

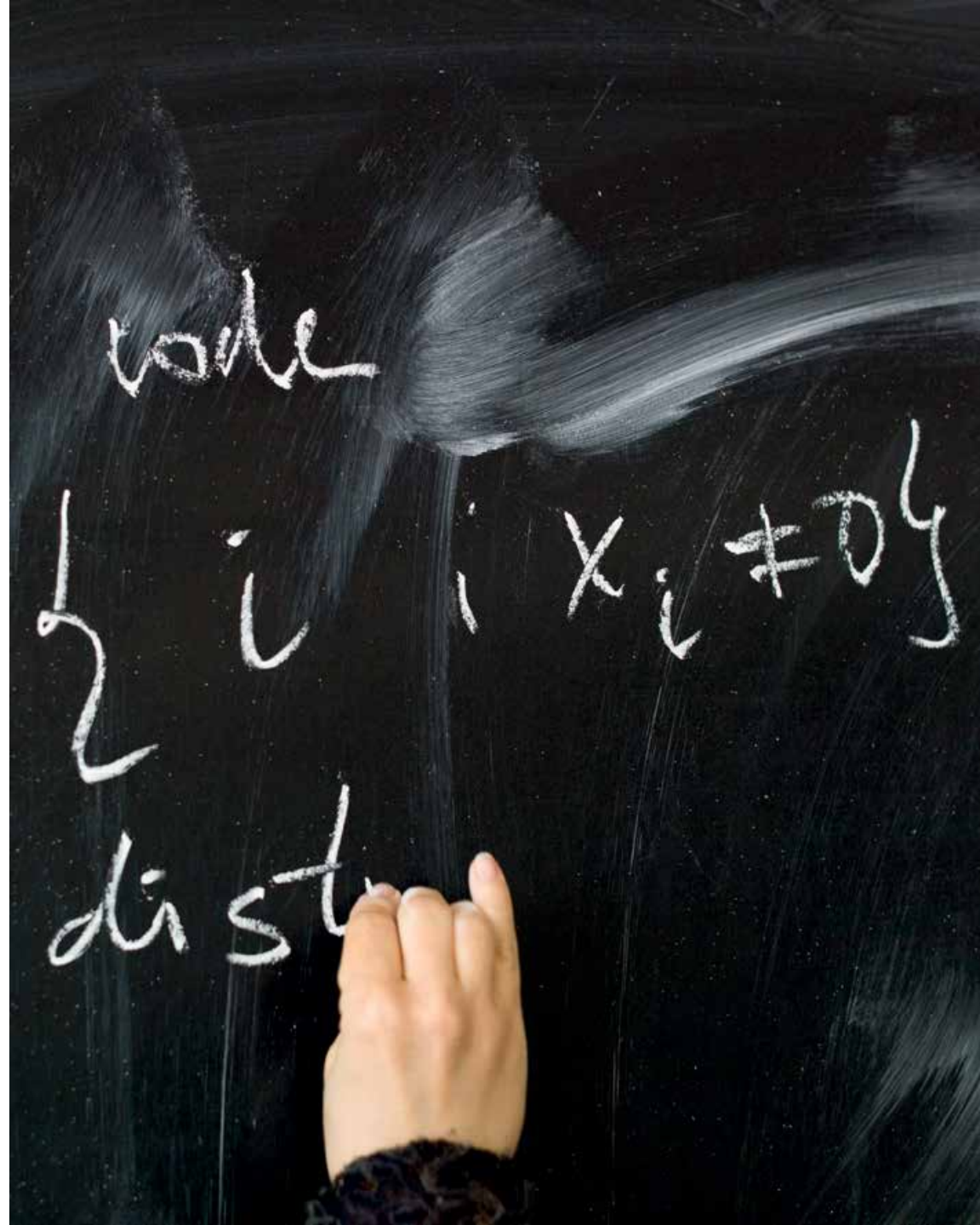
WOMEN IN MATHEMATICS FROM AROUND THE WORLD

A GALLERY OF PORTRAITS

WoMaP, Banff, 14th August 2023

Women of mathematics throughout Europe

A gallery of
twenty three
portraits



*The short story of a long
adventure*

Noel Tovia Matoff
photographer

Sylvie Paycha
curator

How it all started: 2013

invitation by Charu Goel to deliver a talk in the
“Women in mathematics” platform at the University of Konstanz



**WOMEN
MATHEMATICIANS
AROUND THE
WORLD
A GALLERY OF
TEN PORTRAITS**

Alexandra Antoniouk (Ukraine)
Karin Baur (Switzerland/ Austria)
Luz Myriam Echeverry (Colombia)
Yukari Ito (Japan)
Marie Françoise Ouedraogo
(Burkina Faso)
Dusanka Perisic (Serbia)
Cheryl Elisabeth Praeger (Australia)
Minping Qian (China)
Ramdorai Sujatha (India)
Jie Yang (China)

2014 First steps

Agnes Handwerk suggests an exhibition with portraits of mathematicians based in Europe

13 female mathematicians

Nalini Anantharaman (France)
Karin Baur (Switzerland, Austria)
Stefka Bouyuklieva (Bulgaria)
Alice Fialowski (Hungary)
Frances Kirwan (UK)
Irina Kmit (Ukraine/Germany)
Kaisa Matomäki (Finland)
Margarida Mendes Lopes (Portugal)
Barbara Nelli (Italy)
Dušanka Perišić (Serbia)
Katarzyna (Kasia) Rejzner (Poland/UK)
Katrin Wendland (Germany)
Oksana Yakimova (Russia/Germany)



Noel Matoff

The photographer

The team of mathematicians



Sara Azzali



Magdalena
Georgescu



Alexandra
Antoniouk

July 2016: Opening in Berlin (TU)

7th European Congress of Mathematics



Mathematics Library
Technical University in Berlin

With the financial support of

Unterstützt von / Supported by



Alexander von Humboldt
Stiftung/Foundation

Robert
Bosch
Stiftung

Frankfurter Stiftung: **maecenia** für
Frauen in Wissenschaft und Kunst



2016-----2021

THE THIRTEEN PORTRAYED MATHEMATICIANS

Nalini Anantharaman (France)
Karin Baur (Switzerland, Austria)
Stefka Bouyuklieva (Bulgaria)
Alice Fialowski (Hungary)
Frances Kirwan (UK)
Irina Kmit (Ukraine/Germany)
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Stefka Bouyuklieva



Nalini Anantharaman



Oksana Yakimova



Irina Kmit



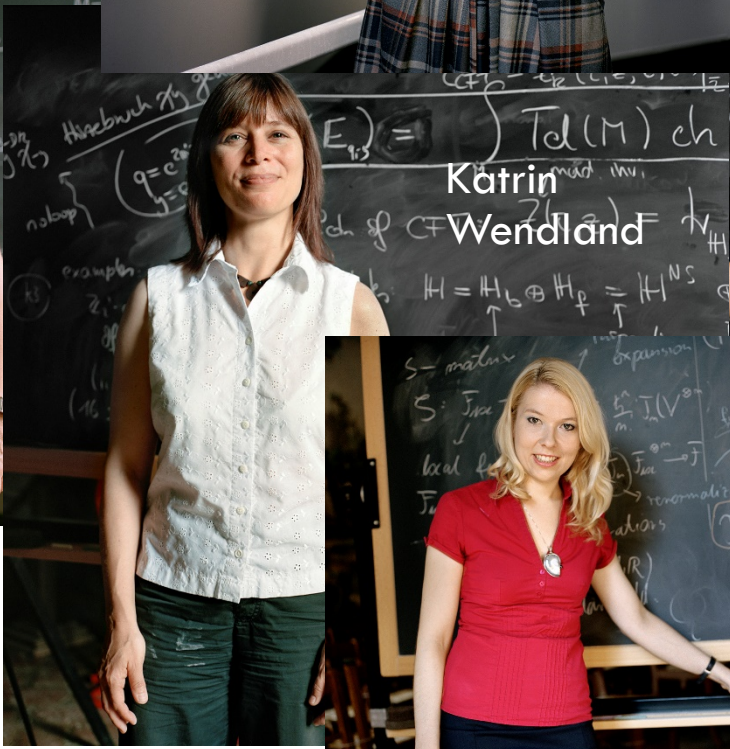
Alice Fialowski



Barbara Nelli



Dušanka Perišić



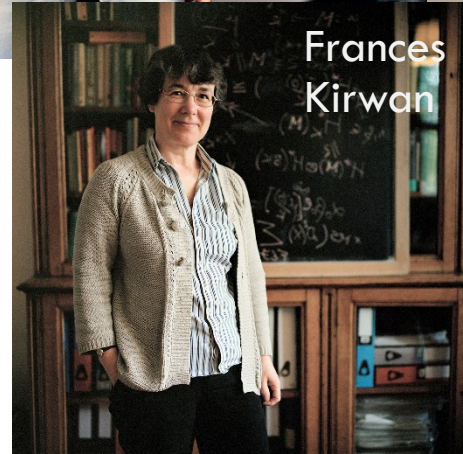
Katrin Wendland



Karla Bour



Kaisa Matomäki



Frances Kirwan



Kasia Rejzner



Margarida Mendes Lopes

TRAVELLED TO MORE THAN

137 VENUES

AROUND THE WORLD.....



Barcelona, Universitat de Barcelona, March 2019



Bogotá, Universidad Nacional September 2017



Beirut Université Libanaise, Fanar February 2018

University of Gothenburg and Chalmers University of Technology Sweden April 2019



Universidad de la Havana
Cuba February 2017



Diyarbakir, Dicle University
Turkey May 2018



AIMS, Senegal in M'bour
May 2018

Quito, Pontificia Universidad Católica del Ecuador
August 2017



- SAINT DENIS (PARIS), FRANCE (II). October 2019
- SALZBURG, AUSTRIA. September 2017
- SANTIAGO, CHILE. March 2018
- SEVRAN, FRANCE. March 2017
- SOFIA, BULGARIA. February 2018
- SINGAPORE, REPUBLIC OF SINGAPORE. October 2018
- STRASBOURG, FRANCE.
- STUTTGART, GERMANY. November 2017
- SYDNEY, AUSTRALIA (I). May 2019
- SYDNEY, AUSTRALIA (II). August 2019
- TOKYO, JAPAN (I). March 2019
- TOKYO, JAPAN (II). October 2019
- TORINO, ITALY. April 2018
- TROMSØ, NORWAY. August 2019
- UTRECHT, THE NETHERLANDS. February 2017
- VALPARAISO, CHILE. January 2019
- VERONA, ITALY. May 2020
- VRATSA, BULGARIA. May 2017
- TÜBINGEN, GERMANY. November 2018
- TWENTE, THE NETHERLANDS. November 2017
- WARWICK, UK. October 2017

Mathématiciennes

Européennes

L'exposition "Mathématiciennes européennes" a été présentée au CDI du collège le mercredi 20 février 2019.



L'exposition propose les photos et les portraits de 13 femmes mathématiciennes à travers l'Europe. Les interviews ont été réalisées par Sylvie Paycha et Sara Azzali et les photos par Noël Tovia Matoff.

Pourquoi y a-t-il plus d'hommes que de femmes mathématiciens / mathématiciennes?



KATRIN WENDLAND (Allemagne)
"Je me suis rendu compte que les mathématiques étaient plus faciles pour moi que pour beaucoup de mes camarades de classe, donc il aurait été presque injuste de ne pas utiliser ce don qui semblait venir presque naturellement pour moi."



NACINI ANANTHARAMAN (France)
"La créativité en mathématiques, ça veut dire savoir poser de bonnes questions et pas seulement savoir trouver des réponses."



NOTRE POINT DE VUE
LORSQU'ON ENTEND MATHÉMATIQUE, LES GENS PENSENT EN MAJORITÉ AUX HOMMES. MAIS NOUS ON VEUT MONTRER QUE LES FEMMES ONT LEUR PLACE.

Les élèves préparent leurs questions aux mathématiciennes au CDI du collège.

Sara, Layana et Nisrine

Saint Denis, Iqbal Masih school, October 2019

+ 7 mathematicians in 2019



Marta Sanz-Solé



Biljana Stamatović



Ragni Piene



Betül Tanbay



Sofia Lambropoulou



Blaženka Divjak



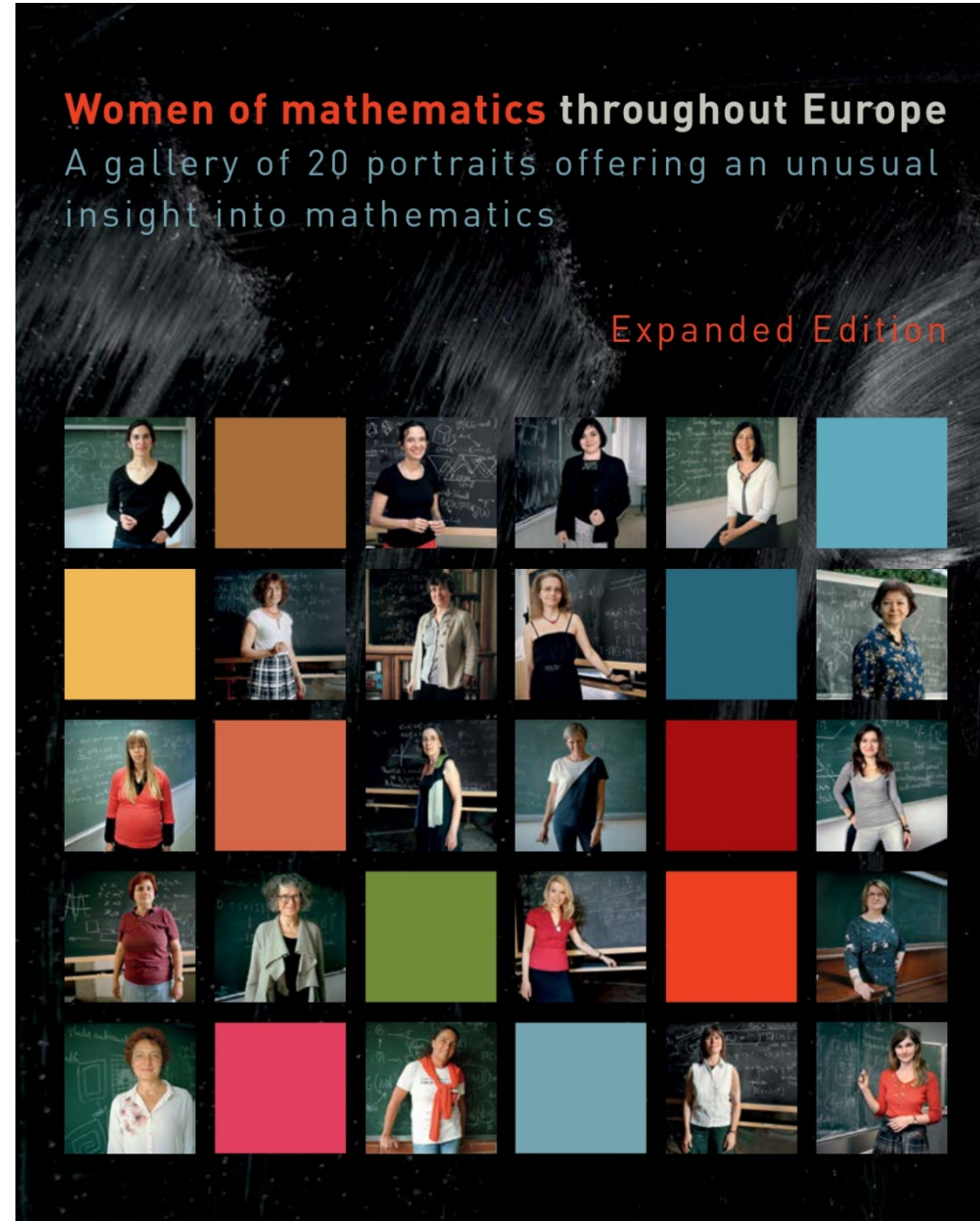
Neža Mramor Kosta

= 20 portraits

The expanded catalogue with the 20 portraits in 2021

13 mathematicians

Nalini Anantharaman (France)
Karin Baur (Switzerland, Austria)
Stefka Bouyuklieva (Bulgaria)
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Katarzyna (Kasia) Rejzner (Poland/UK)
Katrín Wendland (Germany)
Oksana Yakimova (Russia/Germany)



+ 7 mathematicians

Blaženka Divjak (Croatia)
Sofia Lambropoulou (Greece)
Neža Mramor Kosta (Slovenia)
Ragni Piene (Norway)
Marta Sanz-Solé (Spain)
Biljana Stamatović (Montenegro)
Betül Tanbay (Turkey)

Villa de Leyva, Colombia, July 31st - August 9th 2023

Setting up the exhibition in the patio of the Hotel Santa Viviana....





FURTHER EXPANSIONS AROUND THE WORLD

Maríel Saez, PUC Chile

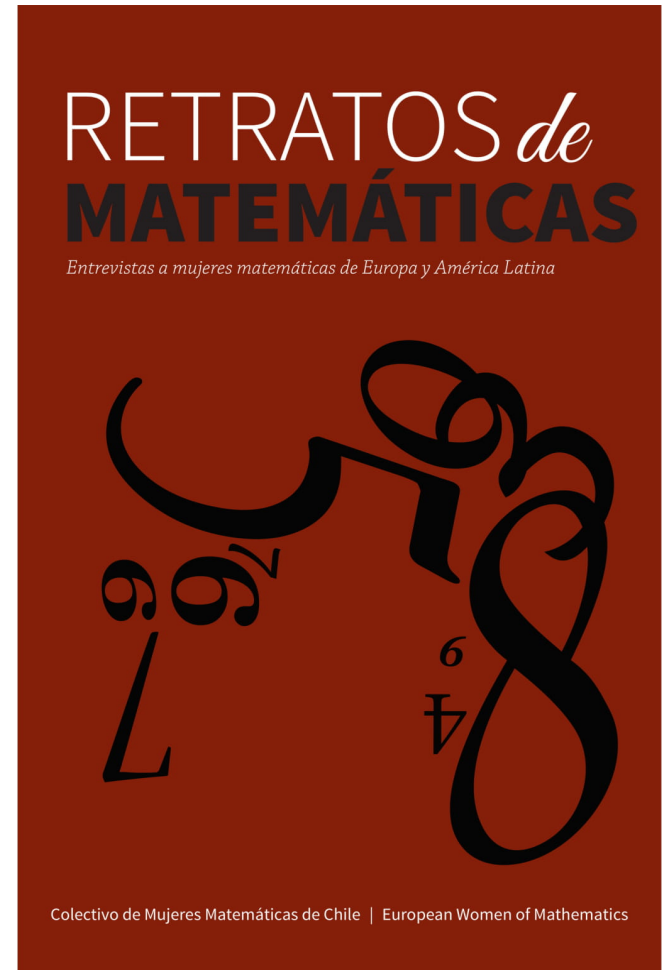


South American women of mathematics

(2018-2020)

Carolina Bhering de Araujo (Brasil)
Carmen Cortázar Sanz (Chile)
Alicia Dickenstein (Argentina)
Lorna Figueroa Morales (Chile)
Yboon García Ramos (Peru)
Salomé Martínez Salazar (Chile)
Mónica Musso Polla (Italy/Chile)
Carolina Neira Jiménez (Colombia)
Amalia Pizarro Madariaga (Chile)
María Ofelia Ronco Vignau (Argentina)
María Soledad Torres Díaz (Chile)

11 portraits



Australian women of mathematics (2019-2021)

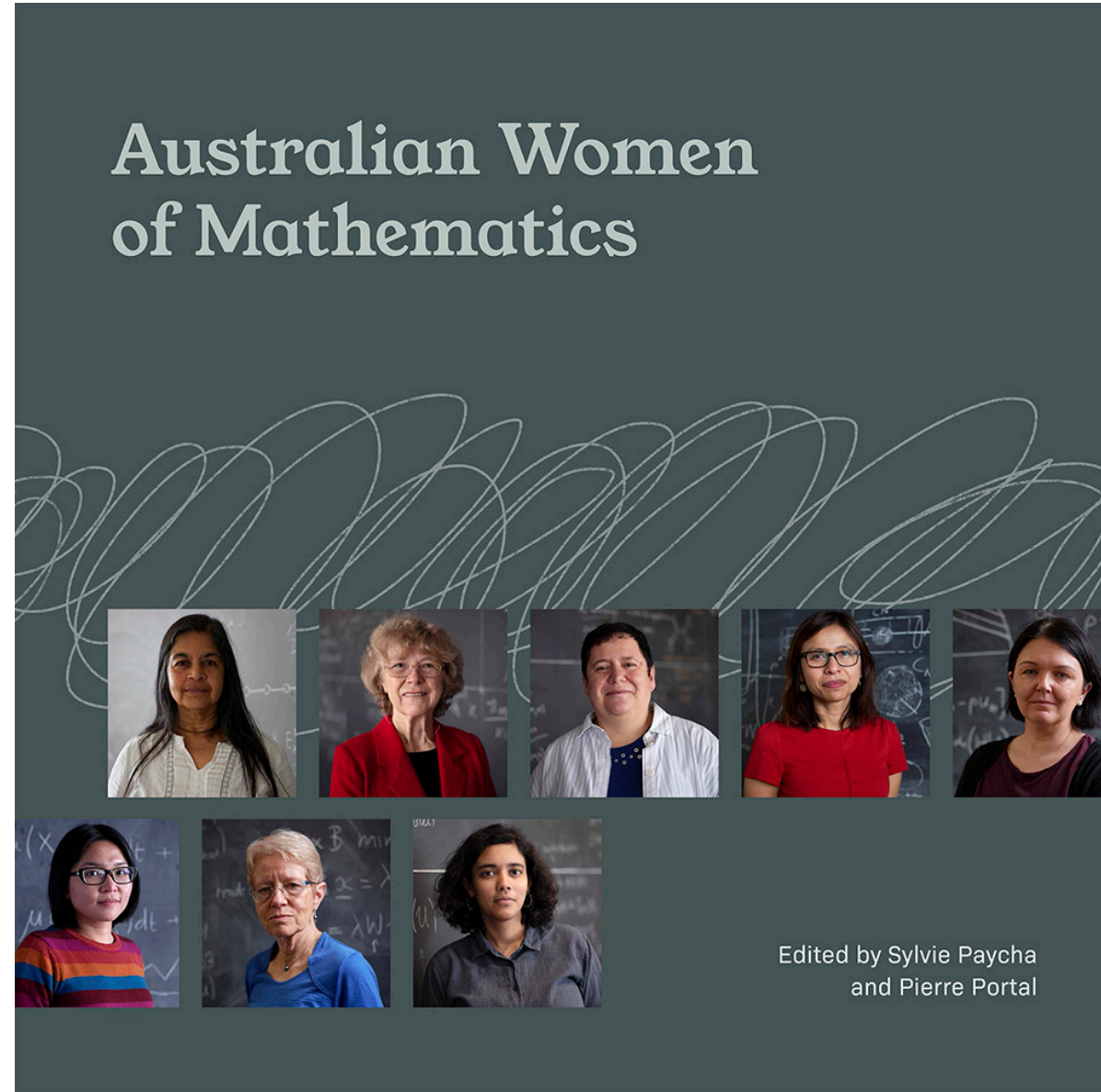
Pierre Portal

ANU Canberra, Australia

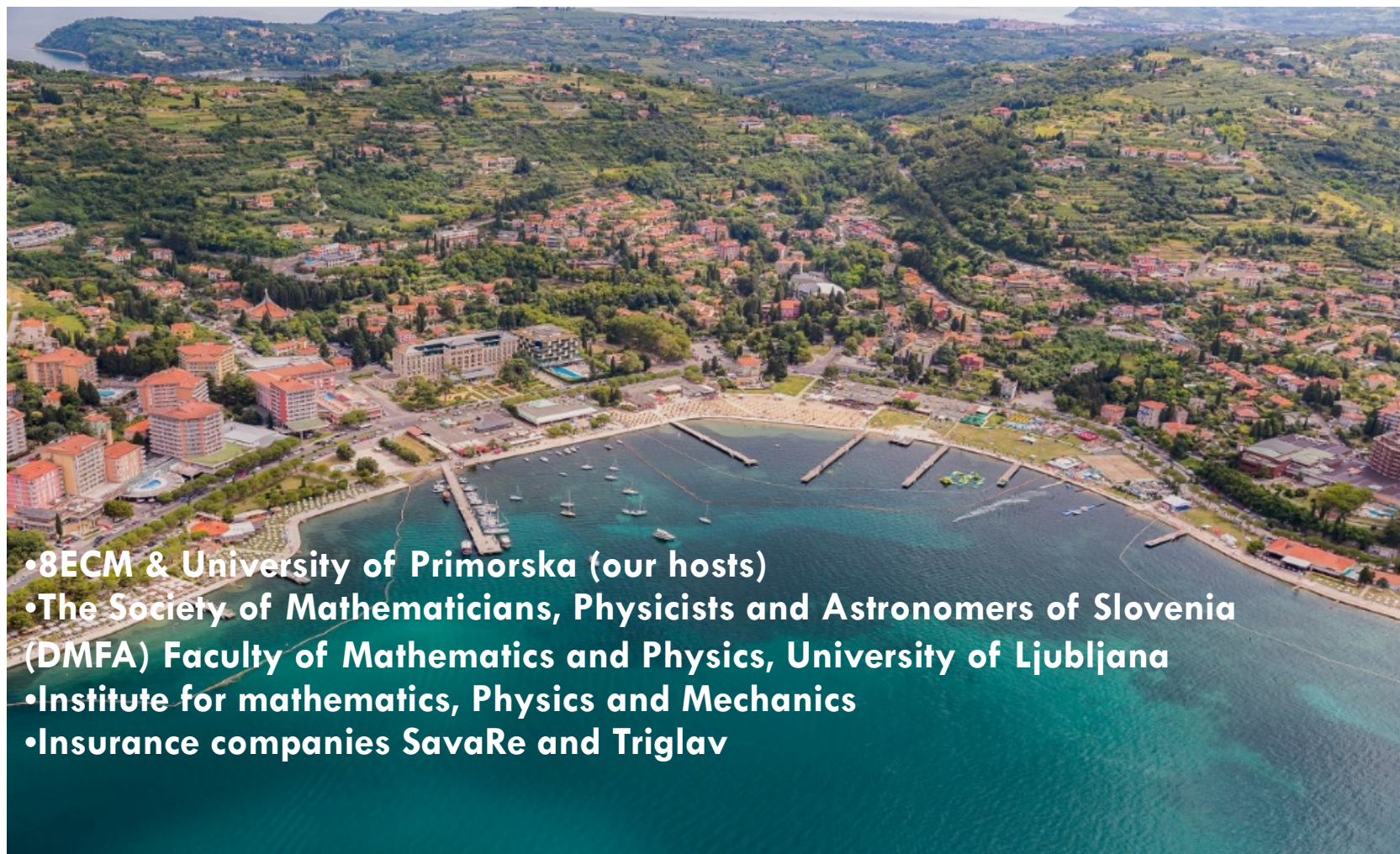


Amie Albrecht
Anita Liebenau
Asilata Bapat
Cheryl Praeger
Giang Nguyen
Inge Koch
Jacqui Ramagge
Jennifer Flegg
Joan Licata
Kate Smith-Miles
Katharine Turner
Maria Athanassenas
Nalini Joshi
Natalie Thamwattana
Rowena Ball
Sophie Calabretto

16 portraits



Five years later..... we were (virtually) at the 8th ECM in Portorož, thanks to...



- 8ECM & University of Primorska (our hosts)
- The Society of Mathematicians, Physicists and Astronomers of Slovenia (DMFA) Faculty of Mathematics and Physics, University of Ljubljana
- Institute for mathematics, Physics and Mechanics
- Insurance companies SavaRe and Triglav



Marjeta KRAMAR

Jasna PREZELJ

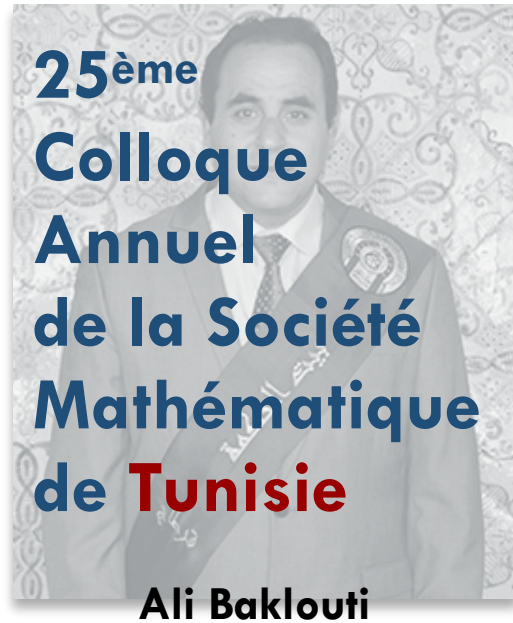


Neža MRAMOR-KOSTA

**First steps towards a
worldwide extension**

Tunisia, 14-17 March 2022

CSMT2022



With portraits of Claire Voisin (France)



Sana Hizem and Saloua Alouadi (Tunisia)



Reiko Toriumi



Okinawa Institute of Science and Technology Graduate University

OIST, OKINAWA, JAPAN March 20-24 2023
"Women at the intersection of mathematics and theoretical physics meet in Okinawa"

Woman in Mathematics
September 7-9, 2022
RIMS, Kyoto University, JAPAN
Lectures: Dusa McDuff, Helene Barcelo, Sunggeum Hong, Makiko Sasada, Marie-Francoise, Sylvie Paycha, Caroline Series
Short Talks: Motoko Kato, Mayuko Yamashita, Mao Shinoda, Yumiko Ohno, Erika Kuno, Xiaodan Zhou, Megumi Sano, Eriko Shinkawa, Natsumi Oyamauchi, Ayako Kubota, Soon-Yi Kang, Ade Irma Suriajaya, Hyojung Lee, Kyewon Koh Park
Organizers: Yukari Ito, Eiko Kin, Aoi Honda, Tomoko Takemura, Mayuko Yamashita
RIMS 共同研究 (公開型)
研究題目: Women in Mathematics
実施期間: 2022年9月7日(水)午前 - 2022年9月9日(金)午後
会場: 京都大学数理解析研究所 420号室



Yukari Ito



TOKYO

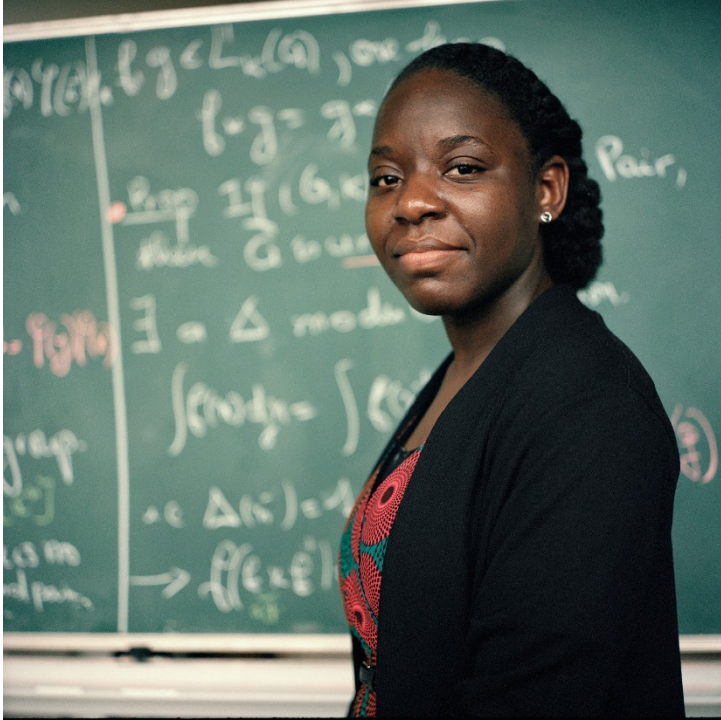


KATARZYNA (KASIA) REJZNER

COUNTRY: Poland
AFFILIATION: University of York, England
RESEARCH TOPICS: Mathematical physics, operator algebras, algebraic quantum field theory, renormalization

$$0 \rightarrow \alpha(\mathbb{Z}) \rightarrow [\alpha(x), \alpha(y)] = [\alpha(x), \alpha(y)] \rightarrow \alpha(x), \alpha(y)$$

"The good sides of my job are the flexibility of our working hours, the freedom you have to choose the topics you work on, the exposure to people. I particularly enjoy the creative process we go through together when doing research with colleagues and friends."
"Maths jobs are interesting and they are not expected to be 'a personal conviction that you are a mathematician, and that what you are doing makes sense.'"
"I used to fear I was not qualified for mathematical employment but for people to tell me I was on the right track. You need to develop a personal conviction that you are a mathematician, and that what you are doing makes sense."



CORNELIE MITCHA MALANDA

COUNTRY Republic of Congo
AFFILIATION Faculty of Science and Technology of Marien Nguabi University
RESEARCH TOPICS Harmonic Analysis on Gelfand pair and representation theory of Lie group

$$C(L'_k(\mathfrak{a})) = [L'_k(\mathfrak{a}), C(L'_k(\mathfrak{a}))]$$

$$C^0(L'_k(\mathfrak{a})) = [L'_k(\mathfrak{a}), C^0(L'_k(\mathfrak{a}))]$$

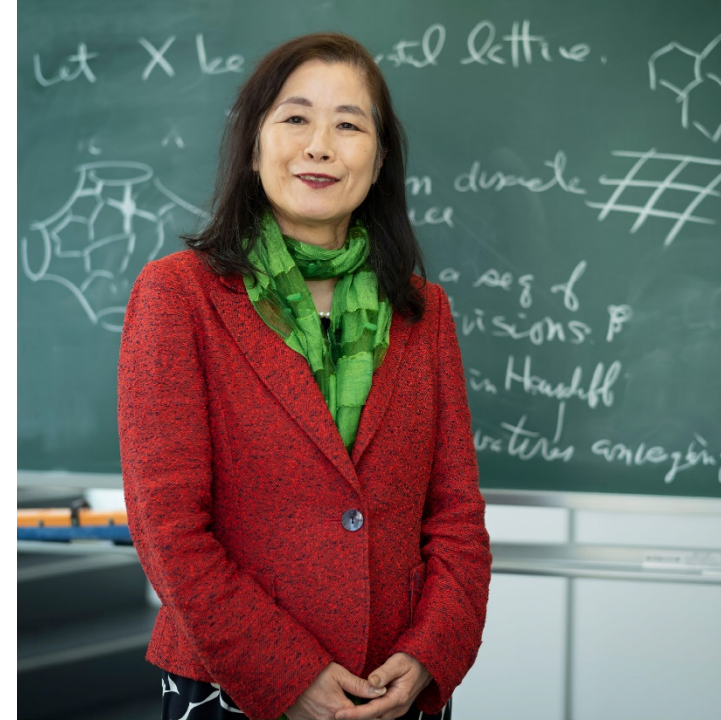
with $C^0(L'_k(\mathfrak{a})) = L'_k(\mathfrak{a})$

«The joy of math for me is that it feels like you've discovered something new when you understand something, even if it's not new in the literature out in the world. But it's new for you, and it feels exciting, like you're back to being a child again. "Oh, wow!" I'm so fascinated every time, like when I was a young child and saw the chain for the first time, and screamed in joy, like that. I think when I'm working to try to understand something, I'm just excited. Sometimes I don't want it to stop. I think to myself, if I stop here, I won't be able to learn anymore today. I have time left, I can still go on. It's kind of like an addiction. I got here today, but maybe if I push myself a bit harder, do it again, I'll learn more.»

«I would say [to a young woman entering the field of mathematics], just trust yourself. Be convinced. Be more confident. You will face challenges, you will be down sometimes, you will cry, that's true. But don't give up. You might feel down, you might want to cry, but you will stand up again. Continue on your way. The peace that you will feel from trying is so much better than living with regret all your life. You have the capacity to do everything you want in your life. You need to pay the price, sure, but you can do it. Be confident.»



Extension in construction.....



MOTOKO KOTANI

COUNTRY Japan
AFFILIATION Tohoku University
RESEARCH TOPICS Discrete geometry

$$0 = \lim_{t \rightarrow \infty} \left[(4\pi t)^{\frac{5}{2}} R(t, x, y) - c(x) \exp\left(-\frac{\text{vol}(M)}{4t} d_{T(x, y)}^2\right) \right]$$

«I was very shy as a child. I enjoyed reading books and studying, but not really talking to my classmates. I would read books, and ask my junior high and high school teachers questions. Not necessarily just in mathematics, but in many other fields. However, I found that the only subject where a child like me could talk on equal footing with the grown-ups – the teachers – was mathematics.»

«I chose mathematics despite not being very confident in my abilities. I made that decision because I thought, I only have this one life. If I do not do what I want, I will not get a "redo." I think you should do what you really want to do.»

«In terms of hardship, you struggle and struggle without any hints. You really want to understand, but you have no idea what to do. It is to the point where you are happy when you have any idea which direction to go, or an idea on how to move forward, even if it is not the best idea. I think many mathematicians experience this kind of frustration, but it is because of this frustration that you feel so happy when you finally have a breakthrough.»

