Happy New Year. This is the tenth year of publication of The ICIAM DIANOIA, and the editors are happy to offer you news of ICIAM, information about the next two ICIAM Congresses, and pointers to several recent initiatives of the International Science Council, including one that features mathematics and another where ICIAM leaders played a role. There is also news of the first year of the new Standing Committee on Gender Equality in Science, and a request for readers to send information about their activities promoting gender equality.

With best wishes from the editors.

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Letter from the ICIAM President

Dear Presidents and Representatives of ICIAM member societies,

Today is the first day of a brand new year. Let me wish you and your family a very Happy New Year of 2022!

2021 was a difficult year for us. Due to the COVID-19 pandemic, the board meeting of ICIAM was held online on October 30th. At that meeting, the Board made many important decisions, including the following: Officer-at-Large Wil Schilders was elected President-Elect, and Liliane Basso Barichello (nominated by SBMAC) was elected as an Officer-at-Large of ICIAM, and will serve a six-year term until 2027. Two societies, the Hong Kong Society for Industrial and Applied Mathematics (HKSIAM) and the Serbian Mathematical Sciences Association (SMSA) were accepted as new members of ICIAM. The board also approved the list of invited speakers for ICIAM-2023 proposed by the chair of the Scientific Program Committee, Prof. Yasumasa Nishiura. Finally, the bid from the Royal Dutch Mathematical Society (KWG) and the Dutch Platform for Mathematics (PWN) for hosting the ICIAM 2027 Congress in
The Hague was approved.

Our secretary, Sven Leyffer was elected as the President-Elect of SIAM. Let us congratulate him with warm hearts! He will be the President of SIAM starting January 1st 2023. That means that ICIAM will need to elect a new secretary before the end of 2022. Hence, I am asking member societies of ICIAM to nominate candidates. Nominations should be sent to the President (president@iciam.org) or the Secretary (secretary@iciam.org) before June 15th, 2022. When a nomination is made, please provide a CV (at most four pages) of the candidate together with a written statement on his/her aspirations and visions for ICIAM.

The COVID-19 pandemic is not over yet. The Omicron wave is affecting the world heavily, and also impacting our plans for 2022. I wish all of you and your families a safe, healthy, and a very Happy New Year!

Ya-xiang Yuan
ICIAM President

Ya-xiang Yuan
Ya-xiang Yuan is the current President of ICIAM (2019-2023). He is a professor at Academy of Mathematics and Systems Sciences, Chinese Academy of Sciences. His research focuses on optimization.

Keep your Society's Information Up to Date
Update Your Membership Information on iciam.org (https://iciam.org/)

ICIAM maintains a self-service membership directory at http://www.iciam.org/members. Please take this opportunity to check your membership information, and update it if appropriate. Instructions on how to update your entry or to add new information can be found in our membership FAQ, http://www.iciam.org/faq-members

The 2022 ICIAM Officers
Ya-xiang Yuan (President), Wil Schilders (President-Elect), Sven Leyffer (Secretary), Heike Fassbender (Treasurer), Luis Vega and Liliane Basso Barichello (Officers-at-large)
Call for Proposals: ICIAM Conference Support for Applied and Industrial Mathematics in Developing Countries

ICIAM Conference Support for Applied and Industrial Mathematics in Developing Countries

In response to the COVID-19 pandemic, ICIAM has expanded its conference support to include virtual meetings. In addition to in-person meetings, ICIAM offers support for virtual meetings, for example by sponsoring waivers of registrations fees for participants from developing countries, or by supporting streaming or recording services. ICIAM encourages conference organizers to apply for support for virtual meetings using the general principles outlined in the announcement. See https://iciam.org/iciam-conference-support-applied-and-industrial-mathematics-developing-countries for more details.

The 2022 ICIAM Officers
Ya-xiang Yuan (President), Wil Schilders (President-Elect), Sven Leyffer (Secretary), Heike Fassbender (Treasurer), Luis Vega and Liliane Basso Barichello (Officers-at-large)

The 2021 ICIAM Board Meeting

The ICIAM Board met online on October 30, 2021. The meeting was supposed to be held in Tokyo, but moved to an online format due to the uncertainty of travel restrictions. Over 60 participants from around the world engaged on a range of business items. The Board voted that the ICIAM dues for 2022 remain unchanged from 2021, and that payment of the 2022 dues is voluntary to reflect a possible loss of income that members may have suffered due to COVID19.

Two new members were welcomed into the ICIAM family: the Hong Kong Society for Industrial and Applied Mathematics (HKSIAM) as new medium-sized full member, and the Serbian Mathematical Sciences Association (SMSA) as a small-sized full member. Wil Schilders had been elected earlier as ICIAM President-Elect, which created a vacancy for an Officer-at-Large. We were lucky to have five highly qualified candidates to replace Wil. Following lively presentations and a Q&A session with all candidates, the Board elected Liliane Basso Barichello (nominated by SBMAC) to serve the remaining two years of Wil's term followed by a full four-year term.

Shinichi Oishi from Waseda University and JSIAM updated the Board on the preparations for the 2023 Congress, and the Board approved the list of invited speakers for the ICIAM 2023 Congress, which will be made public later this year. Looking forward, representatives from The Hague presented their bid for hosting the 2027 Congress, which was...
unanimously accepted by the Board.

The next Board meeting is scheduled for 3 September 2022 in Glasgow, Scotland, making up for the 2020 Board meeting that was moved to a virtual format. We hope to reconnect in person with you in Glasgow!

Slainte,

Sven Leyffer, ICIAM Secretary
News of ICIAM 2023

Greetings for the new year!

The 10th International Congress on Industrial and Applied Mathematics, ICIAM 2023, will be held at Waseda University, Tokyo, Japan on August 20-25, 2023. We are pleased to announce Pre Calls for Minisymposia and Contributed Talks as follows:

**Pre Call for Minisymposia**

The call for minisymposia will be announced on March 1, 2022. The submission page will open on April 1, 2022 at the ICIAM 2023 webpage.

A minisymposium is composed of one or several sessions of coordinated presentations on a single topic of interest and importance in industrial and applied mathematics. Each session within a minisymposium should include four presentations in two hours. Each speaker should be allotted 25 minutes for their presentation, with an additional 5 minutes for discussion. We greatly encourage you to propose a minisymposium.

**Pre Call for Contributed Talks**

The call for contributed talks will be announced on March 15, 2022. The submission page will open on April 15, 2022 at the ICIAM 2023 webpage.

Contributed talks in lecture format are invited in all areas consistent with the congress themes covering topics in industrial and applied mathematics. A contributed talk is a 15-minute oral presentation, with additional 5 minutes for discussion. Those intending to participate in a contributed talk at ICIAM 2023 must submit the title of their presentation, together with a brief abstract (not to exceed 75 words), using the online submission form.

The ICIAM 2023 webpage is at: [https://iciam2023.org](https://iciam2023.org)

We strongly encourage you to join this wonderful event!

Shin’ichi Oishi, ICIAM 2023 Congress Director

Takeshi Ogita, ICIAM 2023 Local Scientific Program Committee Chair

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Shin’ichi Oishi and Takeshi Ogita

Shin’ichi Oishi, Professor at Waseda University, is the ICIAM 2023 Congress Director; Takeshi Ogita, Professor at Tokyo Woman’s Christian University (TWCU), is the ICIAM 2023 Local Scientific Program Committee Chair
The Hague: Site of ICIAM 2027

The choice of site for ICIAM 2027 was announced in the following press release.

**The International Council for Industrial and Applied Mathematics selects The Hague for 2027 Conference**

More than 3,500 delegates will attend The International Congress on Industrial and Applied Mathematics (ICIAM) in The Hague from 12-16 July 2027.

The congress takes place every four years, organised by The International Council for Industrial and Applied Mathematics - the worldwide organisation for professional applied mathematics societies, as well as others with a significant interest in industrial or applied mathematics.

Both the Council and their regular event bring together leading experts from across the field of mathematics to advance the applications of mathematics in all parts of the world. The congress will focus on the further stimulation of the relationship and interaction between mathematics and industry. The event’s scientific program will cover a comprehensive range of applied mathematical topics, highlighting the most recent advances in the discipline and demonstrating their applicability to science, engineering and industry.

The Netherlands is a leader in the field of industrial mathematics, due to a significant number of research laboratories and international organisations spread across the country. Additionally, the Netherlands hosts many of the European Industrial Doctorates programs related to industrial mathematics, making The Hague the ideal location for ICIAM 2027.

Professor Kees Vuik from the Delft University of Technology and the Delft Institute of Applied Mathematics commented: “The transfer of knowledge and expertise between the applied mathematics and the industrial community is one of our priorities given the presence of a strong network within Europe. I am therefore excited that the board has decided to organise ICIAM 2027 in The Netherlands. This congress will give another boost to the industrial and applied mathematics community both here and across Europe.”

Bas Schot, from the The Hague Convention Bureaux added: “This is another opportunity for us to demonstrate our position as world leader in the delivery of international congresses and events. As a global hub for research, industry and mathematics we are perfectly placed to deliver not just the congress but also the wider support from our partners and local stakeholders, all of which make up The Hague’s incredibly powerful knowledge economy.”


Press Release
ICIAM's Next President: Wil Schilders

Wil Schilders was elected President of ICIAM in September 2021. His term as ICIAM President-Elect started on October 1, 2021; will serve two years as President-Elect, before taking over as President on October 1, 2023.

Who is Wil Schilders? Currently, Wil is Full Professor and Chair of Scientific Computing in Industry in the Department of Mathematics and Computer Science of the Technical University Eindhoven. Wil earned his BSc and MSc at the University of Nijmegen, The Netherlands, and defended his PhD thesis in 1980 at Trinity College Dublin. He started at Philips CFT (Centre for Industrial Technology) as a researcher in the Mathematical Software Group. In 1991 he moved to Philips Research and became Senior Researcher in the Applied Mathematics Group. Later he worked there as Principal Researcher, IC Design. In 2006 this part of Philips became NXP Semiconductors. Wil was promoted to both Principal Senior, Systems and Circuits and Leader of the mathematics cluster within NXP. Wil started in 1999 as part-time professor at the Technical University Eindhoven. From 2010 he has held two jobs: Full Professor in Eindhoven and Executive Director of the Dutch Mathematics Platform (PWN).

Besides his regular jobs, Wil has been very active in various networks. In 2010-2011 he was ECMI President; then he was founder, board member, treasurer (2013-2015), and President (2016-2020) of EU-MATHS-IN (European Service Network of Mathematics for Industry and Innovation). He is a member of the following International Advisory Boards: Matheon/MATH+ Berlin (2015-), CeMEAI Brasil (2017-), IMI (Fukuoka) (2015-); Member of the Standing Committee SCEE (treasurer; 2018-). Furthermore, he was Officer-at-Large of ICIAM from 2019 until 2021. Wil has organized many international conferences and written numerous applied mathematics papers in renowned international journals.

His current research consists of two main topics: Model Order Reduction for linear, non-linear, coupled and parameterized systems; and combining scientific computing methods with machine learning/neural networks.

What are the plans of Wil, when he becomes President of ICIAM? Please find below his vision and some of his aspirations:

- He likes to stick to a rigorous time schedule for the officers and the board for the organization of the ICIAM Congress.
- He plans to produce a handbook with clear guidelines and timings to help the organizing committees to organize the ICIAM congress in a smooth and efficient way.
- ICIAM has built up relations with the ISC (International Science Council) and has become a member of ISC. For Wil it is essential that we retain good contacts with ISC and make use of their excellent network to also promote industrial and applied mathematics. This can also help to increase the contact with International Mathematical Union (IMU).
- Wil foresees a larger involvement of member societies in tasks defined during board meetings.
- Finally, he likes to stress the Industrial involvement of ICIAM and have more PR for mathematics in applications: "Maths Inside" and "Mathware".

Kees Vuik

Kees (Cornelis) Vuik has been professor of Numerical Analysis in the Mathematics Department at Delft University of Technology since 2007. He is the treasurer of EU-MATHS-IN, and the Congress Director of the ICIAM 2027 Congress, in The Hague.
New Officer-at-Large: Liliane Basso Barichello

Liliane Basso Barichello was elected an Officer-at-Large of ICIAM at the 2021 Board meeting in October. She is a professor in the Pure and Applied Mathematics Department of the Federal University of Rio Grande do Sul, in Porto Alegre, Rio do Sul, Brazil. Liliane Barichello has a degree in Mathematics from the Federal University of Santa Maria, a Master's in Mathematics from the Federal University of Rio Grande do Sul and a PhD in Mechanical Engineering from the Federal University of Rio Grande do Sul. She completed a Post-Doctorate at the Department of Mathematics at North Carolina State University. Dr. Barichello works in the areas of Applied Mathematics and Engineering, particularly focusing on the development of analytical and spectral methods associated with the Boltzmann Equation and its applications in neutron transport, radiative transfer and rarefied gas dynamics. She is an active member of SBMAC, having served as second vice president in 2014-2015.

About her election to the leadership of ICIAM, Dr. Barichello said, "I am very honored and excited to be a part of the ICIAM team. Since I was a student and throughout my career, I have always had a significant interest in applied and industrial mathematics, which is the foundation of ICIAM. I see, as Officer-at-Large, a unique opportunity to work to advance the applications of mathematics, to promote the professionals in this field, and bring together the societies from all over the world represented in this Council."

The Editors

Announcements from the International Science Council

The ISC has announced four important updates, and has asked member associations to share all of these announcements with their colleagues, members, and wider networks.

1. Launch of the ISC Global Commission on Science Missions for Sustainability

Political leaders, scientists, and influential personalities have issued an emergency warning on sustainability inaction by establishing a Global Commission to mobilize a $100 million a year global fund for Sustainability Science Missions - this will be a key priority for the ISC in the coming years, and is one of the outputs from the ISC Global Forum of Funders initiative and its report "Unleashing Science". The Commission of more than twenty high-level committed thought leaders will be chaired by Irina Bokova, former UNESCO Director-General, and Helen Clark, former Prime Minister of New Zealand and previous administrator of the UNDP.
2. Launch of the CFRS paper “A contemporary perspective on the free and responsible practice of science in the 21st Century”


The Paper is intended for a broad readership, including researchers, research managers, policymakers, science diplomats, and those in the private sector. We invite all ISC Members to read, share and discuss the publication with all those in your network who have a role to play in upholding the free and responsible practice of science in contemporary society.

- Access the paper and explore the multimedia portal [here](https://stories.council.science/science-freedom-responsibility/).

3. ISC 2022 – 2024 Action Plan published

We thank all of our Members for your input and feedback on the draft 2022 – 2024 Action Plan, which was adopted by the ISC membership at the 2nd ISC General Assembly in October. “Science and Society in Transition” sets out the framework of ISC activities over the next three years, outlining five priority domains. The document is now available online, including a print-friendly version, and we very much look forward to implementing the plan together with our Members.


4. International Year of Basic Sciences for Sustainable Development proclaimed

On 2 December, the United Nations General Assembly adopted a resolution proclaiming 2022 the International Year of Basic Sciences for Sustainable Development to highlight the crucial role of basic sciences for sustainable development, and emphasize their contributions to the implementation of the 2030 Agenda and achievement of the Sustainable Development Goals. The proposal for the Year was developed by ISC Member, the International Union of Pure and Applied Physics (IUPAP), with the encouragement and support of the ISC and you, our Members, as well as partner institutions and the UNESCO. Congratulations to the IUPAP on having this International Year endorsed by the United Nations.

- Access the press release [here](http://council.science/current/press/international-year-of-basic-sciences-proclaimed-un/).

With best regards,

Anne

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Anne Thieme | Membership Liaison Officer
International Science Council (ISC)
Anne Thieme

Anne Thieme is the Membership Liaison Officer for the International Science Council (ISC). She can be reached at anne.thieme@council.science

Counting on Mathematicians to Help Save the Planet

The ISC introduced this series, produced by BBC StoryWorks Commercial Productions, to share with the wider community innovative global stories of scientists and how they are addressing inequalities, engaging policymakers and the public, and pioneering a more sustainable future.

With all eyes on COP26, and a chance for the world’s leaders, policymakers and community activists to put the planet on a sustainable path, this series introduces scientists who are finding solutions to some of humanity’s most pressing issues. Unlocking Science looks at how a global collaborative effort by international science is rising to the challenge of finding pathways to living within planetary boundaries.

Produced for the International Science Council by BBC StoryWorks Commercial Productions, Unlocking Science (http://www.unlockingscienceseries.com/) addresses the need for accessible science – through compelling and innovative storytelling for the public. This new series of films, articles and podcasts explores the ever-changing face of science culture, where diversity of thought and creative approaches to our most immediate and complex concerns are championed. The series was launched in November, and Ken Golden's piece appeared in December. It can be found at https://stories.council.science/unlocking-science-mathematicians-save-planet/ (https://stories.council.science/unlocking-science-mathematicians-save-planet/) and people interested in the story behind the story can read more at https://science.utah.edu/events/the-science-of-salty-ice/ (https://urldefense.com/v3/__https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fscience.utah.edu%2Fevents%2Fthe-science-of-salty-ice%2F&data=04*7C01*7C*7C869630285c214ea7d14708d9b82d5881*7Ccc7df24760ce4a0f9d75704cf60efc64*7C1*7C0*7C637* -5i5XX28ouMO_BeCDZsHm7gA3qZcXcneLEWd8Gluv85lgj3hGQp72v-R-uzZfbB4$)

The current full set of completed ISC-BBC stories is at https://stories.council.science/Unlocking-Science/ (https://urldefense.com/v3/__https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fstories.council.science%2F2FUnlocking-Science%2F&data=04*7C01*7C*7C869630285c214ea7d14708d9b82d5881*7Ccc7df24760ce4a0f9d75704cf60efc64*7C1*7C0*7C7+(-5i5XX28ouMO_BeCDZsHm7gA3qZcXcneLEWd8Gluv85lgj3hGQp72v-R-9u4HHis$)
Great News for IYBSSD

In a significant recognition of the importance of basic science, on December 2, 2021, the United Nations General Assembly proclaimed 2022 the "International Year of Basic Sciences for Sustainable Development". This initiative was put forward by the International Science Council, based on a proposal developed by IUPAP (the International Union of Pure and Applied Physics), and supported by many members of ISC. ICIAM is one of the institutions behind the initiative. ICIAM President Ya-xiang Yuan signed a Memo of Understanding to confirm our involvement. President-elect Wil Schilders is ICIAM's representative. The mission and activities of the organization behind IYBSSD can be found at their website, https://www.iybssd2022.org/en/home/.

The International Year of Basic Sciences for Sustainable Development (IYBSSD2022) will be officially inaugurated with an opening conference 30 June – 1 July 2022 at UNESCO headquarters in Paris. Events and activities will be organized around the world until 30 June 2023.

The International Science Council announced this support with a press release that can be found at https://council.science/current/press/international-year-of-basic-sciences-proclaimed-un.

In their statement, the ISC describes the actions of the United Nations General Assembly:

"We need more basic sciences to achieve Agenda 2030 and its 17 Sustainable Development Goals." This is the message sent to the world by the United Nations General Assembly on 2 December 2021: Member States approved by consensus the resolution 76/A/L.12 promulgating the year 2022 as the International Year of Basic Sciences for Sustainable Development. With this resolution, the United Nations General Assembly invites all [its] Member States, organizations of the United Nations system and other global, regional and subregional organizations, as well as other relevant stakeholders, including academia, civil society, inter alia, international and national non-governmental organizations, individuals and the private sector, to observe and raise awareness of the importance of basic sciences for sustainable development, in accordance with national priorities.

The United Nations General Assembly motivated its decision with ‘the high value for humankind of basic sciences’, and with the fact that ‘enhanced global awareness of, and increased education in, the basic sciences is vital to attain sustainable development and to improve the quality of life for people all over the world’. It also stressed that ‘basic sciences and emerging technologies respond to the needs of humankind by providing access to information and increasing the health and well-being of individuals, communities, and societies’. The successes and difficulties of the global fight against the COVID-19 pandemic have been for two years a stark reminder of this importance of basic sciences, such as (but not limited to) biology, chemistry, physics, mathematics and anthropology.

The vote is the result of the mobilization of the international scientific community, led since 2017 by the International Union of Pure and Applied Physics (IUPAP), CERN (The European Laboratory for Particle Physics), and 26 other international scientific unions and research organizations from different parts of the world, under the auspices of UNESCO. Over 90 national and international science academies, learned societies, scientific networks, research and education centers are also supporting this initiative. They will organize events and activities all over the planet during this special year, to showcase and improve the links between basic sciences and the 17 SDGs.

The resolution was proposed to the United Nations General Assembly by Honduras, and co-sponsored by 36 other countries. Its vote confirms resolution 40/C 76 adopted unanimously by UNESCO General Conference, 25 November 2019.
The Editors

Annual Report of the Standing Committee on Gender Equality in Science

The Standing Committee on Gender Equality in Science (SCGES) issued its first annual report. SCGES has 15 partners representing scientists around the world, brought together across disciplines to promote gender equality in science. The aim of SCGES is to ensure exchange of information amongst international scientific unions to foster gender equality and the implementation of recommendations of the “Gender Gap in Science Project.” (Information about this project can be found here [https://gender-gap-in-science.org](https://gender-gap-in-science.org)).

This report, compiled after the committee’s first year of existence, is evidence of its current and future work in this endeavor. It contains brief reports from the 15 partners of SCGES, all of which have a stated commitment to gender equality, on structures and activities within their organizations that support gender equality. The report is enlightening in the various avenues that can be taken to support gender equality.


Authors:
Carol S. Woodward is a mathematician at Lawrence Livermore National Laboratory and the SIAM Vice President-at-Large. Her research includes portable numerical software, time integration methods, and algebraic solvers.
Guiying Yan is a professor at the Academy of Mathematics and Systems Science, Chinese Academy of Sciences (CAS). She is a Vice-President of National Center for Mathematics and Interdisciplinary Sciences. Her research includes graph theory and its applications.

Carol Woodward and Guiying Yan
Carol S. Woodward is a mathematician at Lawrence Livermore National Laboratory. Guiying Yan is a professor at the Academy of Mathematics and Systems Science, Chinese Academy of Sciences (CAS).
Request for Reports on ICIAM Member Societies’ Activities Supporting Gender Equality

ICIAM is an active participant in the new Standing Committee on Gender Equality in Science (See the page, https://iciam.org/standing-committee-gender-equality-science-scgess (https://iciam.org/standing-committee-gender-equality-science-scgess)). To bring greater attention to activities supporting gender equality, ICIAM has created a new web page to collect information about activities its member societies are doing in support of gender equality. The page is located at: https://iciam.org/iciam-activities-support-gender-equality. (https://iciam.org/iciam-activities-support-gender-equality)

We know that there are many activities worldwide that support gender equality, and we will use this page to highlight them. If your society has had an event or some news of activities that support gender equality, please send information to Carol Woodward (woodward6@llnl.gov (mailto:woodward6@llnl.gov)), and we will get it on the web site.

Authors:
Carol S. Woodward is a mathematician at Lawrence Livermore National Laboratory. Her research includes portable numerical software, time integration methods, and algebraic solvers. Guiying Yan is a professor at the Academy of Mathematics and Systems Science, Chinese Academy of Sciences (CAS). She is a Vice-President of National Center for Mathematics and Interdisciplinary Sciences. Her research includes graph theory and its applications.

Carol Woodward and Guiying Yan

Carol S. Woodward is a mathematician at Lawrence Livermore National Laboratory. Guiying Yan is a professor at the Academy of Mathematics and Systems Science, Chinese Academy of Sciences (CAS).

19th Annual Conference of CSIAM, October 7-10, 2021

The China Society for Industrial and Applied Mathematics (CSIAM) held its 19th annual conference in Hefei, Anhui Province, China during October 7-10, 2021. More than 1100 experts in applied mathematics and industries as well as young students from all over the country and abroad attended the conference.

In the three-day conference, there were eight invited plenary and 450 contributed talks, 36 thematic symposiums and four special forums covering the latest research directions and achievements in all aspects of Applied Mathematics in recent years, including the application of mathematics in physics, chemistry, biology, economics, environment,
finance, materials, medicine, information, etc. In addition, six mathematicians including Professor Pingwen Zhang, Academician of the Chinese Academy of Sciences and President of CSIAM, made a number of interesting public presentations for students in Hefei, aiming to popularize scientific knowledge and inspire teenagers' interest in understanding mathematics.

The conference opened with an address from the President of CSIAM, Professor Pingwen Zhang. He expressed deep appreciation to all representatives and local organizers, and made an important speech on how mathematics promotes technical innovation, how industrial development promotes the progress of mathematics, and how to further improve the influence of CSIAM.

Professor Yaxiang Yuan, Academician of the Chinese Academy of Sciences and President of ICIAM, extended warm congratulations on the successful convening of the conference, and pointed out that the recent development and progress obtained by CSIAM have been recognized worldwide.

The 2021 Class of CSIAM Fellows was also announced at the conference, and the following seven distinguished members were named Fellows of CSIAM for their notable contributions to the fields of applied mathematics: Yuhong Dai (Academy of Mathematics and Systems Science, Chinese Academy of Sciences), Xiaotie Deng (Peking University), Huazhong Tang (Peking University), Shanjian Tang (Fudan University), Zongmin Wu (Fudan University), Dinghui Yang (Tsinghua University), and Jifeng Zhang (Academy of Mathematics and Systems Science, Chinese Academy of Sciences).

During the conference, CSIAM leadership changed, a new board of directors and board of supervisors of CSIAM were elected, and Professor Pingwen Zhang was elected as President of CSIAM again.

The annual conference of CSIAM is committed to building a high-level academic exchange platform for industrial and applied mathematicians, and contribute to promoting the industrial and applied mathematical development in China.

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**Yan Guiying**

Guiying YAN is a professor at the Academy of Mathematics and Systems Science, Chinese Academy of Sciences (CAS). She received her PhD from Shandong University. She is a Vice-President of National Center for Mathematics and Interdisciplinary Sciences.
Luis Vega wins National Research Award 2021

The Ministry of Science and Innovation has recognised the work of the UPV/EHU professor in the area of Mathematics and Information and Communication Technologies

The Julio Rey Pastor National Prize in the area of Mathematics and Information and Communication Technologies has been awarded to Luis Vega González, Professor in the Department of Mathematics at the University of the Basque Country (https://www.ehu.eus/en/en-home) and coordinator of the Analysis of Partial Differential Equations area and Principal Researcher of the Severo Ochoa accreditation of the Basque Centre for Applied Mathematics – BCAM.

Created in 1982, the national research awards, organised by the Ministry of Science and Innovation (https://www.ciencia.gob.es/en/), aim to recognise the merit of Spanish researchers who are carrying out outstanding professional work of international relevance, and who contribute “exceptionally to the advancement of science, to a better understanding of human beings and their coexistence, to the transfer of technology and to the progress of humanity”.

The jury of the Julio Rey Pastor National Prize highlighted Luis Vega’s “excellence of his research work and its applications to the study of harmonic analysis for dispersive differential equations, which have had a very singular scientific impact in the field”. The jury also highlighted the international projection of the candidate and, in short, the contribution of his scientific work to both the theoretical and practical fields of Mathematics.

“It is a great joy and a strong stimulus. Many years of shared effort with my colleagues and students have been very pleasantly rewarded. I joined the UPV/EHU’s Faculty of Science and Technology in 1993 thanks to the receptiveness of the Department of Mathematics. The support of this institution and later of BCAM, one of the research centres of the Basque Government's BERC programme, has been constant. Without this support, and the fundamental support of my family, this success would not have been possible. Thank you all very much”, said Luis Vega.

Luis Vega González (http://www.bcamath.org/en/people/lvega)z (Madrid, 1960) graduated in Mathematics from the Universidad Complutense de Madrid in 1982. He received his doctorate in 1988 from the Universidad Autónoma de Madrid (UAM) and after a two-year stay at the University of Chicago he joined the UAM. In 1993 he joined the University of the Basque Country, where he has been Professor of Mathematical Analysis since 1995.

Professor Vega is currently the Principal Investigator of the Severo Ochoa accreditation at BCAM and a world-renowned expert in partial differential equations and Fourier analysis. He has been vice-president of the Spanish Royal Mathematical Society (RSME (https://www.rsme.es/)) and member of the Spanish Society of Applied Mathematics (SEMA (https://www.sema.org.es/en/)), and he is currently an officer of the International Council of Industrial and Applied Mathematics (ICIAM). He is also a member of the Royal Academy of Exact, Physical and Natural Sciences, the European Academy of Sciences and the Academia Europaea.

In his extensive career, Prof. Vega has been awarded for his research work on several occasions: in 2012 he received the Euskadi Research Award and Fellow of the American Mathematical Society (Inaugural Class), and in 2015 he received the Blaise Pascal Medal in Mathematics.

He also leads the HADE project (Harmonic Analysis and Differential Equations: new challenges) funded by the European Research Council.

BCAM Announcement
Obituary: Andreas Griewank

Andreas Griewank passed away suddenly and unexpectedly on September 16, 2021, at the age of 71. We mourn the loss of an outstanding, internationally recognized mathematician whose groundbreaking contributions in algorithmic/automatic differentiation (AD) shaped the field of modern-day optimization.

Andreas was born in Kassel, Germany, on January 26, 1950. After finishing high school at the Albert-Schweitzer-Gymnasium in 1968, he enrolled at the Technische Universität in Clausthal-Zellerfeld and began studying mathematics and physics. Andreas moved to Freiburg in 1972 and pursued mathematics, physics, and economics at Albert-Ludwigs-Universität. He graduated with distinction in 1975 with a diploma thesis on affine linear automata under the direction of Lutz Eichner. Andreas then joined the Computer Centre and Department of Computer Science at the Australian National University in Canberra, where he completed his master’s degree in 1977 with a thesis titled *A Generalized Descent Method for Global Optimization*. He remained in Canberra for his doctorate—advised by Richard P. Brent and Michael R. Osborne—and received his Ph.D. in 1980 for a dissertation on *Analysis and Modification of Newton's Method at Singularities*.

After earning his Ph.D., Andreas worked with Michael J.D. Powell as a postdoctoral researcher at the University of Cambridge. In 1982, he became an assistant professor at Southern Methodist University in Texas; he was promoted to tenured associate professor in 1986. From 1987 to 1993, Andreas worked as a senior mathematician at Argonne National Laboratory. He agreed to a professorship at Technische Universität (TU) Dresden in 1993 that included directorship of the Institute for Scientific Computing. He then spent a sabbatical at INRIA Sophia Antipolis in France from 1998 to 1999. After returning to TU Dresden, Andreas accepted a Matheon professorship at the Humboldt-Universität zu Berlin in 2003. He later served as director of the Institute of Mathematics at Humboldt. Following retirement in 2015, Andreas devoted his energy to the newly founded Universität Yachay Tech in Ecuador, where he was dean of the School of Mathematical and Computational Sciences from 2015 to 2019.

Andreas is widely considered to be the godfather of AD. He began working in this research area in the early 1980s and quickly became the driving force for AD’s development and the field’s leading proponent. His broad perspective covered many areas—including theoretical foundations, efficient algorithms, and the development of mature software tools—and the resulting applications touched a myriad of domains in science, engineering, and economics. In fact, his book *Evaluating Derivatives: Principles and Techniques of Algorithmic Differentiation* (https://my.siam.org/Store/Product/viewproduct/?Productid=1005)(published by SIAM with coauthor Andrea Walther) is already in its second edition and is still a standard reference on the subject.

Andreas continuously made important contributions to the design and analysis of nonlinear optimization algorithms. Here we mention just a few of his accomplishments in the context of very different aspects of nonlinear optimization. First, Andreas and Philippe Toint jointly developed the idea of partial separability. This structural property is ubiquitous in optimization problems and can be exploited to greatly improve algorithm efficiency. Andreas also advanced the convergence theory of Newton and quasi-Newton methods in multiple settings, including the infinite dimensional setting and the degenerate setting — in which the Hessian is singularly the optimum. These topics were the subject of a frequently cited series of papers that form the basis of ongoing research.

The so-called “Griewank function,” which serves as an academic test function in the field of global optimization, is another one of Andreas’ contributions. This function sees widespread use within the global optimization community and is the subject of renewed interest, as non-convex optimization minimizes objectives in data analysis applications like deep learning.
Andreas made significant service contributions to several different communities, and his scientific work was routinely marked by an abundance of ideas and infectious enthusiasm. He organized numerous conferences and workshops around the world, several of which were under the aegis of SIAM. These meetings often aimed to connect academic researchers with practitioners in the areas of AD and nonlinear optimization, a goal that is consistent with SIAM’s outreach to industry and practice.

In 2001, Andreas received the Max Planck Research Award. He was named a Fellow of SIAM in 2017. Andreas also served SIAM in several different leadership roles; he was elected to the SIAM Council in 2013 and was a member of the Board of Trustees from 2015 to 2016.

Andreas wasalways passionate about promoting young researchers; he supervised 23 doctoral students and numerous master’s students during his time in academia. He also had a special interest in supporting mathematical education in developing countries. In addition to his commitment at Yachay Tech in Ecuador, Andreas was actively engaged in groups such as the European Mathematical Society’s Committee for Developing Countries and the International Mathematical Union’s Commission for Developing Countries.

His quick death without any significant prior health issues fits Andreas as we knew him. He was restless until the end and always full of energy for life and new mathematical developments. He lived a very fulfilling life and will be severely missed.

This obituary is reprinted from SIAM News, December 2021 (Vol. 54, Issue 10) The original online article is at https://sinews.siam.org/Details-Page/obituary-andreas-griewank.

Andrea Walther and Uwe Naumann

Andrea Walther is MATH+ Professor at Humboldt-Universität zu Berlin. Her research is in optimization and algorithmic differentiation (AD). Uwe Naumann is professor at RWTH Aachen University. His research in AD is on combinatorial and other problems.

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Report on ICIAM Dianoia

Dianoia celebrated its ninth year of publication in 2021, and its third year as an online newsletter.

Overall, things are very good. The editing and publishing interface, set up by Rob Carr, is excellent, and has required only a few minor tweaks. One intriguing one: Some prankster entered about 5000 bogus subscriptions (this greatly slowed down the e-mail distribution of the notice of publication); we now have a captcha-type check for new subscribers, and legitimate subscribers should receive their issues more quickly.

Two things happened in the past year that will enhance the professionalism of the newsletter:

(1) Having received approval from ICIAM Board to formalize the Editorial Board Committee, it became official at the beginning of 2021, and has 12 members, including the chair. At the moment, everyone’s term is 2020-2024. The level
of engagement of committee members varies widely, and fluctuates, as people have many other responsibilities. At the moment, it is satisfactory: We have been getting enough material for each issue, and when items come up for discussion, enough people join the conversation that we have been able to resolve questions.

(2) Following one discussion, we decided that we ought to have an editorial policy, and several editorial committee members formulated one, as follows:

"ICIAM's newsletter, ICIAM DIANOIA, welcomes articles relevant to applied mathematics, its applications in industry, and non-technical news articles which are of sufficiently broad interest to ICIAM and its member societies. <A list of topics that have been included in previous DIANOIA issues can be found below.> General rules of DIANOIA's operation include: (a) no advertising; (b) no payment of authors for articles; (c) DIANOIA may give permission to reprint articles if asked; (d) DIANOIA may reprint relevant articles from other newsletters, with permission.

"One of the missions of DIANOIA is to disseminate news of ICIAM activities and calls, as well as important information concerning the ICIAM Prizes and Congresses. But the scope of DIANOIA is much larger than ICIAM itself, and will publish news and articles of interest to a large community of mathematicians interested in the applications of mathematics and its interactions with other fields of science and with industry and with society.

"It is up to the discretion of the DIANOIA editorial board to decide which articles to include. If you have any doubts whether a particular topic might be of interest, please get in touch with a member of the editorial board before submitting a contribution."

There are also two areas for future improvement:

(1) One thing that has been lost with the conversion from a PDF newsletter is the ability to archive issues, or even to print out a complete issue. This has been observed as a lack. When we started up the newsletter, the possibility of adding the capability to output a PDF version was mentioned. If there is sufficient interest by the ICIAM Board, and if the ICIAM Board is willing to commit resources to effecting this, we can find out whether it is practical.

(2) At the moment, the only person with access permission to set up articles on the website is the Editor in Chief. This is not a serious problem, and it is not easy to see how to broaden access (since one gets access to a large collection of directories and files, some of which may be quite sensitive). But over the long run, it might be worth making the effort to cordon off Dianoia files from the rest of ICIAM's business on the website so that it would be possible for other editors to work on the newsletter, without compromising other ICIAM documents.

The Editorial Board Committee will be happy to receive comments, feedback and advice, at the meeting or at any time.

Barbara Lee Keyfitz
Barbara Lee Keyfitz is Professor of Mathematics at The Ohio State University. She has a PhD from New York University, and works in the analysis of partial differential equations. She is a Past-President of ICIAM, and Editor-in-Chief of ICIAM Dianoia.

The ICIAM newsletter was created to express the interests of our membership and partner organizations and the views expressed in this newsletter are those of the authors and do not necessarily represent those of ICIAM or the Editorial team. We welcome articles and letters from members and associations, announcing events, on-site reports from events and industry news.

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