# The Heidelberg Laureate Forum – Promoting Careers

**Exchanging ideas and learning from role models inspires young researchers in computer science and mathematics**

By Alev Kaynak

The din in the lecture hall subsides, and the audience draws its attention to the front. Eight computer scientists have taken their seats at the podium to discuss the challenges posed in their fields of research. The panel is followed by a captivated audience of 200 young researchers from all over the world. Panel guests include winners of the renowned ACM Turing Award, which is considered as the Nobel Prize for computer science.

**The laureates along with many decorated guests celebrated the disciplines of computer sciences and mathematics.**

They all traveled to Heidelberg in late summer last year to attend the 1st Heidelberg Laureate Forum (HLF) along with 30 other decorated scientists - all of whom are winners of the most renowned scientific distinctions in the fields of computer science and mathematics. The award winners imparted their knowledge and expertise, experiences and tips on 200 young researchers. In the years to come, these laureates and prize winners will be invited back to Heidelberg to attend the next events. The HLF is organized by the Heidelberg Laureate Forum Foundation (HLFF), an associate foundation of the Klaus Tschira Stiftung (KTS). The KTS has been promoting the natural sciences, mathematics and computer science for almost 20 years and is well known for its commitment to scientific communication.


**Ruxandra Olimid, Computer Scientist, is talking to Prof. Charles William Bachman.**

"I have never imagined that a single week can be enough to personally meet several laureates, talk to dozens of young researchers, learn plenty of things, have a few new research ideas and discover a great city and its surroundings. HLF made this possible," Ruxandra Olimid, a young female computer scientist from Romania, summarized her experience at the HLF.

The young specialist for cryptography had finished her doctorate shortly before she made the trip to Heidelberg, where she met 199 young fellow scientists at an event that focused on issues in the fields of computer science and mathematics. The topics were as important and crucial for the scientific career as is scientific brilliance: One example is that young researchers often experience a situation of uncertainly in their career. They do not know which step they want to take next. Whether to enter the industry or remain in academia is one of the most common questions that the young generations of students at universities and research institutes face. The HLF wants to help young researchers to reach a decision. Another young computer scientist reported after the HLF that she would like to continue her career in science. The motivation that she gained from meeting with the laureates and other young scientists will have a lasting effect: “After I heard Shafrira Goldwasser say that every day she learns from the intensive exchange with experienced colleagues and she is able to develop new ideas precisely due this input, I began to get a feeling of the importance of communication for the career of any young scientist.”

**Prof. Shafrira Goldwasser, winner of the ACM Turing Award, during a panel discussion at the HLF.**

**The HLF as a new mentoring platform**

There is a wide range of terms to describe the concept that increasingly characterizes research and teaching: archetype, role model, mentor, etc. Experienced executives from scientific research institutions directly help young talents and support them in their professional and personal development. In the scientific communities outside of university institutions, mentoring has already gained an important role and is increasingly being systematically implemented in staffing policies. This helps to promote, and above all retain, talented and good employees. The trend in promoting young researchers is now commonplace at universities, and the number of mentoring programs is increasing steadily.

The HLF is also an initiative that places a central importance on learning from experienced researchers. However it has its own particular vision: Excellent role models inspire excellent young generations to achieve great performances. The laureates shine with scientific brilliance: They are winners of the highest distinctions in their disciplines. They have received the ACM Turning Award, the Abel Prize, the Fields Medal or the Nevanlinna Prize. These awards, which are known by only a small section of the general public, correspond to a Nobel Prize for computer science or mathematics. Whoever has received such an award has certainly achieved the pinnacle of his or her

career. The laureates told the 200 selected young computer scientists and mathematicians about their paths to winning these awards and which skills and competences were needed to do so.

**The mentor - a catalyst for future careers**

A central objective of mentoring at the HLF is to build networks, to impart expert advice provided by the laureates and young researchers as well as to enable the informal exchange of ideas and experiences. The HLF gives its guests an opportunity to experience a new type of conference that had hitherto been unknown in these disciplines. The organizers designed HLF based on the Lindau Nobel Laureate Meetings, which has provided an opportunity for exchange among the disciplines and generations for several decades.

| **Mentoring Objectives** | | | | |
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| **Networking** | **Advice** | **Experience** | **Feedback** | **Future** |
| › Establishing contacts<br>› Introducing net-working | › Current questions<br>› Problem areas<br>› Scientific exchange | › Individual experiences of the mentor | › Research<br>› Ideas | › Career tips<br>› Networking with alumni |

During the HLF, the mentee and mentor maintain a relationship in equal standing, one that goes beyond the usual relations in the academic world based on dependence and competition. The HLF ensures a wide-ranging program full of relaxed situations in an atmosphere that is conducive to scientific exchange. This provides the opportunity for the laureate and young researcher to meet in a different context. The various generations of scientists get to know and appreciate each other in high-quality scientific talks and discussions, fruitful conversations and on common excursions. Friendships are made and bonding connections are established. In today's highly competitive world of science, such factors cannot be underestimated; networking is becoming more and more important.

The fact that computer scientists and mathematicians can directly benefit from the HLF mentoring opportunities in their professional development is demonstrated by the Forum's counterpart in Lindau. Many young researchers there report that they were inspired and motivated by their contact with the Nobel Prize winners and that the Meeting was a genuine enrichment for them both personally and professionally. The HLF strives to help the young researchers establish important networks, design their career paths (even those that are not linear), and provide the opportunity to exchange ideas, for example, on work-life balance.

The importance of the topic of family and an academic career was exemplified during the 1st HLF given the large number of participants who attended the workshop "Balance - How to Develop Research Career and a Growing Family", run by the computer scientist Matthias Hagen from Germany. Such non-scientific topics are very relevant, for they influence the life of researchers much more today than they used to. This is due not only to the increasing demands from both our private and professional lives, but is also a result of the changing roles of men and women. During his workshop, Matthias Hagen discussed this problem and sparked the interest of a large number of participants. He summarized his goals as follows: "In this short 90 minutes workshop I would like to get feedback from the participating laureates in form of a panel discussion about their experiences and strategies for balancing their research careers and family life. Also inputs from the younger participants are very welcome-that could be the result of short break-out sessions being part of the workshop. Such break-outs should focus on issues in changing places, time constraints balancing career and family, and also paternal leaves in early career stages."

**Matthias Hagen, Computer Scientist, knows the importance of a good work-life-balance.**

The fact that talking about one's own experiences and one's own academic career path can inspire and motivate and even helps when important decisions need to be made on one's work in sciences could be seen during the 1st HLF: "I had many good discussions with the participants, which stimulated several research ideas. Particularly, Prof. Valiant talked about natural evolution and said that evolution itself is too slow: there must be something to expedite it. Inspired by this fact, now I am using active learning to improve evolutionary computation algorithms for global optimization."

**Prof. Leslie G. Valiant talking about interactions with the participants.**

In addition to the exchange of ideas at a high level, the HLF exemplifies thinking outside the box even further: "It was a great opportunity to broaden my view and network with mathematicians and computer scientists," another young researcher summarized her experience at the 1st HLF.

**Foundation's Mission**

The Forum is organized by the **Heidelberg Laureate Forum Foundation (HLFF)**, an associate foundation of **KTS**, in cooperation with the **Association for Computing Machinery (ACM)**, the

**International Mathematical Union (IMU)** and the **Norwegian Academy of Science and Letters** as well as the **Heidelberg Institute for Theoretical Studies (HITS)**. **The HLFF's objective** is to provide mathematicians and computer scientists with a similar networking meeting as the Lindau Nobel Laureate Meetings have successfully been doing for the disciplines of medicine, physics, chemistry and economics for many decades. The idea was first discussed in **2011** with representatives of the **Mathematical Research Institute in Oberwolfach and the Schloss Dagstuhl – Leibniz Center for Informatics** as well as individual laureates. In the spring of 2012, KTS and HITS entered into cooperation agreements with the award-granting institutions and the parties declared their support for an annual forum in the university town of Heidelberg. The scientific direction of the Forum is headed by Prof. Dr. Andreas Reuter, Managing Director of HITS.

**The Forum**

Heidelberg is an inspiration for the mind and soul. Where else could the HLFF hold such an event, if not in Heidelberg, where there is a tradition of scientific excellence in the oldest university town in Germany. All young researchers invited to the HLF are given the chance to meet distinguished experts in the fields of mathematics and computer science. And there are many advantages to go with it: Accommodation and meals are provided throughout the entire week-long event, and the diverse supporting program ensures that there is never a dull moment. The young researchers stay in centrally located hotels in Heidelberg's historic old town, from which they can easily reach all the event's locations on foot. In addition, there are unforgettable and varied evening programs to establish new contacts and expand existing knowledge and expertise. If a young researcher has any difficulties in attending the HLF due to financial limitations, the Foundation also provides travel grants. By offering this "all-inclusive" package, the Foundation guarantees that nothing stands in the way of concentrating on the scientific and collegial exchange of ideas and experiences.

**Prof. Cédric Villani emits fascination through words, gestures and, above all, his scientific expertise.**

**Current news**

The application phase for the **2nd HLF 2014 from September 21 to 26, 2014** started in the fall of 2013 and ended on February 28, 2014. The selection of the 200 young researchers who will be invited to attend this year's forum was completed by the HLF Scientific Committee on May 8, 2014.

The HLF is an annual event. The application round for the **3rd HLF, September 20 – 25, 2015**, is scheduled to start in November 2014.

**Additional information on the HLF and photos as well as videos from the 1st HLF can be found at:**

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| **Facebook:** | https://www.facebook.com/HeidelbergLaureateForum |
| **HLF image film:** | http://www.youtube.com/user/LaureateForum |
| **Website:** | http://www.heidelberg-laureate-forum.org/ |
| **HLF blog:** | http://www.scilogs.com/hlf/ |
| **Flickr:** | http://www.flickr.com/groups/heidelberg-laureate-forum/ |
| **Twitter:** | https://twitter.com/hlforum |
| **Video Archive:** | http://www.heidelberg-laureate-forum.org/event_2013/**.** |

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