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6 Universität Bern

HANS-SIGRIST-STIFTUNG

VOM STIFTUNGSRAT GENEHMIGT AM 29. MAI 2024

# Tätigkeitsbericht 2023

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# Hans-Sigrist-Stiftung

#### Stiftungsrat

- Prof. Dr. S. Rottenberg, Präsident Vetsuisse Fakultät
- Prof. Dr. C. Rigamonti, Vizepräsident Rechtswissenschaftliche Fakultät
- Prof. Dr. C. Leumann, Rektor vertreten durch Prof. Dr. H. Abriel, Vizerektor Forschung
- Dr. C. Häsler, Erziehungsdirektorin vertreten durch D. Schönmann, Amt für Hochschulen
- Prof. Dr. R. Bloch Theologische Fakultät
- Prof. Dr. S. Brönnimann
  Philosophisch-naturwissenschaftliche
  Fakultät
- Prof. Dr. K. Henke Philosophisch-humanwissenschaftliche Fakultät
- Prof. Dr. A. Kunz Wirtschafts- und Sozialwissenschaftliche Fakultät
- Prof. Dr. Britta Lundström-Stadelmann Institut für Parasitologie
- Prof. Dr. A. Perren Medizinische Fakultät
- Prof. Dr. S. Rebenich Philosophisch-historische Fakultät

Tätigkeitsbericht 2023

An den beiden ordentlichen Sitzungen befasste sich der Stiftungsrat der Hans-Sigrist-Stiftung mit den folgenden Geschäften:

- Wahl des Preisträgers 2023
- Genehmigung des T\u00e4tigkeitsberichtes 2022
- Genehmigung der Jahresrechnung 2022 und des Revisionsberichtes 2022
- Genehmigung des Budgets 2024

Hinzu kamen folgende Tätigkeiten:

Vergabe von fünf Hans-Sigrist-Zuschüssen

Sodann ist unser langjähriger Stiftungspräsident, Prof. Dr. Norbert Trautmann, per Ende 2023 von seinem Amt zurückgetreten. Ich danke ihm herzlich für seine engagierte und professionelle Leitung der Stiftung sowie die reibungslose Übergabe der Amtsgeschäfte.

Den Kolleginnen und Kollegen im Stiftungsrat danke ich für Ihr Engagement und ihr konstruktives Mitwirken. Unser besonderer Dank gilt Frau Dr. A. Stockfleet, auf deren aktive, verantwortungsvolle und umsichtige Leitung der Geschäftsstelle wir uns stets verlassen durften.

> Bern, 29. Mai 2024 Der Präsident des Stiftungsrates Prof. Dr. S. Rottenberg

# 2023 Hans Sigrist Prize Data Science: the Power of the Human Mind for the Sake of Humankind

A committee of experts, under the leadership of Professor Christiane Tretter of the Mathematical Institute at the University of Bern, proposed a ranked list of candidates to the Board for the 2023 Hans Sigrist Prize in the field of "Data Science: the Power of the Human Mind for the Sake of Humankind". In its spring meeting, the Board selected Prof. Aaron Roth, University of Pennsylvania, as the 2023 Hans Sigrist Prize Winner.



Prof. Aaron Roth

#### Laudatio:

Prof. Aaron Roth is awarded the 2023 Hans Sigrist Prize for his groundbreaking work in this year's prize field, "Data Science: the Power of the Human Mind for the Sake of Humankind", in particular for his impactful research on differential privacy and on socially aware algorithm design. His pioneering scientific results on developing mathematically rigorous concepts of privacy and fairness applicable to algorithms span the whole range from deep theoretical results to practice. His outstanding work in the area of private, fair, and robust data science paves principled paths to ensure, for example, that people's sensitive data remain protected when used in large data sets and that social norms can be embedded as constraints into algorithms. This helps both societies and individuals to maximize the benefits of data science, while keeping control of negative side effects.

### An Interview with 2023 Hans Sigrist Prize Winner, Prof. Aaron Roth and 2023 Hans Sigrist Prize Committee Chair, Prof. Christiane Tretter

#### Hans Sigrist Foundation:

Congratulations on winning the 2023 Hans Sigrist Prize in the field of "Data Science: The Power of the Human Mind for the Sake of Humankind". We are so happy to have you coming to Bern to receive the prize, and we appreciate your sitting down with us for this interview about your groundbreaking work in the field.

Our first question is what sparked your interest in this field?

#### Prof. Aaron Roth:

I was a math major when I was in college, and in the computer science department, I stumbled upon a course on computational learning theory, which is sort of the mathematical study of machine learning. This was back in 2002, so it was quite far removed at that level from the practice of machine learning. In general, we sat down and proved theorems, as if you were in a math class, but about the kinds of things that you can learn and the kinds of things you cannot learn. I thought this was really cool. I thought that being able to take mathematics, which in the math classes I had been taking up to then, was always very abstract and divorced from concrete problems, andusing it to study the problem of learning was fascinating.

#### Hans Sigrist Foundation:

So, you shifted to theoretical computer science at that point?

#### Prof. Aaron Roth:

Yes, when I went on to graduate school, I realized there were all sorts of other things at which you could point this computational lens. When I started my Ph.D., that was at the very beginning of this field called differential privacy, which is a way to mathematically define what it might mean to analyze a data set while revealing very little information about any particular person who may or may not be in the data set. It says that there should be no statistical test that can distinguish between some analysis that is done on a data set with your data in it and the same analysis done on the same data set except with your data removed. So, it is a very precise definition of what privacy might mean. Surprisingly, you can do all sorts of things with data satisfying this definition.

#### Hans Sigrist Foundation:

Was that the topic of your Ph.D. dissertation?

# Prof. Aaron Roth:

Yes, and again, the thing that seemed attractive about this was that you could take a problem, like a real problem, that is increasingly important, as data about all of us is increasingly generated and collected. You can think about this problem of using data while protecting privacy, but you can address it in a rigorous formal way. That is how I started to choose problems ever since. About eight years ago, I started thinking about algorithmic fairness and the same kinds of things attracted me to that area. So, it is a real problem, increasingly so - a lot more of a real problem now than it was eight years ago. It is the kind of thing that you can think rigorously about. You can think about definitions, like what exactly you want from your algorithms and what kinds of things you do not want. You can think about what is possible to do under those constraints, and what kinds of constraints you might want but which are not possible to simultaneously achieve.

#### Hans Sigrist Foundation:

You also teach in this field. What would you say is the most important thing you pass on to your students about differential algorithms or, more broadly speaking, about integrating social awareness into algorithms?

#### Prof. Aaron Roth:

Well, I teach various kinds of classes. My undergraduate classes are not usually specifically about differential privacy. I teach algorithms and an algorithmic game theory class. I also teach Ph.D. students, and I try to give them the freedom to find a topic that is right for them. Some undergraduates may not be trying to become researchers and are taking a required theory class, and they may think that they do not need all this theory. They just want to go program. I try to convince them that it is still important to think carefully about what problem you want to solve, because definitions are important. You should define your problem carefully, before starting to try to produce solutions. You will eventually have to evaluate your solutions, and you will have to know if those solutions did what you wanted them to do. For undergraduates who are from further outside this field, you know, I try to impress upon them the value of mathematical thinking in computer science.

#### Hans Sigrist Foundation:

Prof. Christiane Tretter of the University of Bern's Mathematical Institute, served as the 2023 Hans Sigrist Prize Committee Chair. We are grateful for her initiative. She responded to our call for proposals from the faculty at the University of Bern and proposed that the prize be awarded in this important and interesting field. The Foundation can only do what we do thanks to the faculty members who make proposals for the prize field and who lead the committee through a lengthy search process. Christiane, could you share with us some of the things that set Aaron's work apart from others?

### Prof. Christiane Tretter:

When Aaron entered this field, it was not as fashionable as it is today. He had to have the vision to recognize that this was an important topic, and to make his writing and work accessible to those, not only in computer science, but also to everyone involved in trying to achieve fairness in algorithms - politicians, lawyers, etc. He has inspired others to think about what fairness is, as applied by humans and their algorithms. His outstanding work in the area of private, fair, and robust data science has paved principled paths to ensure, for example, that people's sensitive data remain protected when used in large data sets and that social norms can be embedded into algorithms as constraints. This helps both societies and individuals to maximize the benefits of data science, while keeping control of negative side effects.

# Hans Sigrist Foundation:

Are there areas of your research for which it is difficult to get funding? And if so, do you think that the Hans Sigrist Prize funds will help you with any certain projects or certain things you want to explore that may be harder to get funded?

#### Prof. Aaron Roth:

Yes, the Hans Sigrist Prize Funds will be a great help. I am fortunate to be able to get funding from federal agencies, like the National Science Foundation, but they have strong limitations on what you can spend the money on. Specifically, it will be of great help to be able to purchase computers and equipment to be used by those who are working on my team.

# HANS SIGRIST SYMPOSIUM 2023

The 2023 Hans Sigrist Symposium on the topic of "Data Science: The Power of the Human Mind for the Sake of Humankind" took place on Friday, December 1, 2023. The symposium was very well attended and featured speakers and attendees both from Switzerland and abroad. Presentations were given by:

Aaron Roth University of Pennsylvania What should we want from predictions?

Moritz Hardt Max-Planck-Institute for Intelligent Systems, Tübingen The power of prediction

Malte Elson University of Bern On the Hacking of Private Data and the p-Hacking of Research Data

Carmela Troncoso EPF Lausanne Privacy was never a goal, it was always a means

Thomas Grote University of Tübingen Machine Learning in Healthcare and the Quest for Reliability

# RESEARCH FIELD FOR THE 2024 HANS SIGRIST PRIZE

On October 30, 2023, after the presentation of an engaging proposal by Prof. Dr. Marcel Zwahlen, the Hans Sigrist Foundation Board chose the field "Breakthroughs in mRNA-based Vaccines and Therapeutics" as the 2024 prize field. This prize field was submitted by the Faculty of Medicine at the University of Bern. Prof. Dr. Zwahlen has put together a prize committee to nominate and evaluate leading candidates, and the selection of the prize winner will be made at the May 2024 board meeting.

# NOMINATION AND SELECTION OF PRIZE WINNERS

The Hans Sigrist Prize field changes annually, based upon proposals from the faculties of the University of Bern. Each spring, the Hans Sigrist Foundation board members (who represent all faculties at the university) put out a call to their respective faculties asking for prize field proposals to be submitted in late summer. In the fall board meeting, the board votes on the proposals, determines the prize field, and selects the prize committee chair.

Once the prize committee chair is selected, additional experts are appointed by the chair to create the prize committee. The committee members select a group of candidates and then ask independent outside experts for further opinions. The prize winner is selected at the spring foundation board meeting and receives the prize at the Dies academicus (the annual formal awards ceremony of the University of Bern) in December.

The goal of the foundation in awarding the prize is to select a researcher/ academic at mid-career level who still has plenty of time to make additional contributions to his or her field. It is not meant to be a lifetime achievement award, but instead, a prize to spur further research.

We encourage faculty members at the University of Bern who are interested in proposing a prize field to get in touch with our foundation manager via e-mail at office.sigrist@unibe.ch.

# APPLYING FOR SUPPLEMENTARY GRANTS (ZUSCHÜSSE)

Hans Sigrist Supplementary Grants are meant to supplement, but not to fund fully, the cost of a research visit to the University of Bern. Given the high cost of living in Bern, the Foundation offers up to CHF 1,000 per month, pro-rated weekly, to assist professors from other universities with their living costs while conducting a project in cooperation with a University of Bern faculty member. Thefoundation accepts applications for supplementary grants (Zuschüsse) on a rolling basis. Applications must be submitted at least six weeks before the proposed research visit, in order to allow time for consideration. However, because the foundation has a fixed annual budget for these grants, earlier applications are encouraged. The request/application for a Supplementary Grant must be made by the University of Bern host professor. Full details on the application process (in English) are available on our website at www.sigrist.unibe.ch.

In 2023, the Foundation funded five Hans Sigrist Supplementary Grants for a total amount of CHF 10,970.



Prof. Dylan Jayatilaka (background) and PD Dr. Simon Grabowsky (foreground) working on the representation of molecular surfaces in crystal structures.

#### Prof. Dylan Jayatilaka, University of Western Australia

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The research visit of Prof. Dylan Jayatilaka from the University of Western Australia was supported with a supplementary grant by the Sigrist Foundation of CHF 2,500. Prof. Jayatilaka stayed at the University of Bern for 2.5 months from April 17th to July 1st and worked closely with the research group of PD Dr. Simon Grabowsky. The project evolved around the development of software techniques to refine molecules in crystal structures under full consideration of the periodic environment in the crystalline solid state.

In the past, crystal structures have always been determined with the assumption that the atoms inside are non-interacting spherical entities. However, every chemist knows that this is not true; atoms in the solid state (or any other state but the vacuum, for that matter) always interact with the surrounding atoms, deforming the electron density towards a non-spherical shape, forming bonds and other weaker interactions. Prof. Jayatilaka has pioneered methods and software code to describe such deformations in molecules for 25 years. Hence, our research group was able to benefit significantly from his experience, so that we could transfer the Jayatilaka techniques to solid periodic network compounds.

The project, and also the interaction and collaboration with Prof. Jayatilaka, will continue after he has left our group. The final software package is expected to be publishable by the end of 2023. Afterwards, we will apply the new method to materials and minerals, starting from simple yet abundant compounds, such as quartz and other silicates and expanding to more complex natural and artificial zeolites.

# Dr. Andrés Antico, National Scientific and Technical Research Council, Argentina

Prof. Dr. Stefan Brönnimann, Geographical Institute at the University of Bern, requested CHF 1,000 for a one-month grant for Dr. Andrés Antico, of the National Scientific and Technical Research Council, Argentina.

Dr. Antico was invited by Prof. Dr. Stefan Brönnimann and Dr. Andrew Friedman from the Institute of Geography of the University of Bern (GIUB). He also started to collaborate with members of Prof. Brönnimann's group, to rescue early climate records and to study long-term hydroclimate variability in South America. Dr. Antico is also collaborating with Drs. Andrew Friedman and Gilles Reverdin (Sorbonne), and Nicholas Maughan (Aix-Marseille University) to rescue historical hydro-meterological data from French navy ships that sailed the Paraná (one of the largest rivers on Earth) in the mid-19th century. Dr. Antico is also discussing with Drs. Andrew Friedman, Marta Martín del Rey, and Teresa Losada (the last two at the Complutense University of Madrid), the possibility of using the ModE-RA long-term reanalysis (recently developed by Prof. Dr. Brönnimann's group) to improve the current understanding of the ENSO-Paraná streamflow connection. Besides initiating these specific research works, during his stay, Dr. Antico also maintained fruitful discussions on historical climatology with various researchers, among whom were Drs. Yuri Brugnara (University of Bern), Stefan Grab (University of Witwatersrand), Raphael Neukom (Institute for Snow and Avalanche Research, formerly at the University of Bern), Juliana Norguira (Czech University of Life Sciences Prague, formerly at the Rio de Janeiro State University), Christian Pfister (University of Bern), and Peter Stucki (University of Bern).

These synergistic activities led to submissions of two project proposals: 1) "Fostering historical climatology in Latin America; Learning from the past to increase societal resilience to climate change", grant application with the the State Secretariat for Education, Research and Innovation (SERI) and 2) "Rescuing early climate records in southern South America", grant application with the Oeschger Center for Climate Change Research (OCCR).

# Prof. Dr. Dev S. Gangjee, University of Oxford, Faculty of Law

Prof. Cyrill Rigamonti of the Centerfor the Law of Innovation and Competition (CLIC) at the University of Bern, requested CHF 500 to help support the the fall visit of Prof. Dev S. Gangjee from the University of Oxford.

During his Fall 2023 visit, Prof. Gangjee gave lectures and held a seminar for law students on the topic of "The International Protection of Geographical Indications". Students at the University of Bern participating in the seminar not only learned about the core features of geographical indications and the legal framework relevant to them, but also developed an understanding of the protection options and the ability to apply the conflict management rules between geographical indications and other intellectual property rights. Moreover, Prof. Gangjee advised students on their papers addressing emerging issues in the field. In addition to his teaching, Prof. Gangjee also met with doctoral students at the CLIC to discuss their dissertation projects and give individual feedback.



Prof. Cyrill P. Rigamonti of the University of Bern's Center for the Law of Innovation and Competition (right) with guest, Prof. Dev S. Gangjee from the University of Oxford Faculty of Law, and three University of Bern doctoral students in intellectual property law.

# Prof. Dr. Sujoy Ghosh, IIT Kharagpur, India

Prof. Jörg Hermann of the Institute for Geological Sciences of the University of Bern, requested CHF 1000 to help support the one-month visit of Prof. Sujoy Ghosh from June 1-30, 2023. During his stay at the University of Bern, Prof. Ghosh engaged in collaborative research activities focused on the study of water distribution in nominally anhydrous minerals within high-pressure experimental conditions. These research activities were conducted in conjunction with Prof. Jörg Hermann and his research scholar Nils B. Gies.

On June 2, 2023, Prof. Ghosh held a productive discussion session with Prof. Jörg Hermann and Nils B. Gies at the Institute of Geological Sciences, University of Bern. The primary objective of this meeting was to plan and strategize the Fourier-transform infrared (FTIR) analysis of nominally anhydrous minerals coexisting with hydrous carbonated melt in pyroxenite and peridotite lithologies. The outcome of this discussion session laid the groundwork for the subsequent research activities.

The primary goal of Prof. Ghosh's visit was: Collaborative Research on Water in Nominally Anhydrous Minerals. Prof. Ghosh aimed to establish a collaborative research initiative focused on investigating the distribution of water in nominally anhydrous minerals under high-pressure experimental conditions. This research is of particular importance as it contributes to a deeper understanding of water's role within the lithospheric mantle. The experimental work conducted by Prof. Ghosh at the Department of Geology & Geophysics, IIT Kharagpur, played a pivotal role in achieving these research objectives.



Prof. Ghosh also had the opportunity to join an excursion trip with Prof. Jörg Hermann, Prof. Daniela Rubatto, and undergraduate students, to the Alps in the Zermatt area on June 28, which added a rewarding dimension to his academic trip to Bern.

# Prof. Dr. Felix Riede, Aarhus University, Denmark

Prof. Dr. Albert Hafner of the Institute of Archaeological Sciences at the University of Bern, applied for a six-month, CHF 6000, Supplementary Grant to support the visit of Prof. Dr. Felix Riede of Aarhus University in Denmark. The grant's duration was from January 2 to July 7, 2023. Prof. Riede's profile and ongoing research activities focusing on human-environment relations, past climate change and resilience, as well as on computational archaeology, are closely aligned with Bern's Institute of Archaeological Sciences.

In the coming years, Prof. Riede will closely cooperate with a Bern postdoc, Dr. Caroline Heitz, on her recently awarded Swiss National Science Foundation Ambizione career grant ("Climate Change Resilience and Vulnerabilities of Bronze Age Waterfront Communities (2200-800 BC)"). He is a named collaborator on said grant, and he is also the designated host for Dr. Heitz's research stay abroad. His six-month presence in Bern during the start-up phase of this important project was very beneficial.

Furthermore, being strongly engaged in computational archaeology, Prof. Riede also contributed to the Digital Archaeology Bern Symposium on Feb. 1-3, 2023, organized by Dr. Martin Hinz and other members of IAW (https://dab23.archaeological.science/), for the second time since 2018.

At the OCCR at large, Prof. Riede also has numerous active contacts. He works closely with Prof. Michael Sigl, paleoclimatologist specialised in volcanic impacts on past climate. He currently holds an ERC Consolidator Grant and Professors Riede and Sigl have published one paper together (Abbott et al., 2021). During his time in Bern, Prof. Riede continued this scientific collaboration with a focus on investigating the role of volcanic eruptions on Late Pleistocene climate. Further, they hosted i.) a joint workshop for their research groups, and ii.) together organised in Bern (22-24 May 2023) a major conference for the working group of the PAGES alliance of paleo-scientists on Volcanic Impacts on Climate and Society (VICS) (https://pastglobalchanges.org/science/wg/vics/intro).

# FORSCHUNGSAUSZEICHNUNG UND -FÖRDERUNG DURCH DIE HANS-SIGRIST-STIFTUNG

Die Hans-Sigrist-Stiftung hat seit ihrer Gründung zahlreiche Persönlichkeiten aus Bern, aus der Schweiz sowie aus dem Ausland auszeichnen und unterstützen können. Nachstehend werden alle Preis- und Stipendiumsempfänger und -empfängerinnen aufgeführt. Zu erwähnen ist, dass zahlreiche dieser Persönlichkeiten nach der Auszeichnung durch die Hans-Sigrist-Stiftung ihre wissenschaftliche Laufbahn mit grösstem Erfolg fortgesetzt haben, was u.a. auch auf den innovativen Charakter der Hans Sigrist Unterstützung schliessen lässt. So erhielt Robert Horvitz, unser erster Preisträger 1994, acht Jahre später den Nobelpreis, und 2009 wurde der frühere Hans Sigrist Preisträger (Preis 1997), Prof. Jack W. Szostack, zusammen mit Elisabeth Blackburn und Carol Greider mit dem Nobelpreis für Medizin ausgezeichnet.

# BISHERIGE TRÄGERINNEN UND TRÄGER DES HANS SIGRIST PREISES

| 1994 | Prof. H. Robert Horvitz, Massachusetts Institute of Technology, U.S.A.<br>Apoptosis – Der programmierte Zelltod  |
|------|--|
| 1995 | Prof. Joseph P. Newhouse, Harvard University, U.S.A.<br>Gesundheitsökonomie  |
| 1996 | Prof. Frantisek Smahel, Karls-Universität Prag, Tschechien<br>Geschichtliche Erforschung von Ostmitteleuropa   |
| 1997 | Prof. Gerald F. Joyce, Scripps Research Institut, U.S.A., und<br>Prof. Jack W. Szostak, Harvard Medical School, U.S.A.<br>RNA – Schlüsselmolekül zur Entstehung von Leben. |
| 1998 | Dr. Michel Orrit, Centre de Physique Moléculaire Optique et<br>Hertzienne, Université de Bordeaux, Frankreich<br>Chemische Grundlagen neuartiger Materialien               |
| 1999 | Prof. Joan W. Scott<br>Institute for Advanced Study, Princeton, U.S.A.<br>Neue Erkenntnisse in der Geschlechterforschung   |
| 2000 | Prof. Elsa Tamez, Universidad Biblica Latinoamericana, Costa Rica<br>Kontextuelle Bibelhermeneutik   |
| 2001 | Prof. Jan Johansson, Karolinska Institutet, Schweden<br>Biologische Grenzflächen: Die innere Lungenoberfläche  |

| 2002 | Dr. Jorge Galàn, Yale University, U.S.A.<br>Pathogen-Wirt-Interaktion  |
|------|--|
| 2003 | Prof. Dr. Emilio Gentile, Università «La Sapienza», Rom, Italien<br>Politische Religionen als Merkmal des 20. Jahrhunderts   |
| 2004 | Prof. Dr. Christopher Pollitt, Erasmus University, Rotterdam, Niederlande<br>Public Governance   |
| 2005 | Prof. Dr. Stephen Elledge, Harvard Medical School, Boston, U.S.A.<br>Qualitätskontrolle in lebenden Zellen   |
| 2006 | Prof. Dr. David M. Richardson, Stellenbosch University, Südafrika<br>Biological Invasions  |
| 2007 | No Prize Awarded   |
| 2008 | Prof. Dr. Andreas Feldtkeller, Humboldt-Universität, Berlin, Deutschland<br>Religionen – Wahrheitsansprüche – Konflikte – Theologien:<br>Theoretische Perspektiven |
| 2009 | Prof. Dr. Patrik Vuilleumier, Universität Genf, Schweiz<br>Kognitive Neurowissenschaft   |
| 2010 | No Prize Awarded   |
| 2011 | Prof. Dr. Nicola Lacey, University of Oxford, United Kingdom<br>Rechtsstaat und Spätmoderne  |
| 2012 | Prof. Dr. Stephen A. Boppart, University of Illinois, U.S.A.<br>Diagnostische Lasermedizin   |
| 2013 | Prof. Dr. Yoshiki Sasai, RIKEN Center for Developmental Biology, Kobe, Japan<br>Stem Cells in Regenerative Medicine  |
| 2014 | Prof. Dr. Jennifer Klein, Yale University, New Haven, CT, U.S.A.<br>Women and Precarity: Historical Perspectives.  |
| 2015 | Prof. Dr. Luciano Marraffini, The Rockefeller University, New York, NY, U.S.A.<br>Combatting Antibiotic Resistance: Novel Antibacterial Strategies                 |
| 2016 | Prof. Dr. Gabriele Hegerl, University of Edinburgh, Scotland<br>The Human Fingerprint on the Earth System  |
| 2017 | Prof. Dr. Heleen Muree-van den Berg, Radboud University, The Netherlands,<br>Historical Research in Eastern Christianity   |

| 2018 | Prof. Dr. Marina von Keyserlingk, The University of British Columbia, Canada<br>Sustainably Produced Food of Animal Origin |
|------|--|
| 2019 | Prof. Dr. Ignas Snellen, Leiden University, The Netherlands<br>Exoplanets: Worlds Beyond Our Solar System                  |
| 2020 | Dr. Amanda Sferruzzi-Perri, University of Cambridge, United Kingdom<br>Maternal-Fetal Communication                        |
| 2021 | Prof. Dr. Garry Nolan, Stanford University, U.S.A.<br>The Single Cell Revolution and Precision Medicine                    |
| 2022 | No Prize Awarded   |
| 2023 | Prof. Dr. Aaron Roth, University of Pennsylvania, U.S.A.   |

Data Science: The Power of the Human Mind for the Sake of Humankind



An den Stiftungsrat der Hans-Sigrist-Stiftung, Bern

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#### Bericht der Revisionsstelle zur eingeschränkten Revision

Als Revisionsstelle haben wir die Jahresrechnung (Bilanz, Erfolgsrechnung und Anhang) der Hans-Sigrist-Stiftung für das am 31. Dezember 2023 abgeschlossene Geschäftsjahr geprüft.

Für die Jahresrechnung ist der Stiftungsrat verantwortlich, während unsere Aufgabe darin besteht, die Jahresrechnung zu prüfen. Wir bestätigen, dass wir die gesetzlichen Anforderungen hinsichtlich Zulassung und Unabhängigkeit erfüllen.

Unsere Revision erfolgte nach dem Schweizer Standard zur Eingeschränkten Revision. Danach ist diese Revision so zu planen und durchzuführen, dass wesentliche Fehlaussagen in der Jahresrechnung erkannt werden. Eine Eingeschränkte Revision umfasst hauptsächlich Befragungen und analytische Prüfungshandlungen sowie den Umständen angemessene Detailprüfungen der beim geprüften Unternehmen vorhandenen Unterlagen. Dagegen sind Prüfungen der betrieblichen Ablaufe und des internen Kontrollsystems sowie Befragungen und weitere Prüfungshandlungen zur Aufdeckung deliktischer Handlungen oder anderer Gesetzesverstösse nicht Bestandteil dieser Revision.

Bei unserer Revision sind wir nicht auf Sachverhalte gestossen, aus denen wir schliessen müssten, dass die Jahresrechnung nicht dem schweizerischen Gesetz und der Stiftungsurkunde entspricht.

Bern, 11. März 2024

GFELLER + PARTNER AG



Zugelassener Revisionsexperte (Leitender Revisor)



Zugelassener Revisionsexperte

#### Beilagen:

- Jahresrechnung (Bilanz, Erfolgsrechnung und Anhang)

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#### Beilage 1

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#### Bilanz

|                                 | 31.12.2023   | 31.12.2022    | Abweichung  |
|---------------------------------|--------------|---------------|-------------|
|                                 | CHF          | CHF           | CHF         |
| AKTIVEN                         |              |               |             |
| Umlaufvermögen                  |              |               |             |
| Flüssige Mittel                 | 427'274.46   | 475'047.17    | -47'772.71  |
| Übrige kurzfristige Forderungen | 23'739.30    | 24'778.75     | -1'039.45   |
| Verrechnungssteuer              | 23'739.30    | 24'778.75     |             |
| Aktive Rechnungsabgrenzungen    | 3'592.40     | 870.65        | 2'721.75    |
| Anlagevermögen                  |              |               |             |
| Finanzanlagen                   | 3'692'460.77 | 3'724'507.95  | -32'047.18  |
| Total AKTIVEN                   | 4'147'066.93 | 4'225'204.52  | -78'137.59  |
| PASSIVEN                        |              |               |             |
| Kurzfristiges Fremdkapital      |              |               |             |
| Passive Rechnungsabgrenzungen   | 43'192.15    | 5'014.00      | 38'178.15   |
| Dritte                          | 41'038.15    | 2'860.00      |             |
| Organe                          | 2'154.00     | 2'154.00      |             |
| Figureanital                    |              |               |             |
| Stiffungskapital                | 7/421/008 10 | 7/421/008 10  | 0.00        |
| Verlustvortrag                  | 2'211'717 58 | 2'261'484 60  | 850'232.08  |
| Labresergebnis                  | -116'315 74  | -2 301 484.00 | 733'017 24  |
| Total                           | 4'103'874.78 | 4'220'190.52  | -116'315.74 |
| Total PASSIVEN                  | 4'147'066.93 | 4'225'204.52  | -78'137.59  |

#### Beilage 2

#### Seite 1

# Erfolgsrechnung

|  | 2023       | 2022        | Abweichung  |
|--|------------|-------------|-------------|
|  | CHF        | CHF         | CHF         |
| Wertschriftenertrag                                |            |             |             |
| Dividenden-und Zinsertrag Finanzanlagen            | 70'310.99  | 72'720.01   | -2'409.02   |
| Zinsertrag   | 235.90     | 0.00        | 235.90      |
| Realisierte Kursgewinne Finanzanlagen              | 26'340.42  | 134.30      | 26'206.12   |
| Nicht realisierte Kursgewinne Finanzanlagen        | 194'373.54 | 0.00        | 194'373.54  |
| Total Nettoerlös aus Leistungen                    | 291'260.85 | 72'854.31   | 218'406.54  |
| Wertschriftenaufwand                               |            |             |             |
| Bankspesen   | 196.00     | 132.00      | 64.00       |
| Spesen Finanzanlagen                               | 284.25     | 230.50      | 53.75       |
| Fremdwährungsverluste                              | 0.00       | 0.00        | -           |
| Realisierte Kursverluste Finanzanlagen             | 1'814.35   | 58'470.17   | -56'655.82  |
| Nicht realisierte Kursverluste Finanzanlagen       | 32'201.49  | 644'447.00  | -612'245.51 |
| Wertschriftenverwaltung                            | 14'123.05  | 15'032.00   | -908.95     |
| Total Aufwand                                      | 48'619.14  | 718'311.67  | -669'692.53 |
| Bruttoergebnis                                     | 242'641.71 | -645'457.36 | 888'099.07  |
| Personalaufwand                                    |            |             |             |
| Saläre   | 44'535.60  | 49'408.20   | -4'872.60   |
| Sozialleistungen                                   | 11'287.20  | 11'310.55   | -23.35      |
| Total  | 55'822.80  | 60'718.75   | -4'895.95   |
| Übriger betrieblicher Aufwand                      |            |             |             |
| Verwaltungsaufwand                                 | 1'550.40   | 3'730.20    | -2'179.80   |
| Buchführung  | 969.30     | 969.30      | 0.00        |
| Revision   | 2'154.00   | 2'154.00    | 0.00        |
| Aufwand Stiftungsrat                               | 351.70     | 150.70      | 201.00      |
| Total  | 5'025.40   | 7'004.20    | -1'978.80   |
| Ergebnis vor Verwendungen gemäss<br>Stiftungszweck | 181'793.51 | -713'180.31 | 894'973.82  |

Beilage 2

Seite 2

# Erfolgsrechnung

| 2023        | 2022  | Abweichung   |
|-------------|---|--|
| CHF         | CHF   | CHF  |
| 181'793.51  | -713'180.31   | 894'973.82   |
|             |   |  |
| -100'000.00 | 0.00  | -100'000.00  |
| -12'205.00  | -6'114.82   | -6'090.18  |
| -104'934.25 | -129'937.85   | 25'003.60  |
| -80'970.00  | -1'000.00   | -79'970.00   |
| -298'109.25 | -137'052.67   | -161'056.58  |
| -116'315.74 | -850'232.98   | 733'917.24   |
|             | 2023<br>CHF<br>181'793.51<br>-100'000.00<br>-12'205.00<br>-104'934.25<br>-80'970.00<br>-298'109.25<br>-116'315.74 | 2023      2022        CHF      CHF        181'793.51      -713'180.31        -100'000.00      0.00        -12'205.00      -6'114.82        -104'934.25      -129'937.85        -80'970.00      -1'000.00        -298'109.25      -137'052.67        -116'315.74      -850'232.98 |

#### Anhang

#### A. Bewertungsgrundsätze

Die vorliegende Jahresrechnung wurde gemäss den Vorschriften des Schweizer Gesetzes, insbesondere der Artikel über die kaufmännische Buchführung und Rechnungslegung des Obligationenrechts (Art. 957 bis 962 OR) erstellt. Die wesentlichen Abschlusspositionen sind wie nachstehend bilanziert:

#### Finanzanlagen

Die Wertschriften des Anlagevermögens werden zum Stichtagskurs am Bilanzstichtag, also zum Marktwert bewertet.

#### B. Erläuterungen zur Jahresrechnung

|                          | 31.12.2023   |              |
|--------------------------|--------------|--------------|
|                          | CHF          | CHF          |
| Finanzanlagen            |              |              |
| Aktien Schweiz           | 902'823.08   | 838'529.41   |
| Immobilen-Fonds          | 670'161.90   | 643'930.18   |
| Obligationen Schweiz CHF | 1'228'145.57 | 1'351'886.75 |
| Obligationen Ausland FW  | 365'250.58   | 368'568.74   |
| Aktien Welt              | 526'079.64   | 521'592.87   |
| Total                    | 3'692'460.77 | 3'724'507.95 |

#### C. Übrige im Gesetz vorgesehene Angaben

#### 1.1 Rechtsform, Zweck

Die Hans Sigrist-Stiftung ist eine gemäss öffentlicher Urkunde vom 12. August 1993 (Urschrift 1755) errichtete Stiftung im Sinne der Art. 80ff ZGB mit Sitz in Bern. Domizil der Stiftung ist Schanzeneckstrasse 1, 3012 Bern.

Gemäss den Statuten vom 21. Januar 1997 hat die Stiftung zum Zweck: die Förderung der wissenschaftlichen Forschung und Honorierung hervorragender wissenschaftlicher Leistungen, gleichgültig in welchem Fachgebiet gemäss Reglement vom 29. Oktober 1996, Datum des Erlasses vom 27. Januar 2014.

#### 1.2 Personelle Zusammensetzung des Stiftungsrates

| Trautmann Norbert, Prof. Dr., Bern          | Präsident     |
|---|---------------|
| Rigamonti Cyrill, Prof. Dr., Bern           | Vizepräsident |
| Brönnimann Stefan, Prof. Dr., Zollikofen    | Mitglied      |
| Henke Katharina, Prof. Dr., Mont-Vully (FR) | Mitglied      |
| Kunz Alexis, Prof. Dr., Riaz                | Mitglied      |
| Leumann Christian, Prof. Dr., Bern          | Mitglied      |
| Häsler Christine, Burglauenen               | Mitglied      |
| Bloch René Sigmund, Prof. Dr., Bern         | Mitglied      |
| Perren Aurel, Prof. Dr., Bern               | Mitglied      |
| Rebenich Stefan, Prof. Dr., Kandersteg      | Mitglied      |
| Rottenberg Sven, Prof. Dr., Bern            | Mitglied      |

#### 1.3 Entschädigungen an die Stiftungsräte werden keine ausgerichtet.

#### 1.4 Zeichnungsberechtigung

Der Präsident und der Vizepräsident des Stiftungsrates führen Kollektivunterschrift zu zweien.

#### 1.5 Revisionsstelle

Gfeller + Partner AG Amthausgasse 6 3000 Bern 7

#### 1.6 Erklärung, ob Anzahl Vollzeitstellen im Jahresdurchschnitt nicht über 10, 50 oder 250 liegt

Die Anzahl Vollzeitstellen liegt im Jahresdurchschnitt nicht über 10 Mitarbeitenden.

#### 1.7 Wesentliche Ereignisse nach dem Bilanzstichtag

Nach dem Bilanzstichtag sind keine wesentlichen Ereignisse eingetreten, welche die Aussagefähigkeit der Jahresrechnung (2023) beeinträchtigen könnten bzw. an dieser Stelle offengelegt werden müssten.

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