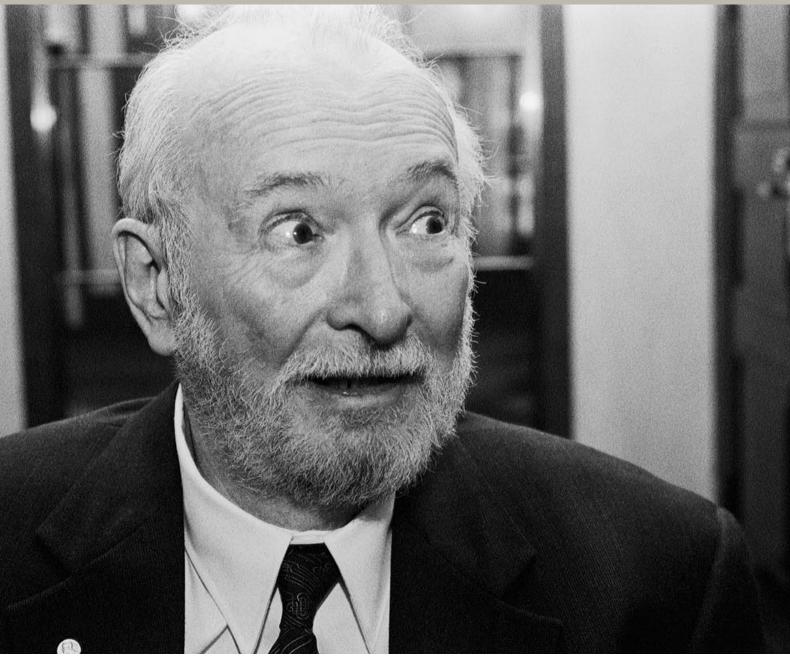
"One question was: 'How do you become a Nobel Prize Laureate?' Thanks to the meeting I now know how: Go to Lindau - wear a blue lanyard. The scientific programme was excellent. However, I wish there could have been more time for the podium discussions, as they were interactive and made interdisciplinarity not only a word. All together Lindau offered a great opportunity to meet in an informal atmosphere."

Manuel Hilbert Chemistry, Germany



"Meeting with the Nobel Laureates was, no doubt, inspiring but the message that really hit me was the fact that these individuals were very ordinary people with an extraordinary outlook on life. I was also impressed with their striving for excellence and, most importantly, the connection they were trying to establish between science and society. Above all, I came back home with a resolution: to aim to be 'the best', personally as well as professionally."

Vijay Mahadevan Iyer Chemistry, India



"The interdisciplinary character of the 2005 Lindau meeting made it especially enjoyable, and also pointed the way to the future, aided by the inclusion of students from all over the world."

Paul C. Lauterbur Physiology or Medicine 2003

Evaluation Report of the Interdisciplinary Lindau Meeting of Nobel Laureates 2005

The 2005 Meeting of Nobel Laureates in Lindau was an interdisciplinary event for Nobel Prize winners in chemistry, physics and physiology/medicine – next to the 50th anniversary Meeting, only the second interdisciplinary Meeting of this kind. The Meetings of Nobel Laureates are traditionally monothematic and devoted in alternate years to the disciplines of chemistry, physics and physiology/medicine. Countess Sonja Bernadotte invited the Nobel Laureates in her capacity as President of the Council for the Lindau Nobel Laureate Meetings. Physicist Prof. Dr. Jürgen Uhlenbusch, a member of the Council for many years and since 2005 one of the two Vice-Presidents, was in charge of organising this year's Meeting. Isabella Schielin, Nadine Minkner and Margarete Boms worked in the Executive Secretariat of the Council.

Besides the 44 Nobel Laureates (see page 49), 696 outstanding students and young scientists from 54 nations also took part in the 16 plenary lectures given by the Laureates and in the three panel discussions that all took place in Lindau, Germany, from June 27th to July 1st, 2005. The young scientists and researchers were also able to carry on a direct dialogue with the Laureates in 24 seminar and discussion events. Of the 696 young researchers from 54 nations who took part, 204 came from Germany, 205 from other European countries, 157 from Asia, 112 from the Americas, 14 from Oceania and 4 from Africa. 35 percent of the young researchers were women. A further 150 public figures, representatives from universities, scientific academies, research institutes, foundations and from governments and private corporations also accepted the Council's invitation.

An allotment of 10 to 15 young researchers per Laureate was considered ideal for encouraging scientific dialogue, leading to the target of around 700 participants. Students, PhD candidates and postdocs in the fields of chemistry, medicine, biology and physics were permitted to apply. The applicants were selected for participation by the Scientific Chairmen of the Meeting in accordance with an evaluation and selection process based on academic qualification criteria and supported by the votes of trusted domestic and foreign lecturers and professors at universities of international repute, leading research centres and academies.

The catalogue of criteria drawn up by the Council for the Lindau Nobel Laureate Meetings (see page 52) assured that only the best young scientific talents from the huge pool of applicants would qualify for the Lindau science dialogue – regardless of financial opportunity, venue of study, nationality or gender. To make this principle work – as it did for the Meeting in Economic Sciences – the organisers and their partners took over the travel and lodging/boarding expenses for all participants. Generous contributions by a number of benefactors made this possible. The young scientific talents regarded the invitation to the Meeting of Nobel Laureates as a special distinction.

From the more than 8,000 initial applications from domestic and foreign lecturers, 1,000 candidates were selected for final consideration. Ultimately, 696 participants were selected by the Review Panel made up of three scientific chairmen for the subjects chemistry (Professor Lubitz), medicine (Professor Sies) and physics (Professor Uhlenbusch). This talent evaluation took four weeks altogether and the Review Panel was supported by Andreas Schmidt.

A compendium of participants was compiled from a database that was made available to all those taking part in the Meeting. This registry catalogued for each participant the academic track record, education, teaching experience, work, publications and special honours awarded. As a basis for alumni discussion fora, the focussed support of the database



"The meeting on the picturesque island of Lindau left me with valuable memories. I was impressed by the physical and mental agility of the Laureates and the enthusiastic and motivating atmosphere which it created. They were open to casual discussions in which they encouraged the participants to stay curious and conduct responsible research. The international young scientists present also contributed to an inspiring and joyful week. Thank you to everyone who contributed to this unique experience and I'd like to wish the future participants of the meeting an equally wonderful time."

Yoshihiko Katayama Chemistry, Japan



"Enjoy the others! Feel the spirit! That's the benefit! The less you talk about your research the more you learn about the other ways of thinking. Not all the latest investigations stay in mind but the characters of the people do. So the Laureates should explain what they did, but never forget to mention who they are."

Benedikt Hofmann Physics, Germany



"The most important thing that I have taken back to my own work with me is optimism, something that as a second year PhD student is often in short supply. Prof. Charles Townes' lecture in particular inspired me, and his words 'there are no failures, some [experiments] are more successful than others' really struck a cord with me. From meeting other students from around world to chatting with some of the Laureates over lunch, I realised that everybody has highs and lows with their work, even those at the very pinnacle of their fields."

Phil Humphreys Chemistry, Great Britain will help sustain the "Lindau Dialogue" well into the future. It will create new impetus in accordance with the goal of establishing a network of the world's best young scientists. In this way the platform offered by the Lindau Meetings will make it possible for scientists, research institutes and industry to build on their dialogue in a practical and research relevant way.

THE SCIENTIFIC PROGRAMME

The scientific part of the Meeting lasted from Monday, June 27th to Thursday, June 30th. A new approach was needed, since all 44 Laureates had expressed a desire either to hold a lecture or take part in a panel discussion, and also because the interdisciplinary nature of the Meeting had to be properly accounted for. A three-step concept for the agenda was therefore drawn up featuring half-hour plenary lectures (without discussion) by Laureates to start things off in the morning (for all in the Inselhalle). These were followed by panel discussions in the morning (for all in Inselhalle) as well as multiple parallel two-hour sessions in the afternoon (with lectures and discussions in various lecture halls for registered participants). This scheduling assured that the Laureates had an audience that was both manageable and interested. In the process, the contents of plenary lectures, panel discussions and lecture and discussion sessions running in parallel were all synchronized. Although the Laureates were completely free to choose the topics for their lectures - an essential feature of the Meeting of Nobel Laureates in Lindau - the entire event was very homogeneous. Here, the fact that the Laureates were closely involved in the planning of both content and format prior to the Meeting paid off.

The special significance of this Meeting of Nobel Laureates in Lindau became evident in the fact that the first three days each began with a plenary lecture by a Nobel Laureate who had received the Nobel Prize in Stockholm only the year before:

- Prof. Aaron Ciechanover, Chemistry 2004:
 "Why Proteins Have to Die so we Shall Live"
- Prof. David Gross, Physics 2004: "The Future of Physics"
- Prof. Frank Wilczek, Physics 2004:
 "The Universe is a Strange Place"

Here the close partnership between the Swedish and German members of the Lindau Council deserves special emphasis, particularly with regard to programme preparation, topic structuring, scientific hosting, requests for financial support and public relations. For the first time, English was the only language of the Meeting, which facilitated the dialogue between lecturers and the audience.

YOUNG SCIENTISTS FROM AROUND THE WORLD

The new selection criteria were based solely on the principle of academic excellence, which is seen as a key component in international competition. The Council for the Lindau Nobel Laureate Meetings underscored its high standards for qualification with its willingness to accept all costs for the young scientists taking part with the help of donations from a number of benefactors and partners (see page 53-55). This made it possible to offer all participants contributions for boarding and lodging as well as for travel expenses, adjusted according to the place of origin.

In the international sphere, new partnerships were set up with renowned scientific institutions and existing partnerships were strengthened. For instance, Professor Wolfgang Schürer expanded and intensified the established links to the National Science Foundation and the Department of Energy in the USA, the Japanese Ministry of Education, Culture, Sports, Science and Technology, PIEAS in Pakistan as well as the Weizmann Institute of Sciences and the Department of Science and Technology of the Government of India. One example of this is that, for the first time in collaboration with science attachés at Indian embassies (coordinated by Dr. Kamal Kant Dwivedi from the Embassy of India in Washington), ten outstanding young scientists from the Indian diaspora, scattered across the world, could be identified. US partners helped build up new contacts to Canada, Latin America and New Zealand.

The guiding principle is that the selection process should be run in cooperation with the respective national academies and with recognised scientific institutions. An excellent example of this is the cooperation with the Sino-German Center for Research Promotion that was initiated in November 2004



"Although I couldn't understand all of the Laureates' presentations completely, all of them were so impressive to me. The most precious experience was to be a person in charge of gathering the written enquiries in the lecture. I was so excited and a little bit nervous when I went up to the platform and took them to the chairperson next to the Laureates. Back in Japan, I will have exchanges with some of them by sending e-mails."

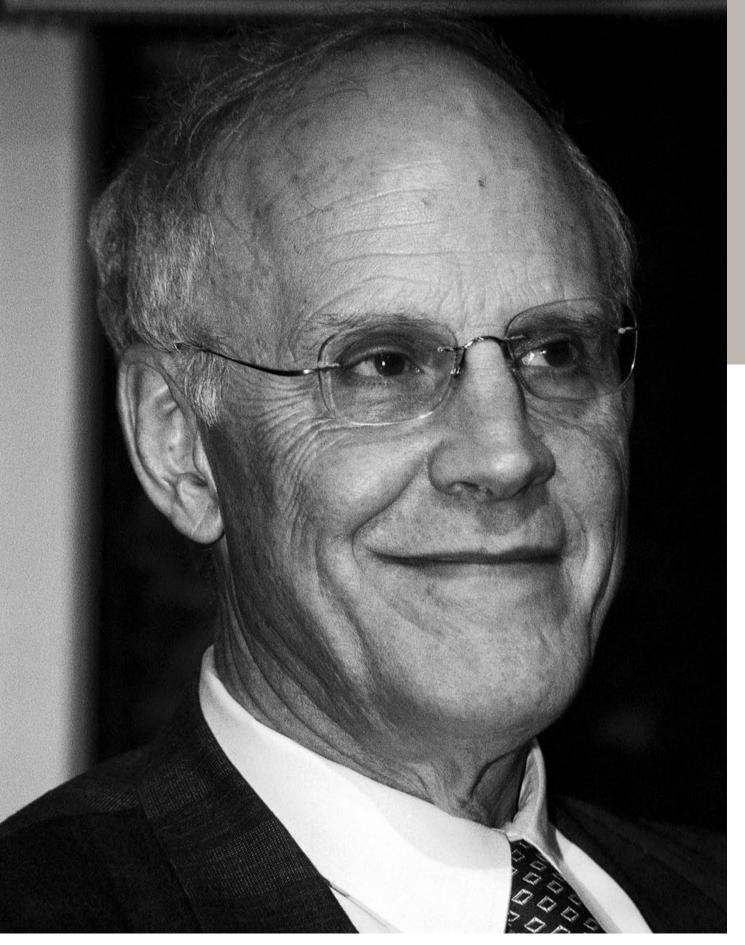
"Especially the contact with people working in other disciplines was very fruitful for me. This is something a general conference can't offer and therefore I hope that the interdisciplinary meetings will be continued [in the future], to give more young scientists the chance to experience this unique atmosphere."

Matthias Schillinger Physics, Germany



"No matter what their ages, the Nobel Laureates were able to give excellent lectures in such an easy way for understanding. On the other hand, the organisation of the event was really good. It seemed to be a lot of work for them but they did a great job. I should say at this point that if some of us [the students] were unsure about our careers as 'scientists', the meeting in Lindau motivated us to continue doing science. Just the fact of being there, listening the Laureates was enough. It was a kind of 'driving force' for me. The most important moment for me that really touched me was a lunch with Prof. Dr. Roderick MacKinnon."

Yexica Aponte Biology, Venezuela



"The students this year were super. They participated fully and asked excellent questions. But students from Central and South America – with the exception of Chile – seem to have little or no representation."

David Gross Physics 2004





"To all the participants therefore my big plea: Tell your country's people that you've seen that we are not so far apart from each other as some people may claim. Thank you, I wish you all the best!" **Ueli Neuenschwander** Chemistry. Switzerland



"Joining the interdisciplinary Nobel Prize Winners Meeting in Lindau was a great opportunity for me. I enjoyed not only the extraordinary experience of meeting Nobel Laureates but also the possibility to come to know young scientists from all over the world. I profited a lot from the discussions and talks of the Nobel Laureates on up-to-date research projects. This meeting had a big impact on me and it was a really great experience."

Clara Meusburger Physics, Austria " 'Science is about communication' – I became aware of the importance of this statement in Lindau. To get in touch with young people and to network with them over geographic and scientific boarders on the one hand and to discuss with Nobel Laureates face to face on the other hand was a really great experience for me."

Sven Weber Chemistry, Germany



"My impressions are beyond description. I can hardly find words to describe my feelings. I found the city wonderful, full of friendly atmosphere and communicative people of whom I had only read about in the books. I made a lot of nice friends, met a number of great scientists, learned a lot of new things. In other words it was one of the happiest weeks of my life, one of those that can never be erased from one's memory."

Marina Hovakimyan Biology, Armenia



"The Lindau Meeting of Nobel Laureates is the highlight of my stay in Germany. It's a well organized international event. I am so fortunate to have been selected to attend the congress, and was able to meet the Laureates who inspire me to study harder. Coming from Indonesia, it is kind of luxury to attend such an international event. So, a big thank to my sponsor DAAD! I hope there will be a higher quota for participants from Asian countries in the next meetings. Last but not least, I hope there will be more female Laureates in the future."

Mirari Prasadajudio Physiology or Medicine, Indonesia



"I will always remember: The stage fright before my first question to the Nobel Prize Laureate and the joy and pride afterwards, the fascinating, impressive and simply the best lecture ever, given by Sir Harold Kroto and the very special sunset when I sat half submerged on a huge rock in Lake Constance. Thank you Lindau."

Tomasz Klimczuk Physics, Poland in Beijing by Countess Sonja Bernadotte and Professor Wolfgang Schürer in the presence of the Bavarian State Minister for Science, Research and Art, Dr. Thomas Goppel. 154 candidates were nominated for this year's Meeting by the leading Chinese universities. A seven-person panel of experts selected 56 of these applicants to be invited for individual interviews. A final evaluation by Chinese and German scientists selected the 25 outstanding young scientific talents who were all confirmed by the Review Panel of the Lindau Council.

The European Commission, under the leadership of Commissioner Dr. Janez Potocnik, supports the Lindau dialogue specifically with an eye to fostering Europe as a location for scientific endeavour and to increasing its appeal to excellent young scientific talents from countries all over the world. For the first time, young European academicians with special qualifications who are studying or researching at US or Asian universities were targeted to receive special support that would allow them to take part at Lindau.

With an eye to these international scientific contacts, it was important to take the momentum of the 2005 Meeting of Nobel Laureates and form them into a basis for lasting success. In this vein, the Council was able to agree upon a Memorandum of Understanding with the Academy of Sciences Malaysia during the Meeting. It expressed the common desire to make it possible for highly gifted young scientific talents from Malaysia to take part in the Meeting of Nobel Laureates in Lindau. After the Meeting the Council signed similar agreements with the Australian Academy of Science and the Human Frontier Science Program, while it is in talks with the Ministry for Research and Technology of the Republic of Indonesia. This strengthening of contacts to Asia complements the institutional ties of the Meetings of Nobel Laureates in Lindau. It shows a continued commitment to pursuing the goal of fostering the best young scientific talents around the world by helping them take part in the dialogue with Nobel Laureates.

MEDIA RELATIONS

The media work for the 55th Meeting of Nobel Laureates in Lindau displayed a number of new features. More than 75 journalists from Germany, neighbouring European countries, central and eastern European countries, Russia, the USA, China, Japan and India, but also other Asian countries were accredited. Responsibility for media work was in the hands of Thomas Ellerbeck, a member of the Council, who was actively supported by Regine Lahme and Christian Rapp.

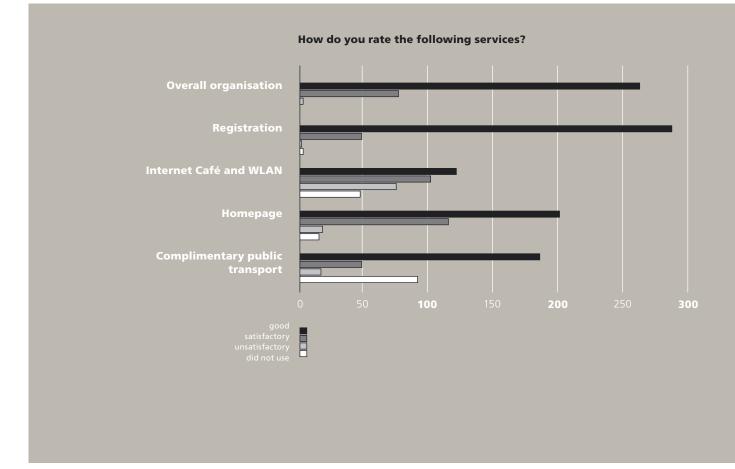
In the run-up to the Meeting, the professional quality of the PR work was significantly improved – something that became clearly visibly in the quality and quantity of the media reports, as well as in the comprehensive reporting prior to, during and after the Meeting in such important newspapers and magazines as, among others, Chinese Journal of Nature, Current Science, Engery & Power, Frankfurter Allgemeine Zeitung, Handelsblatt, The Hindu, The Independent, IAEA ECHO, Indian Science Cruiser, Nature, Pravda, South China Morning Post, Der Standard, Süddeutsche Zeitung, Die Welt and Die Zeit. BBC Radio and the Bayerische Rundfunk also reported from the Meeting. A selection of press reports about the Meeting has been compiled at the website www.lindau-nobel.de.

Particularly noteworthy was the change in the public's perception of the Meeting, reflecting the modernisation of the overall image. It is no longer a "family reunion" of Nobel Laureates; instead it has become a recognised, international scientific dialogue between the best talents. As a result, major newspapers now deal comprehensively with the content of the Meeting and its significance for scientific, research and economic endeavours.

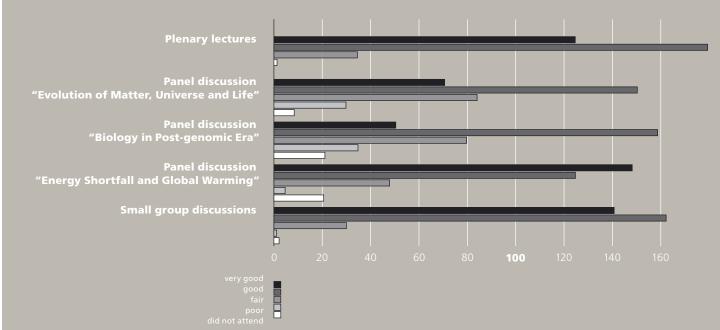
One special feature in communicating the Meeting was the broad mix of target groups. The following groups were actively addressed: the international media (see page 26), scientific journals, national dailies, major regional newspapers, radio and television as well as online media. The scientific nature of the Laureates' presentations had to be considered, making it a matter of communicating complex issues and topics that do justice to the standing of the Laureates in the international world of science and the level of material presented in scientific journals. Indeed, Lindau is not suitable for "rapid-fire reporting" or "sensations."

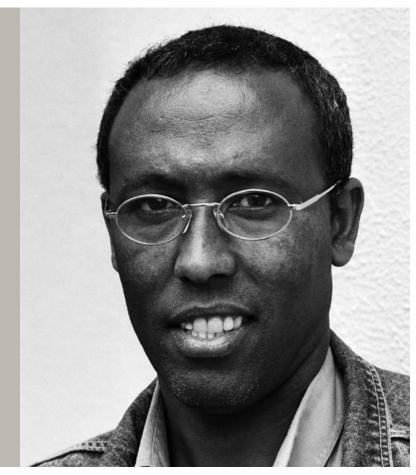
It is important to point out the significance this Meeting has for Germany and Europe as a location for science and

Answers of Participants



How do you assess the following parts of the scientific programme?





"The common theme I heard from all Laureates was that scientists should be passionate about their work. Not to do the work in hope of recognition or awards but for scientific curiosity, and the love of finding out things. That's what I will remember from this trip. I was especially impressed with the multidisciplinary nature of the meeting."

Himani Sharma Biology, India

"The Lindau Meeting has left unforgettable memories in my mind. Such a wonderful event is by itself a very special occassion which happens very rarely in life. I benefited quite a lot by approaching different Laureates, particularly those in my discipline, physics. I found Lindau a very fascinating city and a place which deserves for such wonderful activity. I would be very happy if the Council for the Lindau Meetings were able to give more chances to participants in the respective displinces from the developing world."

Alem Mebrahtu Tesfamariam Physics, Ethiopia



"I have the goal to contribute to the development of the knowledge in this area, to the benefit of patients. This experience helped me to decipher the way that lies ahead of me."

Maximiliano Espinosa Physiology or Medicine, Chile



research, and also for presenting the qualities of the European research area. As such, the Meeting contributes significantly to positioning Europe in relation to North America and Asia. Scientific policy aspects, such as Lindau as a "window to the world" in an intercultural scientific dialogue, were also a focus of the Meeting's communication.

Special emphasis was given to the expansion and deepening of contacts to international science journalists. In these efforts, use was made of recommendations from a number of different organisations such as the European Union of Science Journalists' Associations. The financial support of the EU Commission (see page 54) made it possible to invite a larger number of journalists, particularly from the recent EU accession countries, as well as other nations in central and eastern Europe, but also overseas.

The growing significance of online media as a source of information has led to the creation of a special address list for online media and internet journalists. With almost 150 contacts, it takes account of the major online media. One novelty in online communication was the online broadcast of the uncut lectures of five Nobel Laureates on the internet. Thanks to the support of the International Lake Constance Conference (IBK) and the Free State of Bavaria, it became possible for young scientists all over the world to take part "virtually" in the Meeting. The internet broadcasts gave the Meeting a unique character and were actively employed to address specific target groups (polytechnics, research institutions, the Goethe Institutes, etc.) and the media.

By refining and expanding the internet site as an essential communication and information platform, this important initiative, which is key to positioning Lindau in the global competition among science conferencing venues, was further strengthened. Professor Dr. Arno Allan Penzias, the 1978 Nobel Laureate in Physics, designed the architecture and did the coaching. Hewlett-Packard was won over as a major supporter who provided comprehensively all required hardware and software, as well as contributed to the implementation.

For the first time, individual reports were sent out over the Original Text Service (OTS) by dpa news aktuell, serving an extensive international address pool (Europe, USA, Korea, Japan). The use of the OTS assured that a wide range of websites were supplied and that the conference was present internationally – the Fachverteiler Wissenschaft, a special mailing list for the scientific community, allowed the right groups to be addressed.

Targeted offers made it possible to launch a series of articles about the 2005 Meeting of Nobel Laureates in large regional newspapers (see page 38) and thus generate additional interest in regions around universities and the home towns of young scientists and researchers. The previously compiled mailing list of all editors-in-chief of regional newspapers in Germany made approaching the right people easy.

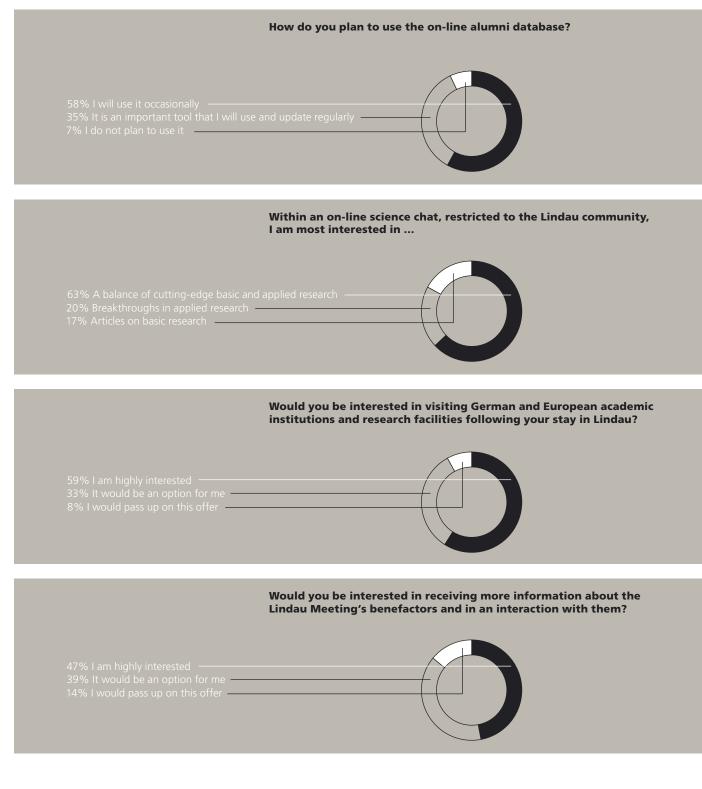
Bavarian Television followed the 2005 Meeting of Nobel Laureates in Lindau intensively and made a number of interviews. Director Vera Botterbusch produced a one-hour documentary on the Lindau Meeting with the title "Ausflüge in die Zukunft, 55. Nobelpreisträgertreffen in Lindau." It will be first aired on December 11th, 2005 as part of the reporting on the Nobel Prize Award Ceremony in Stockholm. Dr. Leonore Uhlenbusch, as scientific advisor, represented the Council in this project, which was vitally important for the global outreach of the Lindau Meeting. The Council hopes that the positive response to this film will trigger further projects of this kind.

BENEFACTORS AND SUPPORTERS

The Meeting was financed by earmarked donations. Thanks to targeted efforts and great commitment, it was possible to finance the material expenses involved in setting up the conference. For the first time in the history of the Meeting of Nobel Laureates in Lindau, the 2005 budget for the event was over 1 million euros, in addition to more than 350,000 euros in donations in kind.

Countess Sonja Bernadotte had entrusted this task to Professor Wolfgang Schürer, Chairman of the Foundation and a member of the Council. The Foundation carried out all acquisitions, negotiations and transactions on a pro bono basis. This commitment was substantiated by the efforts of the senior research associate to the Foundation's Chairman, Dr. Ulrich Stoll, and of Nikolaus Turner, a member of the Board, with a total of 165 workdays. In addition, contributions from

Answers of Participants



the Foundation once again made up a significant part of the basic budgetary needs of the Meeting of Nobel Laureates, as was support from the Deutsche Forschungsgemeinschaft (DFG–German Research Foundation).

The German Federal Ministry for Education and Research (Federal Minister Edelgard Bulmahn, State Secretary Wolf-Michael Catenhusen and Ministerial Director Hartmut F. Grübel) made it possible to carry out an interdisciplinary Meeting by taking over significant parts of the additional costs of this event in comparison to a mono-disciplinary conference. As a project partner, the Deutsche Telekom Foundation (Former Federal Minister Dr. Klaus Kinkel, Chairman of the Board) agreed to make a special contribution to supporting projects during the 2005 Interdisciplinary Meeting of Nobel Laureates. This was done in collaboration with the Federal German Ministry for Education and Research. A formal agreement on project support was also reached with the EU Commission (Commissioner Dr. Janez Potocnik, Dr. Rainer Gerold, Director for Science and Society). The focus was on widening the field of participants and expanding the international appeal of the conference, particularly among young, talented scientists and researchers around the world. With the Robert Bosch Foundation (Attorney Dieter Berg, Chairman of the executive management; Dr. Ingrid Hamm, Member of the executive management; Dr. Ingrid Wünning, Director for Science in Society) and the Dr. Ing. h.c. F. Porsche AG (Dr. Dipl.-Vw. Gerhard Schäfer, Director of Economics and Politics), two more respected partner institutions also joined the effort. The evaluation of these first cooperative projects will serve as a basis for all further cooperative agreements.

The International Lake Constance Conference (Günther H. Oettinger, IBK President for 2005 and Minister President of the German Federal State of Baden-Württemberg along with Staate Secretary Rudolf Böhmler; Mr. Peter Wieser, Chairman of the IBK Commission for Education, Science and Research) again made a substantial contribution to the financing of the internet site. In the spirit of co-financing, the Bavarian state government (represented by Dr. Thomas Goppel, State Minister for Science, Research and Art, and Ministerial Director Dr. Walter Schön, Chief of Staff of the Bavarian State Chancellery) also made another contribution this year. This commitment allowed interested young scientists and researchers worldwide to participate "virtually", something that was met with a positive international response and growing interest. Such outreach was expressly requested and welcomed by the Laureates.

Without large donations in kind and extraordinary pro bono services, the concept and organisation for the Meeting at this high-calibre international, scientific and professional level would not have been possible, in particular in view of the very limited budget. The value of donations in kind and probono services for the 2005 meeting amounted to more than 350,000 euros.

The Council and the Foundation paid tribute to the commitment of the benefactors and the project partners on the internet, within the scientific programme and the documentation for the Meeting, during the opening event, in the communication work with partner institutions and the public, as well as in the final report. All benefactors, for whose material and non-material support the Council and the Board of the Foundation would like to express its profound gratitude, are listed on the pages 53-56. Additional details on the Meeting's fundraising initiatives can be found in the 2005 Annual Report of the Foundation Lindau Nobelprizewinners Meetings at Lake Constance.

THE MEETING AND ITS SCHEDULE

The Meeting of Nobel Laureates was opened on Sunday, June 26th, 2005 by Count Björn Bernadotte, who stood in for the President of the Council, Countess Sonja Bernadotte, who was unable to take part for health reasons. Count Björn delivered the greetings of the President and thanked Federal Minister Bulmahn for the generous contributions of the Ministry for the Meeting and for her support for the idea of hosting an interdisciplinary Meeting in Lindau as part of the "Einstein Year" project. He also thanked the other benefactors and supporters of the 2005 Meeting and emphasised that the core task of the Council and the Foundation was to bring Laureates and the coming generation of researchers together. The "window to the world" should continue to be opened. Count Björn introduced the Nobel Laureates and the Scientific Chairmen and awarded the Lennart Bernadotte Medal to Baron Stig Ramel. He had brought together



"The Lindau Meeting of Nobel Laureates was a surprise for me because I did not know about its existence before, and to be selected to participate was a real honour. I am sure everybody - Laureates, students, organisers, etc. - enjoyed this wonderful week in Lindau. It was really moving for me to see all us students so excited about talking to the Laureates and sharing with them not only their lectures but also informal talks, a dinner, dancing and even a boat trip. Furthermore, I truly feel that the most important experience for all the participants was the possibility to meet people from so many different places all over the world and get to know them (and even keep in touch!)."

Valeria Runza Biology, Argentina



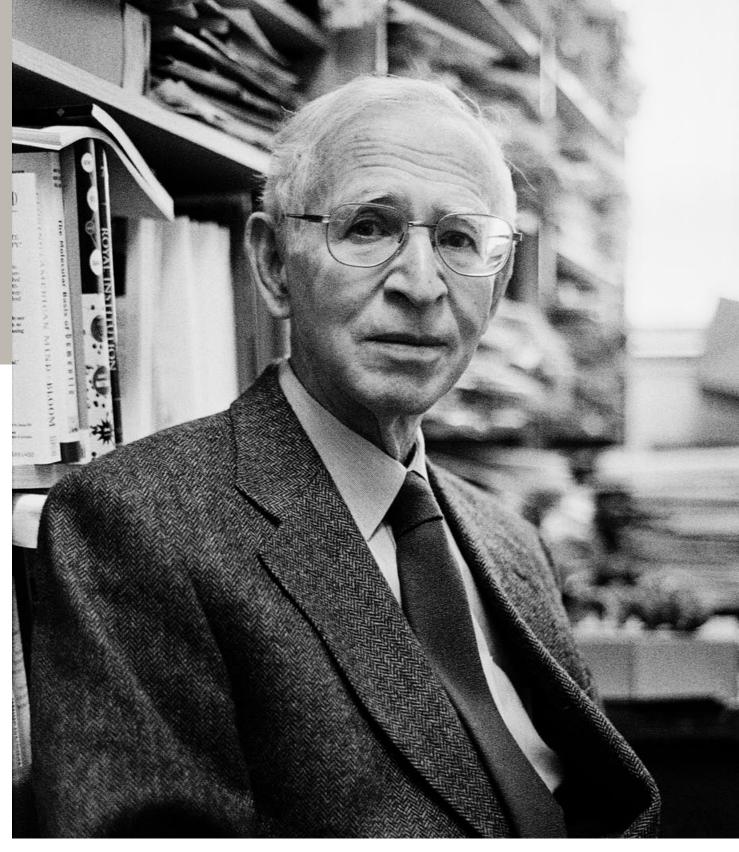
"The Lindau Meeting was a truly unique scientific and personal experience to me. Especially the interdisciplinary character made it a happening of creative exchange betweens minds and disciplines. I was been surprised and impressed by the friendliness of this interaction and I learnt a lot from it, not only in an intellectual, but also in a personal way."

Ara Schorscher-Petcu Physiology or Medicine, Germany



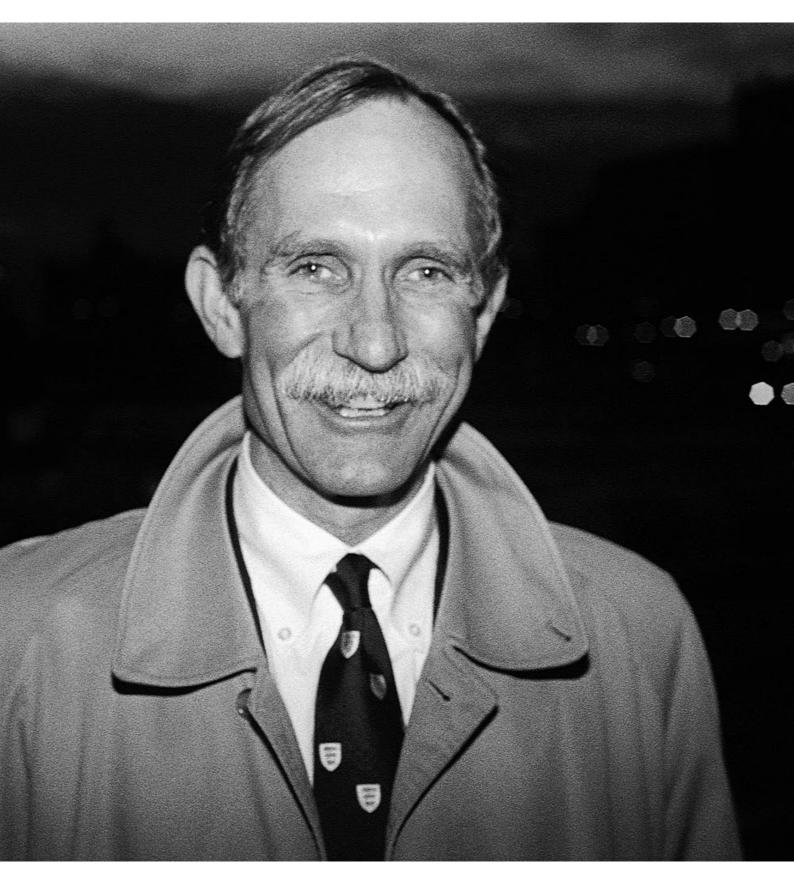
"The invitation to Lindau came as a surprise to me and most astonishing was the atmosphere of the meeting itself: I expected many elite young scientists attending the meeting, but I was surprised about most of them being so open-minded and friendly. I found the unbelievable lecture about the sociology of science 'How the Laser Happened' by Prof. Charles Townes the most impressive. This clearly demonstrated the fascinating personal impact of science on all of us."

Ingo Schwab Chemistry, Germany



"It is always refreshing to come into contact with young, eager and curious minds, but the intellectual traffic goes both ways. The students have a chance to hear first hand how a scientific discoverer went about a problem, rather than merely learning the results. Moreover, there are the opportunities between the lectures for discussions of wider topics, on issues of global problems and science policy. It is the new generation who have to face and help solve them."

Aaron Klug Chemistry 1982

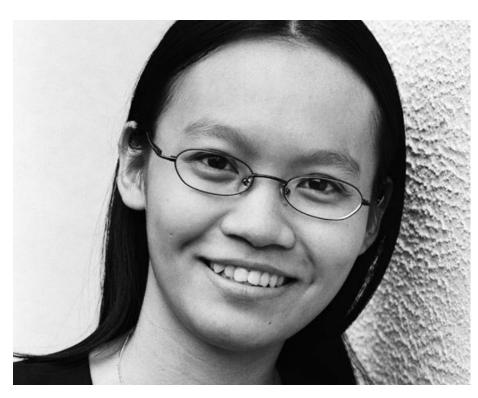


"Meeting the young people is the best part of Lindau. Organized lunches could be expanded. I attended the Thursday lunch for U.S. students and had a wonderful time. Increased participation by Arab and other Muslim groups would be useful. Also consider more representation from Singapore, Thailand and other Asian countries, in addition to China and Japan."

Peter Agre Chemistry 2003

"I personally learned a lot from the Laureates about their courage, strong motivation and determination. The concert by the UBS Verbier Festival Youth Orchestra, Switzerland was also very excellent. The boat excursion to Isle of Mainau was also unforgettable."

Ismunandar Chemistry, Indonesien



"It was a fantastic once-in-a-lifetime experience that I can't even describe in words. Between the discussions, two points were often reiterated: first, be passionate, work hard and be fully committed to what you are pursuing, and second, be clear with your goal and direction."

Yoke Leng Sim Chemistry, Malaysia

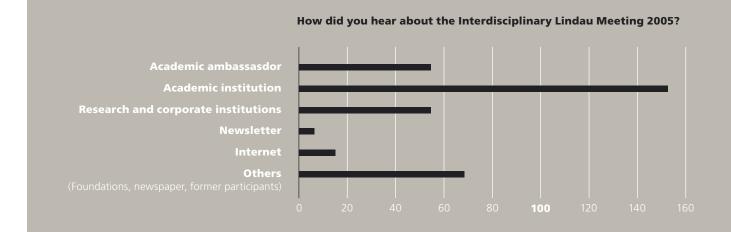




"What can be a greater experience for a young ambitious scientist than meeting some of the most famous scientists in the world? The Lindau Meeting of Nobel Laureates not only gives you the chance to listen to, but also to talk to the researchers who laid the recent basis for your own research. In addition you meet many interesting young scientists from all over the world. It was great and very motivating."

Judith Zaugg Biology, Switzerland

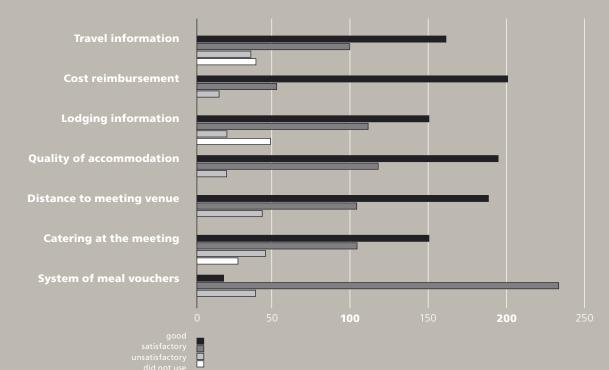
Answers of Participants



What was your impression of the selection process?



How do you rate the following aspects?



the two institutions, the Nobel Foundation and the Council for the Lindau Nobel Laureate Meetings, and helped them lead a fruitful dialogue, but also worked for many years as a mentor to both. Count Björn also paid tribute to Professor Ludwig E. Feinendegen who left the Council after 25 years of service. On behalf of his mother, he thanked Professor Feinendegen for his great commitment and presented a commemorative volume dedicated to him and commissioned in his honour by the Lennart Bernadotte Foundation.

After him spoke the Lady Mayor of the City of Lindau and remembered the Honorary President, the Spiritus Rector of the Meetings of Nobel Laureates in Lindau and President of the Council over many years, Professor Dr. h.c. mult. Count Lennart Bernadotte, who passed away in December 2004 at the age of 95.

State Minister Dr. Thomas Goppel presented the greetings of the Free State of Bavaria. He characterised the Lindau Meeting as the "Research Olympus" for scientific exchange of the highest calibre and the most extraordinarily broad range of topics. As a representative of the Federal German government, State Secretary Prof. Frieder Meyer-Krahmer emphasised that important messages originate from the Meeting in Lindau. On the one hand, there is the message of "Science Made in Germany", on the other a message to Asia and North America. In Lindau, the world's most eminent scientists in international basic research meet regularly, making these Meetings "an embodiment of the most essential engine for innovation, without which Germany as a location would lose its competitive advantage." Furthermore, Prof. Walter Rudolf Erdelen from UNESCO spoke, as did Prof. Bertil Andersson as the representative of the Nobel Foundation.

SCIENTIFIC EVENTS

The scientific programme of the Meeting, lasting from Monday, June 27th to Thursday, June 30th, began on each of the first three mornings with a plenary lecture by a Laureate who was awarded the Nobel Prize in the past year.

Following these lectures, panel discussions took place. They dealt with the development of matter, the universe and life, with biology in the post-genome era as well as with the energy shortage and global warming. After brief statements on the topic under discussion by the moderators and participating Laureates, questions written down by the young scientists in the audience were posed. The young scientists made extensive use of this opportunity and new aspects raised in the very interesting questions from the auditorium livened up the panel discussions. The Laureates taking part on the roundtable discussion were chosen to ensure that all the areas of specialisation were covered, substantiating the interdisciplinary character of the panel. It became abundantly clear that the issues raised during the discussions in astrophysics, modern biology and environmental protection could only be dealt with in an interdisciplinary manner.

After the panel discussions, the Meeting's programme was continued with further plenary lectures. In a total of 16 lectures, the Laureates reported to the fascinated and attentive auditorium about the latest in research work. In the afternoons, the participants had two hours of time to attend lecture and discussion events by Laureates who were of particular interest to them. The lecture topics had been put together by the programme commission in such a way that they fit to the topics of the panel discussion in the morning.

DISCUSSIONS, GET-TOGETHERS AND DIALOGUES

The goal of the supporting programme was to foster dialogue and help people get to know each other in a casual and informal atmosphere. Its significance for the concept behind the Lindau Meeting was borne out once again by the Laureates, the young scientists and the other participants from around the globe. On Monday evening, June 27th, 2005, as every year, a "Get-together Party" took place in the Inselhalle. The City of Lindau and the Foundation Lindau Nobelprizewinners Meetings at Lake Constance made the evening possible and invited everyone to a buffet. On June 30th, 2005, an invitation by the State Lottery Commission to the Lindau Casino made for a hospitable evening and created a pleasant ambience for an inter-generational dialogue.

On Wednesday evening, there was a concert featuring an ensemble including Maestro Sitkovetsky and seven other members of the UBS Verbier Festival Orchestra. The UBS



"The most important experience was to meet students and young scientists from all over the world. I'm very thankful for the diverse social programme allowing us participants to discuss matters concerning our research in a relaxed atmosphere with a beer or two."

Silke Gundel Biology, Germany



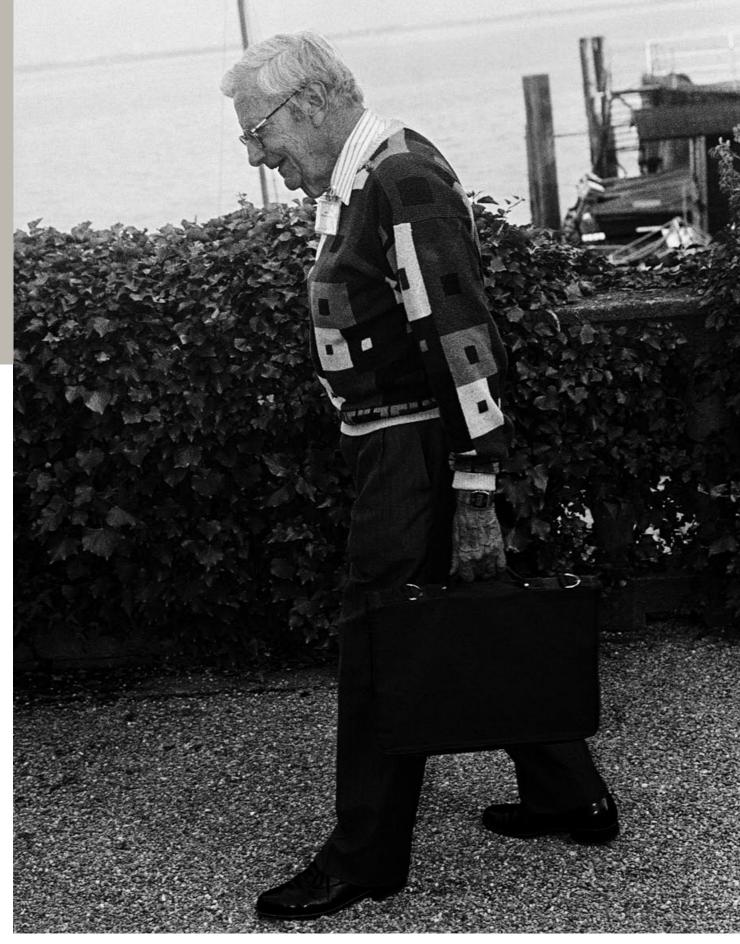
"Having just started to work on my PhD thesis, it was a great honour for me to be able to participate at the 55th Meeting of the Nobel Laureates in Lindau. The week offered all attendees a unique opportunity to meet the international scientific elite and furthermore provided us students with a truly interdisciplinary forum for the exchange of experience and knowledge with advanced researchers and fellow students. The scientific programme of the meeting was highly motivating and gave impressive insight into the work and social responsibilities of the visiting Nobel Laureates. I myself especially enjoyed meeting many people from all over the world, all getting together at beautiful Lake Constance and sharing a great interest in life sciences."

Juha Thomas Lindner Biology, Finland



"The Meeting of the Nobel Laureates was a tremendous experience that I will cherish forever. It was inspiring to talk to the Laureates about their lives and work and to see that their backgrounds were not so different from ours. It was very nice to see so many people excited about science."

Sara Breitzmann Physics, USA



"I enjoyed the round table discussions. They could even be incorporated in meetings for the individual sciences. I was impressed by the quality of the young participants which appear to be higher than in previous meetings."

Nicolaas Bloembergen Physics 1981



Verbier Festival Orchestra is truly symbolic of the central theme of the Lindau Meetings – that of identifying young talents from countries and cultures around the world and successfully spurring them on to work together and achieve excellence.

Every day the young scientists from around the globe had opportunities to meet and get to know each other and the Laureates during complimentary meals at one of the many restaurants on the island. In addition, almost all the groups from outside Germany, but also foundations and government institutions, organised their own events that the Laureates took part in as well.

On Friday morning, all those participating went on a cruise from Lindau to the Lake Constance island Mainau. The boat trip and the walks they took upon arriving offered a unique opportunity for everyone to inquire into, reflect on and discuss specific topics more deeply and expand their international networks. All those involved took advantage of this opportunity. As such, the final day of the Lindau Meeting represented a particularly important element of the entire event.

The closing event took place in the Palm House next to Mainau Castle. On behalf of all the young scientists at the conference, Stefanie Sassen, a doctoral candidate at the Technical University of Munich, thanked the Laureates and the Council. Professor David Gross thanked all the participants on behalf of his fellow Laureates. The 55th Meeting of Nobel Laureates in Lindau ended with Count Christian Bernadotte taking leave from all the participants. On behalf of his entire family and the Council, he thanked the Laureates and the young scientists for all their commitment and enthusiasm.

The 55th Meeting of Nobel Laureates in Lindau was a venue at which new, cross-border and cross-cultural scientific networks and personal friendships developed. The alumni database continues to foster the dialogue between participants even after the personal meetings in Lindau have passed and also allows former participants to keep in touch and follow-up on what they are doing in their work. It also opens the door to science chats. The rationale for making sure the "Lindau Dialogue" lasts into the future is to create a new impetus and meet recent calls for the establishment of a network of the best young scientists in the world, who can then use the platform offered by the Lindau Meetings for a sustained dialogue between scientists, research institutes and economic research centres.

As part of a special project called "German Week", delegations from outside Germany along with a select group of young scientists participated in a follow-up programme after the Meeting set up in cooperation with the DAAD (German Academic Exchange Service) and the DFG (German Research Foundation). Visits to universities and research institutes, together with a research dialogue in the Berlin offices of Deutsche Telekom, fostered goodwill for scientific and research endeavours "Made in Germany".

EVALUATION OF THE MEETING

The Meeting was evaluated in a three-step process. The first step was to have the Council and the Foundation Board evaluate the Meeting internally after it ended, the focus here being on the scientific programme, the participant structure, the media work and budgetary discipline.

Feedback from the Laureates, the second step in the evaluation process, offered above all appreciation for the Meeting, in particular for its goals and programme, its incomparable ambience as well as the quality and international composition of the young science talents who took part. The Laureates praised the choice of the two-hour discussion and lecture series and welcomed the services offered in the areas of logistics, especially the professional chauffeur service with a BMW fleet and the flight arrangements made through Lufthansa. However, they also pointed out that the infrastructure and air-conditioning in the Inselhalle did not meet the standards for global scientific conferences.

The third step was a questionnaire to survey the young scientists in attendance about their impressions, experiences and recommendations for improvement. More than 50% of the participants returned their questionnaire. The three-step structure of the scientific programme struck a particularly positive chord. The plenary lectures were considered either very good or good, the panel discussions on Monday and



"You are doing just about right to the scientific programme. Too much information before the meeting on the subjects of discussion will reduce the curiosity about the lectures. Global warming and energy shortage are subjects that attracted the most interest among young scientists. Perhaps in one of the afternoon sessions, one could consider a second round of round table discussions. The age of young researchers could be reduced somewhat. The international presentations seem quite good." Yuan Tseh Lee Chemistry 1986





"Attending this conference gave me the opportunity to find out for myself that even the Nobel Laureates began their careers just like ordinary people. From interacting with them, I learnt that when things got tough, it was those who persevered who were successful. This experience will be an inspiration to me for many years to come."

Jayanthi Santhanam Physics, India "I am grateful for having had the opportunity to meet some of the most outstanding researchers in the world. I was inspired by their spirit of achieving breakthroughs in all directions of research, and the volition of giving the best in all fields one is acting or working in left a lasting impression on me. I can therefore highly recommend this meeting to all students who have the chance to be selected."

Nicolas Brüggemann Chemistry, Germany "What I liked most was being able to ask questions to the Laureates. It is not easy to make this happen in other instances. Also I enjoyed establishing conversations with other students. There I could get to know their interests and also make a lot of new friends. I had a great time. It is an experience I will remember the rest of my life and share with my fellow colleagues."

Francisco Valenzuela Industrial Engineering, Chile



"I will remember the humane and motivating meeting with both Nobel Prize winners, their qualities, passions, opinions and faults, and junior scientists from such different backgrounds. I also appreciated this interdisciplinary meeting for the societal, ethical and political aim or colouring of some talks and round table discussions."

Pierre Lugan Physiker Frankreich





"Interdisciplinary cooperation was shown to be very important, along with the need for international communication. Several discussions addressing the extremely important issues of global warming and energy shortfall emphasised this aspect of the Meeting."

Kenny Arnold Chemistry, Great Britain

"Meeting one Nobel Laureate is an honour but to spend a week with 44 of them is a unique opportunity. The interdisciplinary meeting has shown me that although the techniques may be different, the questions in medicine, physics and chemistry are very similar: where do we come from, why is the universe the way it is, can we change it and where are we going?"

Irene Suarez Martinez Chemistry, Spain Tuesday good, those on Wednesday very good and the free dialogue forums in the afternoon very good or good, as well as extremely effective. More than three-quarters of those surveyed regarded the number of panel discussions, the plenary lectures and the discussion forums as adequate. The questions concerning the international composition of the participants, the interdisciplinary nature of the Meeting, the breadth, depth and currency of topics and the inclusion of young scientists in the dialogue reflected equally strong approval (see page 12, 24, 28, 34, 58, 59).

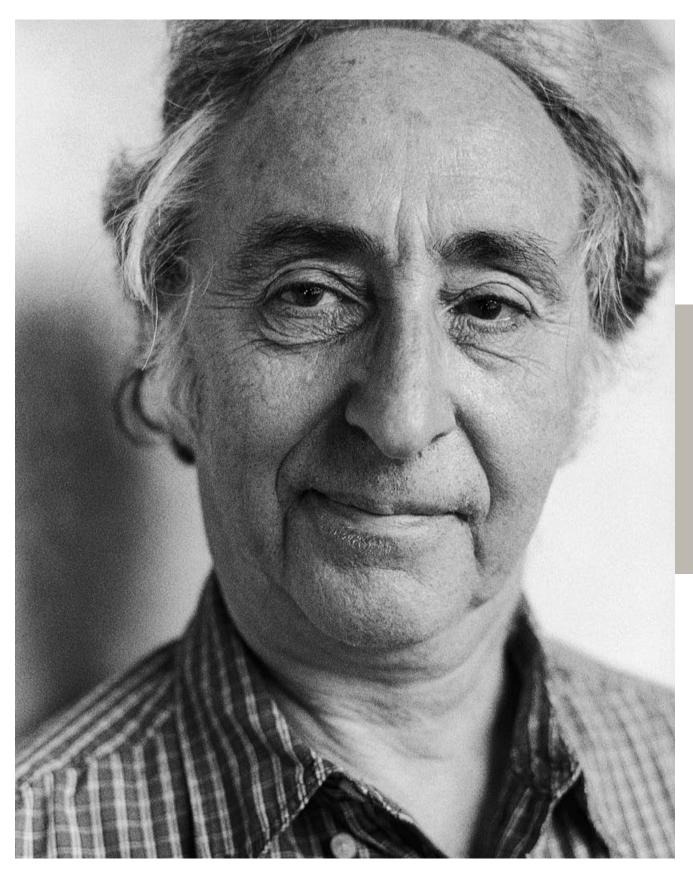
The organisation of the Meeting, the work of the Meeting office and the design of the website received very good marks from more than two-thirds of all those surveyed. The internet café operated by T-Com, the WLAN service in the Inselhalle and the HP internet kiosks were greatly appreciated as services. The portrait album "Nobelpreisträger im Portrait – Nobel Laureates in Portraits" that was passed out to every young scientist who attended also elicited an extremely positive response. It was seen as a token of remembrance and motivation.

AN EYE TO THE FUTURE

The 55th Meeting of Nobel Laureates in Lindau marks a decisive step for this annual meeting in becoming a unique and significant international forum for excellence. This is also reflected positively in the national and international media coverage. The young scientists and the Laureates praised the friendly, open-minded and liberal atmosphere of the Meeting and appreciated the high level of the intellectual dialogue between generations and cultures that gave them new creative impetus for their work.

The Meeting has clearly shown that the scientific challenges facing the natural sciences can only be met with an interdisciplinary approach. For this reason, the Council intends in future to complement the Meetings devoted to chemistry, physics and physiology/medicine, which take place in alternate years, in an interdisciplinary fashion. The next tridisciplinary meeting is slated to take place in 2010. As new Delegate of the President of the Council, Countess Sonja Bernadotte, Dr. Rainer Gerold, former Director of Science and Society at the EU Commission, will continue in this commitment to the Lindau initiative and foster the international nature of the Meetings.

The organisers are aware that the Lindau Meetings are possible in this manner only with the generous support – both private and institutional – from industry, foundations, associations and the public sector. The Council and the Foundation would therefore like to thank all their benefactors very much on behalf of all those who took part in the 2005 Interdisciplinary Meeting of Nobel Laureates in Lindau.



"I found the students very appreciative of my heretical views." Brian David Josephson Physics 1973 "The greatest amazement stemmed from the acquaintance of so many knowledgeable, talented and passionate young scientists from all over the world: I immensely enjoyed the extraordinary discussions we had each evening of our stay in Lindau, and I have never felt so privileged."

Luca Albertin Chemistry, Italy





"I was most impressed by the Laureates' life-long achievements and their commitment in promoting issues of societal interest (e.g. global warming). Particularly amazing was the intellectual fluidity of those Laureates being already well-advanced in years."

Christina Westhoff Physiology or Medicine, Germany



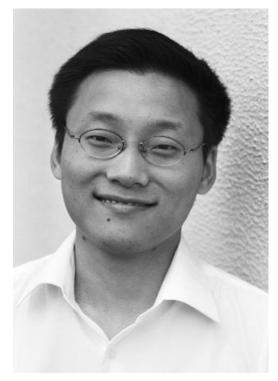
"Nobel Prize winners are not from outer space. I could realize that hard work, focus and passion are the key to achieving results that may change the world. Ingeniousness is something that comes and goes, and if we want, we will be able to grab it from time to time." Carlos Varela

Engineering, Chile



"The Lindau Meeting offered me that unique opportunity, as old and new generations of scientists came together to assess the present state of affairs and to hint at future challenges. It also increased my global awareness and I identified my role as a professional in promoting solidarity to attain a better tomorrow. In an important manner, the meeting rekindled my desire to pursue an advanced degree in science."

Edward J. Sambriski Chemistry, USA



"During the Lindau Meeting, we were lucky to talk with the Nobel Laureates face to face and listen to their wonderful lectures. I feel that life science and universal science might be the direction of natural science in the future. Round table discussion attracts more audience, because the thinking collision of Laureates from different research field will direct us to many aspects that we have never thought about before."

Jian-Ping Ge Chemistry, China



"The meeting with the Nobel Laureates was like a dream come true. I truly considered myself to be really lucky sitting in the midst of some of the greatest scientists and researchers coming from all over the world. Every aspect of their personality was an inspiration in itself."

Muhammad Fawad-ul-Qamar Physiology or Medicine, Pakistan



Zhenhong Guo Physiology or Medicine, China



Daniel Aili Physics, Sweden



Elizabeth Fulton Biology, Australia





Aaron Mc Gowan Physics, USA



Norbert Babcsán Chemistry, Hungary

Geoffrey Rurimo Physics, Kenya





Jakub Dostalek Physics, Czech Republic

Ahmed Bakar Al-Harbi Chemistry, Saudi Arabia



Uri Keshet Physics, Israel



"It was a unique experience for me to participate in the 55th Meeting of Nobel Laureates in Lindau. As every young scientist, I had the opportunity to make contact with many Laureates, ask them scientific questions, but also learn some points about their motivations. I was very often impressed by how enthusiastic many Laureates were about their fields. In addition, I found the atmosphere impressive, where so many young scientists from all over the world were present. We could exchange experience considering different cultural aspects of our countries. I liked Lindau, a very neat town of Germany very much! The citizens are very kind and hospitable. I kindly thank everybody who took part in the organisation of this excellent meeting."

Ebru Yilmaz Physiology or Medicine, Turkey

Facts and Figures

of the Interdisciplinary Lindau Meeting of Nobel Laureates 2005

NUMBER OF PARTICIPANTS

Argentina	3	Latvia
Armenia	2	Lithuania
Austria	8	Malaysia
Australia	11	Mexico
Belgium	2	Netherlands
Bosnia and Herzegovina	1	New Zealand
Brazil	7	Norway
Bulgaria	2	Pakistan
Cameroon	1	Poland
Canada	6	Portugal
Chile	5	Romania
China	33	Russian Federa
Czech Republic	18	Saudi Arabia
Denmark	4	Singapore
Estonia	6	Slovakia
Ethiopia	1	Slovenia
Finland	2	South Korea
France	9	Spain
Georgia	1	Sweden
Germany	204	Switzerland
Great Britain	18	Taiwan
Greece	1	Trinidad and T
Hungary	19	Turkey
India	41	Ukraine
Indonesia	6	United Arab E
Israel	13	USA
Italy	7	Venezuela
Ireland	1	Yugoslavia
Japan	19	
Kenya	2	Total

Total	696
Yugoslavia	2
Venezuela	1
USA	87
United Arab Emirates	2
Ukraine	10
Turkey	7
Trinidad and Tobago	1
Taiwan	4
Switzerland	14
Sweden	11
Spain	14
South Korea	5
Slovenia	4
Slovakia	5
Singapore	3
Saudi Arabia	6
Russian Federation	6
Romania	7
Portugal	4
Poland	13
Pakistan	8
Norway	4
New Zealand	3
Netherlands	4
Mexico	2
Malaysia	8
Lithuania	6
Latvia	2

NOBEL LAUREATES PARTICIPATING:

Peter Agre Werner Arber Günter Blobel Nicolaas Bloembergen Aaron Ciechanover Paul Crutzen Robert Curl Christian de Duve Manfred Eigen **Richard Ernst** John D. Fenn Riccardo Giacconi Ivar Giaever David Gross Alan Heeger Robert Huber Brian D. Josephson Jerome Karle Klaus von Klitzing Aaron Klug Walter Kohn Masatoshi Koshiba Harold Kroto Paul Lauterbur Yuan Lee William N. Lipscomb Rudolph Marcus Peter Mansfield Alan G. MacDiarmid Roderick MacKinnon Kary Mullis Marshall Nirenberg Christiane Nüsslein-Volhard Douglas Osheroff Norman Ramsey Robert Richardson **Richard Roberts** Sherwood F. Rowland Hamilton O. Smith Charles Townes Martinus Veltman Eric Wieschaus Frank Wilczek Kurt Wüthrich

MONDAY, JUNE 27TH

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09:00	Prof. Aaron Ciechanover (Chemistry 2004) Haifa/Israel "Why Proteins Have to Die so we Shall Live"	09:00	Prof. David Gross (Physics 2004) Santa Barbara/USA "The Future of Physics"
09:30	Round Table Discussion "Evolution of Matter, Universe and Life"	09:30	Round Table Discussion "Biology in the Post-genomic Era"
	Prof. Werner Arber (Physiology or Medicine 1978), Prof. Christian de Duve (Physiology or Medicine 1974), Prof. Manfred Eigen (Chemistry 1967), Prof. John B. Fenn (Chemistry 2002), Prof. Masatoshi Koshiba (Physics2002), Prof. Rudolph Marcus (Chemistry 1992), Prof. Martinus Veltman (Physics 1999) Chair: Prof. Anders Bárány, Prof. Burkhard Fricke		Prof. Günter Blobel (Physiology or Medicine 1999), Prof. Aaron Klug (Chemistry 1982), Prof. Christiane Nüsslein-Volhard (Physiology or Medicine 1995), Prof. Hamilton O. Smith (Physiology or Medicine 1978), Prof. Kurt Wüthrich (Chemistry 2002) Chair: Prof. Hans Jörnvall, Prof. Helmut Sies
11:30	Prof. Robert Richardson (Physics 1996) Ithaca/USA "Examples of some Multi-disciplinary Research"	11:30	Prof. Riccardo Giacconi (Physics 2002) Washington/USA "Basic and Applied Research"
12:00	Prof. Kurt Wüthrich (Chemistry 2002) Zürich/Switzerland "From Genome to Proteome-Impact on Biological and Biomedical Research"	12:00	Prof. Sir Peter Mansfield (Physiology or Medicine 2003) Nottingham/GB "Real Time MRI: Echo –planar Imaging"
15:00 - 17:00	Lectures and discussions	12:30	Prof. Manfred Eigen (Chemistry1967) Göttingen/D "What is Life – Now?"
Inselhalle Saal Europa	Prof. Werner Arber (Physiology or Medicine 1978) Basel/Switzerland "Molecular Mechanism of Biological Evolution"	15:00 - 17:00	Lectures and discussions
Inselhalle Saal Bayern	Prof. Christian de Duve (Physiology or Medicine 1974) Brussels/Belgium "Singularities in the Origin and Evolution of Life"	Inselhalle Saal Europa	Prof. Richard Ernst (Chemistry 1991) Zürich/Switzerland "Academic Opportunities for Conceiving and Shaping our Future"
Rathaus Alter Rathaussaal	Prof. Ivar Giaever (Physics 1973) Troy/USA "A Biosensor using Living Cells"	Inselhalle Saal Bayern	Prof. Robert Huber (Chemistry 1988) Martinsried/D "Immunreceptors-Antibody Interactions, a Structural Basis"
Rathaus Rungesaal	Prof. Sir Aaron Klug (Chemistry 1982) Cambridge/GB "From the Laboratory to the Clinic: Towards Therapeutic Applications of Engineered Zinc Finger Protein"	Rathaus Alter Rathaussaal	Prof. Kary Mullis (Chemistry 1993) Newport Beach/USA "Altermune: Chemically Programmable Immunity"
Cinema Filmpalast	Prof. Masatoshi Koshiba (Physics 2002) Tokyo/Japan "The Neutrinos; what we Know about them and what they Tell us in Future"	Rathaus Rungesaal	Prof. Douglas Osheroff (Physics 1996) Stanford/USA "Global Warming and The Energy Prospects for the Future "
Cinema Parktheater	Prof. Alan G. MacDiarmid (Chemistry 2000) Philadelphia/USA "The World is Becoming Smaller"	Cinema Filmpalast	Prof. Norman Ramsey (Physics 1989) Cambridge/USA "Contributing to other Sciences by Lucky Accidents
	Prof. Martinus Veltman (Physics 1999) Bilthoven/NL "A Century of Particle Physics"	Cinema Parktheater	Prof. Hamilton O. Smith (Physiology or Medicine 1978) Reisterstown/USA "Towards Constructing a Minimal Synthetic Organism"
			Prof. Eric Wieschaus (Physiology or Medicine 1995) Princeton/USA "Are there Common Genetic Principles that Govern Embryonic Development of all Organisms?"

TUESDAY, JUNE 28TH

WEDNESDAY, JUNE 29TH

THURSDAY, JUNE 30TH

09:00	Prof. Frank Wilczek (Physics 2004) Cambridge/USA "The Universe is a Strange Place"	09:00	Prof. Peter Agre (Chemistry 2003) Baltimore/USA "Aquaporin Water Channels: From Atomic Structure to Clinical Medicine"
09:30	Round Table Discussion "Energy Shortfall and Global Warming" Prof. Nicolaas Bloembergen (Physics 1981),	09:30	Prof. Paul Lauterbur (Physiology or Medicine 2003) Urbana/USA "From Molecules to Mice to Man and back again"
	Prof. Paul Crutzen (Chemistry 1995), Prof. David Gross (Physics 2004) Prof. Sir Harold Kroto (Chemistry 1996), Prof. Sherwood F. Rowland (Chemistry 1995), Chair: Prof. Astrid Gräslund, Prof. Wolfgang Lubitz	10:00	Prof. Mashall Nirenberg (Physiology or Medicine 1968) Bethesda/USA "The Initial Strategy for Constructing Part of the Nervous System of Drosophila"
11:30	Prof. Günter Blobel (Physiology or Medicine 1999) New York/USA "Transport into the Nucleus"	11:00	Prof. Roderick MacKinnon (Chemistry 2003) New York/USA "Ion Channels: Life's Electronic Hardware"
12:00	Prof. Sir Harold Kroto (Chemistry 1996) Brighton/GB "2010 a Nanospace Odyssey"	11:30	Prof. Walter Kohn (Chemistry 2003) Santa Barbara/USA "Nearsightedness of Electronic Matter"
15:00 - 17:00	Lectures and discussions	19.00	Draf Vlana var Vlivia v (Davies 1005)
Inselhalle Saal Europa	Prof. Paul Crutzen (Chemistry 1995) Mainz/D	12:00	Prof. Klaus von Klitzing (Physics 1985) Stuttgart/D "Einsteins Nobel Prize and Modern Nanoelectronics"
	"Atmospheric Chemistry and Climate in the Anthropocene"	15:00 - 17:00	Lectures and discussions
Inselhalle Saal Bayern	Prof. Robert Curl (Chemistry 1996) Houston/USA "The Strange Chemistry of Elemental Carbon"	Inselhalle Saal Europa	Prof. Alan Heeger (Chemistry 2000) Santa Barbara/USA "Conjugated Polymers as Light Harvesting Materials for Riscongerus Foreta Recongence Foregation
Rathaus Alter	Prof. Yuan Lee (Chemistry 1985) Taipei/Taiwan		for Biosensors: Forster Resonance Energy Transfer (FRET) and the "FRET Gate""
Rathaussaal	"Dynamics of Molecular Dissociation"	Inselhalle Saal Bayern	Prof. Brian D. Josephson (Physics 1973) Cambridge/GB
Cinema Filmpalast	Prof. William N. Lipscomb (Chemistry 1976) Cambridge/USA	Saar Dayern	"Relationship between Physics and Biology"
1 impaiase	"Molecular Dynamics in Yeast Chorismate Mutase"	Rathaus Alter	Prof. Jerome Karle (Chemistry 1985) Washington/USA
Cinema Parktheater	Prof. Richard Roberts (Physiology or Medicine 1993) Beverly/USA "The Genomics of Restriction and Modification"	Rathaussaal	"Kernel Energy Method for Quantum Cristallography"
	The Genomics of Restriction and Mounication	Cinema	Prof. Charles Townes (Physics 1964)
Rathaus Rungesaal	Prof. Sherwood F. Rowland (Cemistry 1995) Irvine/USA "The changing Atmosphere (Greenhouse Gases, Global Warming and Climate Change) "	Parktheater	Berkeley/USA "How the Laser Happened-The Sociology of Scientific Developments"

SCIENTIFIC CHAIRPERSONS OF THE 2005 MEETING



Chemistry: Prof. Astrid Gräslund Stockholm Prof. Wolfgang Lubitz, Mülheim a.d. Ruhr





Medicine: Prof. Hans Jörnvall, Stockholm Prof. Helmut Sies, Düsseldorf





Physics:

Prof. Anders Bárány, Stockholm Prof. Burckhard Fricke, Kassel Prof. Jürgen Uhlenbusch, Düsseldorf (coordination-at-large)

SELECTION CRITERIA FOR THE YOUNG, INTERNATIONAL TALENTS IN SCIENCE AND RESEARCH

All selected participants shall

- show a genuine interest in science and research,
- show a strong commitment both to their principal field of studies and to inter-disciplinary dialogue within the international academic community,
- receive the unequivocal support of their application by their academic advisor and/or by internationally renowned scientists (received scholarships and other academic awards can serve as recommendations),
- be fluent in English,
- be familiar with societal impacts of scientific knowledge and its applications,
- in general be younger than 30 years; in exceptional cases postdoctoral scientists can be up to 35 years of age.

In addition, the following requirements shall be fulfilled in dependence of the age of the participants:

- (1) Undergraduate students shall
 - belong to the top 10 per cent of their class,
 - possess solid general knowledge in the natural sciences.

(2) Doctoral students shall

- have excellent graduation records,
- produce outstanding research,
- possess good teaching experience.

(3) Postdoctoral scientists shall

- have up to 5 years of postdoctoral experience,
- have published results of scientific investigations in widely recognized scientific journals,
- · have presented research reports at scientific meetings,
- have acquired solid experience in teaching and tutoring,
- possess experience in research management.

NATIONAL AND INTERNATIONAL COOPERATION PARTNERS OF THE COUNCIL FOR THE LINDAU NOBEL LAUREATE MEETINGS IN 2005

A*STAR - Agency for Science, Technology and Research of Singapore Academia Sinica, Taiwan Academy of Sciences Malaysia Alexander von Humboldt Stiftung Australian Academy of Science Brazilian Academy of Sciences Budapest University of Technology and Economics Centrum Fizyki Teoretycznej PAN in Poland Conabio - Comisión nacional para el conocimiento y uso de la biodiversidad in Mexico Deutsche Bundesstiftung Umwelt Deutsche Forschungsgemeinschaft Deutsche Telekom Stiftung Deutscher Akademischer Austauschdienst Dickinson College Direction de la recherche of the Région Rhône-Alpes, France Direzione Generale Artigianato, Nuova Economia, Ricerca e Innovazione of the Regione Lombardia, Italy ECTARC - The European Centre for Training and Regional Co-operation of the Welsh Government, United Kingdom Elitenetzwerk Bayern Embassy of India in Washington in cooperation with science attachés at Indian embassies worldwide EPS - European Physical Society EPSRC - Engineering and Physical Science Research Council European Commission, Directorate Science and Society Ewha Womans University Förderverein Chemie-Olympiade e.V. Fraunhofer-Gesellschaft Fulbright-Commission GAIN - German Academic International Network German Federal Ministry of Education and Research GF Deutsche Technion-Gesellschaft e.V. Gottlieb Daimler- und Karl Benz-Stiftung Hanns-Seidel-Stiftung Hermann von Helmholtz-Gemeinschaft Deutscher Forschungszentren Human Frontier Science Programme Organisation (HFSP) Indian Ministry of Science and Technology Industrie-Club e.V. Düsseldorf Industriellenvereinigung Vienna INTAS -- International Association for the Promotion of Cooperation with Scientists from the New Independent States of the Former Soviet Union International Lake Constance Conference (IBK) Interuniversity Council of Catalonia of the Government of Catalonia, Spain Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT)

Karls University of Prague King Saud University, Saudi Arabia Klaus Tschira Stiftung GmbH Konrad-Adenauer-Stiftung e.V. Mexican Academy of Sciences Ministry for Research and Technology of the Republic of Indonesia Ministry for Science, Research and Art of Baden-Württemberg Ministry of Culture, Higher Education and Scientific Research and the The Higher Colleges of Technology of the United Arab Emirates MPEI – Moscow Power Engineering Institute (Technical University) National Science Foundation, United States of America National Taras Shevchenko University of Kiev NSERC - Natural Sciences and Engineering Research Council of Canada Oak Ridge Institute for Science & Education PIEAS – Pakistan Institute of Engineering and Applied Sciences Portuguese State Ministry for Science, Innovation and Higher Education Professor-Rhein-Stiftung Radford University Research Council of Norway Robert Bosch Stiftung Royal Netherlands Academy of Arts and Sciences Royal Society of New Zealand Schweizerische Studienstiftung Sino-German Center for Research Promotion Stiftung Jugend forscht e.V. Südwestmetall, Verband der Metall- und Elektroindustrie Baden-Württemberg e.V. Sung Ae General Hospital The Korea Science and Engineering Foundation The Nobel Foundation The Royal Society, United Kingdom U.S. Department of Energy UNESCO, Division of Basic and Engineering Sciences, Natural Sciences Sector University College London Hospitals University of Chile University of Cape Town University of Southern Denmark Verband der Baverischen Metall- und Elektro-Industrie e.V. Verein der Bayerischen Chemischen Industrie e.V. Verein Deutscher Ingenieure in cooperation with FEANI – European Federation of National Engineering Associations Vereinigung der Bayerischen Wirtschaft e.V. Vilnius University VolkswagenStiftung Weizmann Institute of Science Willhelm Sander-Stiftung World Academy of Young Scientists

World Federation of Nuclear Medicine and Biology

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Audi AG **Bertarelli Foundation Deutsche Telekom Stiftung** Dr. Ing. h.c. F. Porsche AG **Ecoscientia Stiftung** EnBW Energie Baden-Württemberg AG Hansjörg Wyss Medical Foundation Jungbunzlauer AG Monika und Wolfgang Schürer Novartis International AG SAP AG Siemens AG Südwestmetall Baden-Württemberg Synthes-Stratec Inc. Verband der Bayerischen Chemischen Industrie Verband der Bayerischen Metall- und Elektro-Industrie e.V. Verein Deutscher Ingenieure

BENEFACTORS OF THE 2005 INTERDISCIPLINARY MEETING OF NOBEL LAUREATES IN LINDAU

Bayerisches Staatsministerium für Wissenschaft, Forschung und Kunst Bundesministerium für Bildung und Forschung Deutsche Forschungsgemeinschaft (DFG) Deutsche Lufthansa AG **Deutsche Telekom Stiftung** Dr. Ing. h.c. F. Porsche AG **European Commission** Hewlett-Packard GmbH International Lake Constance Conference (IBK) Prof. Dr. Jürgen Kluge **MS Management Service AG National Science Foundation Robert Bosch Stiftung** Foundation Lindau Nobelprizewinners Meetings at Lake Constance U.S. Department of Energy **UBS AG**

Academy of Sciences Malaysia Alexander von Humboldt-Stiftung Alfons Goppel-Stiftung artificial image Australian Academy of Science Peter Badge Bankhaus Sal. Oppenheim KGaA Bayerische Staatskanzlei Big Image Systems GmbH BMW AG BrainsToVentures AG | Umantis Carl Zeiss AG Chemie-Olympiade Baden-Württemberg Chinesisch-Deutsches Zentrum für Wissenschaftsförderung Christa und Hermann Laur-Stiftung Community Foundation "Kaliningrad" Deutsche Bundesstiftung Umwelt (DBU) Deutsche Telekom AG Deutscher Akademischer Austauschdienst (DAAD) Druckerei Hermann Brägger Eduard-Rhein-Stiftung Elitenetzwerk Bayern ETO Magnetics KG European Physical Society Festo AG & Co. KG Prof. Dr. phil. h.c. Arthur Fischer Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V. Fulbright-Kommission Maximilian Gärber Gottlieb Daimler- und Karl Benz-Stiftung Government of Pakistan Hanns-Seidel-Stiftung

Hermann von Helmholtz-Gemeinschaft Deutscher Forschungszentren Indian Ministry of Science and Technology Industrie-Club e.V. Düsseldorf Industriellen Vereinigung (IV) Insel Mainau GmbH INTAS, International Association for the promotion of cooperation with scientists from the New Independent States of the former Soviet Union Japanese Ministry of Education, Culture, Sports, Sciences and Technology Jugend forscht Klaus Tschira Stiftung gGmbH Konrad-Adenauer-Stiftung e.V. Lorie Karnath Landesstiftung Baden-Württemberg gGmbH Leica Camera AG Lennart-Bernadotte-Stiftung Lindauer Zeitung Professor Dr. R.A. Mashelkar N.N. P.R. Narvekar National Institute of Standards and Technology (USA) Simon Newman Nobel Foundation Oak Ridge Associated Universities Peter Dornier Stiftung Professor-Rhein-Stiftung ProLindau GmbH & Co. KG PwC Deutsche Revision Robert E. Roethenmund Royal Society of New Zealand Schweizerische Studienstiftung Sennheiser electronic GmbH South Korean Ministry of Science Sparkasse MM-LI-MN Staatliche Lotterieverwaltung Stadt Lindau (B) Stadtverkehr Lindau (B) GmbH Walter Stahlecker Stiftung Jugend forscht e.V. Stiftung van Meeteren Südkurier Ratan N. Tata T-Com University College London Hospitals **UNESCO** United Arab Emirates Ministry of Culture, Higher Education and Science Research Verein Deutscher Ingenieure e.V. VolkswagenStiftung Verlagsgruppe Handelsblatt Wall Street Journal Europe Wilhelm Sander-Stiftung Xerox GmbH ZF Friedrichshafen AG

REVENUES

Description	Amount
Donations and funds from the public sector (Bundesministerium für Bildung und Forschung, European Commission, Bay. Staatsministerium für Wissenschaft, Forschung und Kunst, International Lake Constance Conference), from institutions aiding the advancement of science (Deutsche Forschungsgemeinschaft, Jugend forscht), from industry (Dr. Ing. h.c. F. Porsche AG, Bankhaus Sal. Oppenheim KGaA, ProLindau Marketing GmbH&Co KG, Sparkasse MM-LI-MN, Festo AG, ZF Friedrichshafen AG, Verband Bayerische Chemische Industrie, Südkurier GmbH) and charitable or non-profit organisations (Robert Bosch Stiftung gGmbH, Deutsche Telekom Stiftung, Stiftung van Meeteren, Eduard Rhein Stiftung, Wilhelm Sander-Stiftung, Peter Dornier-Stiftung)	897,686.54€
Contribution as per August 31, 2005 and deficiency guarantee respectively of the Foundation Lindau Nobelprizewinners Meetings at Lake Constance with its principle patrons (Bertarelli Foundation, Novartis International AG, SAP AG, Siemens AG, Südwestmetall Baden-Württemberg, Verband der Bayerischen Metall- u. Elektroindustrie, Verein der Bayerischen Chemischen Industrie), Patrons (Audi AG, Deutsche Telekom Stiftung, Ecoscientia Stiftung, EnBW Energie Baden-Württemberg AG, Jungbunzlauer AG, Monika und Wolfgang Schürer, Synthes-Stratec Inc., Verein Deutscher Ingenieure, Hansjörg Wyss Medical Foundation)	42,653.22€
Subsidies or reimbursements of lodging and travel expenses	76,009.74 €
Participant fees for young scientist taken over by benefactors (among them DAAD, U.S. Department of Energy, Oak Ridge Associated Universities, Industrieclub Düsseldorf, Elitenetzwerk Bayern, European Physical Society, Hanns-Seidel-Stiftung, Hermann von Helmholtz-Gemeinschaft Deutscher Forschungszentren, Deutsche Bundesstiftung Umwelt, Fulbright Commission, Alexander von Humboldt- Stiftung, Konrad-Adenauer-Stiftung, National Science Foundation, Professor Rhein Stiftung, Schweizerische Studienstiftung, Nobel Foundation Stockholm, VolkswagenStiftung, Gottlieb Daimler und Karl Benz Stiftung, Ms. Lorie Karnath, Wilhelm Sander-Stiftung, N.N., Carl Zeiss AG)	75,750.00€

Total sum of revenues

1,092,099.50 €

EXPENDITURES

Printing costs and printed materials Translation and interpreting costs Rent for conference venue Participant logistics PR (including outreach initiatives) PR (including outreach initiatives) Costs of selection process for participants Costs of selection process for participants Costs in kind for conference General travel expenses Travel expenses for Nobel Laureates Travel expenses for scientific chairmen and Council General lodging costs for Participants Boarding costs for Nobel Laureates Lodging costs for Nobel Laureates Lodging costs for scientific chairmen and Council General lodging costs for participants Costs for Nobel Laureates Costs for Nobel Laureate	60,170.17 € 4,409.00 € 33,849.12 € 12,910.59 € 40,151.07 € 13,480.00 € 33,044.03 € 111,825.00 € 111,340.58 € 87,405.46 € 23,288.86 €
Rent for conference venue Participant logistics PR (including outreach initiatives) Costs of selection process for participants Costs of selection process for participants Costs in kind for conference General travel expenses Travel expenses for Nobel Laureates Travel expenses for participants Travel expenses for scientific chairmen and Council General boarding costs Boarding costs for Nobel Laureates Boarding costs for Council General lodging costs for Nobel Laureates Lodging costs for Nobel Laureates Lodging costs for Scientific chairmen and Council	33,849.12 € 12,910.59 € 40,151.07 € 13,480.00 € 33,044.03 € 11,825.00 € 111,340.58 € 87,405.46 €
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Boarding costs for Council General lodging costs Lodging costs for Nobel Laureates Lodging costs for participants Lodging costs for scientific chairmen and Council	37,053.22 €
Boarding costs for Council General lodging costs Lodging costs for Nobel Laureates Lodging costs for participants Lodging costs for scientific chairmen and Council	71,867.55 €
Lodging costs for Nobel Laureates Lodging costs for participants Lodging costs for scientific chairmen and Council	1,518.17 €
Lodging costs for participants Lodging costs for scientific chairmen and Council	10,653.60 €
Lodging costs for scientific chairmen and Council	56,334.78€
	155,714.61 €
Expenses for Nobel Laureates	13,592.58€
	4,163.00€
Postage	6,246.86€
Telephone	5,445.10€
Internet (website and global broadcasting)	148,955.41 €
Office equipment	2,560.54 €
Costs for subsequent scientific programme for participants (German Week)	45,000.00 €
Overheads for financial transactions	306.09€
Interim total of expenditures	997,373.56€
Staffing, wages and salaries incl. payroll taxes	91,372.58 €
Accounting costs	1,239.46 €
Further education costs	2,113.90€
Total sum of expenditures	1,092,099.50 €

GmbH, Brains ToVentures AG | Umantis, Peter Badge, BMW AG, Deutsche Lufthansa AG, Druckerei Hermann Brägger, Maximilian Gärber, Hewlett Packard, Professor Dr. Jürgen Kluge, Lennart Bernadotte Stiftung, Leica Camera AG, Professor Dr. R.A. Mashelkar, MS AG, P.R. Narvekar, Sennheiser electronic GmbH, Staatliche Lotterieverwaltung, Walter Stahlecker, Ratan N. Tata, T-Com, Klaus Tschira Stiftung gGmbH, UBS, Xerox GmbH)

APPLICATION AND SELECTION PROCESS

Please share your impressions on the composition of the participants and your recommendation on how to foster the outreach of the Lindau Meetings, e.g. which institutions could act as ambassadors in your part of the world.

- 1. Here, most respondents (80%) named universities and foundations.
- 2. There were some requests for the press to be more involved and that there be more publicity for the Meetings.
- 3. The international mix of students was very well received.
- 4. A point of criticism was that most institutions and foundations were not provided with sufficient information to brief their candidates.
- 5. Names of specific potential contact persons were not given.

1. The Meeting was absolutely great.

- 2. I feel that better publicizing these meetings would help to get the message out.
- The composition of participants was about right. Incorporating as many representatives from
 institutions around the world as possible is highly effective in increasing the divesity of the meeting.
- 4. The media should be involved even more.
- 5. Composition of participants is really good, well distributed among the world.
- 6. Universities should also be informed abouth the meeting next time, so that they could then pass the messages on to the students.
- 7. In effect Lindau preaches to the converted and such an intellectually stimulating experience while undoubtedly of benefit to those such as myself already embarked on a research career could prove an excellent means of polarising promising young students in favour of a research career.

ORGANISATION OF THE MEETING

What services did you miss?

- 1. Air conditioning (approx. 95%)
- 2. Free beverages in the breaks, especially coffee and water (approx. 90%)
- 3. More opportunities for informal meetings with the Laureates, e.g. lunch (approx. 85%)
- 4. More available PCs in the Internet Cafe (approx. 70%)
- 5. Kosher food (approx. 5%)

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- 1. I was not made to miss any service because it was arranged in such a beautiful way.
- 2. There was no cooling system.
- 3. The air conditioners, with 600 participants the hall got stuffy with no air circulation.
- 4. I think free coffee should be handed out in the breaks.
- 5. Free water should be provided.
- 6. More mixing-up between Laureates and students.
- 7. I would like more chances to meet the Laureates towards the end of the week, after we have heard their lectures.
- 8. There was a shortage of internet access for the 700 researchers in attendance at the conference.
- 9. There was very few workstations available. Participants in such conferences often wish to write down ideas, perform calculations, as well as attend to pressing work obligations, and this was quite difficult during the meeting."
- 10. The relatively short hours of the WLAN made it difficult to access at times without forgoing part of the schedule.

TRAVEL, BOARDING AND LODGING

Comments:

- 1. Busses should run later that 22.30h (approx. 70%).
- 2. Not all students received food vouchers.
- 3. A desire for shuttle busses for students, which are not as full as the regional transit busses (approx. 30%).
- 4. Complaints that some participants were not adequately reimbursed for their travel expenses.
- 5. Many had to share a double room, and as such also one bed, with another student.
- 6. In some cases the accommodation was too far away from the Inselhalle.
- 7. A desire for more information on accommodations on the web site.
- 8. A desire for more information on reimbursement of travel expenses on the website.

\mathcal{L} **L** 1. There should be later busses (until midnight).

- 2. All of the participants should have get vouchers.
- 3. I missed shuttle busses from the airport to Lindau. There should also be some special busses for participants too, because most of the public busses were full of tourists.
- 4. I was a bit surprised that people were treated differently and some of the participants got a travel allowance (paid out in Lindau) and some not.
- 5. Only 1 King size bed for 2 students. There should be more single rooms available. It is quite curious to share a bed with a stranger.
- 6. It would be better to have participants within walking distance of meeting hall.
- 7. I missed more information about the hotels on your website.
- 8. It would be better to inform the participants in advance about the cost reimbursement on your homepage.

GENERAL QUESTIONS

What could be done to further improve your Lindau experience?

- 1. Fewer students (approx. 80%)
- 2. Smaller groups for the student discussions (approx. 70%)
- 3. More PCs in the Internet Café (approx. 70%)
- 4. More Laureate lectures on the internet (approx. 65%)
- 5. No publication of personal data, for example in the Catalogue of Participants (approx. 40%)
- 6. Hand out CDs with the digital photographs at the end of the Meeting (approx. 30%)
- 7. Fewer journalists; in part, the press was perceived as being in the way (approx. 20%)
- 8. The Mainau cruise should not be on the last day, making it possible for more students to take part
- 9. Air conditioning (almost unanimous)
- 10. There were requests for the afternoon lectures to be staggered
- \int 1. The number of students was definately too high.
 - 2. The "small" discussions were not really small. There should be fewer participants so that the students have more chances to talk to the Laureates.
 - 3. I hope there will be more laptops in the Internet Café for the students next year.
 - 4. I have missed some lectures on the website. But perhaps some of the Laureates didn't want their lecture to be published.
 - 5. I don't want all my data to be published.
 - 6. The photos were quite too expensive. It would be nice to get a CD with all photos at the end of the meeting.
 - 7. Such a lot of journalists were disturbing. Also for the Laureates.
 - 8. The trip to the Mainau should have been earlier, because most of the students had to leave on early Friday and couldn't join the trip.
 - 9. It was too hot and an air conditioner is absolutely necessary!
 - 10. It was unfortunate that 2 Laureates from the same field presented at the same time.

REMARKS GENERAL FEEDBACK SUGGESTIONS FOR IMPROVEMENT

Mainly praise and acknowledgement for the organisation. Below a few comments:

C C 1. Very well organized meeting.

- 2. Lindau is a beautiful charming and perfect venue for this traditional meeting.
- 3. I cannot stress enough how incredible the meeting was, and my thanks to the Council and its benefactors for arranging such an event.
- 4. I feel incredibly privilaged to have experienced such a thing and my future work will always have the meeting at the back of my mind.
- 5. In particular, it has given me a broader appreciation and understanding of the issues facing modern science.
- 6. This has been an excellent opportunity to meet and interact with young scientists and Nobel Laureates.
- 7. All I have experienced was stimulating and precious to me. Thank you very much.
- 8. Attending this year's Lindau meeting has been extremely inspiring, and I now feel able to ask, and hopefully answer the key questions within my field.

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