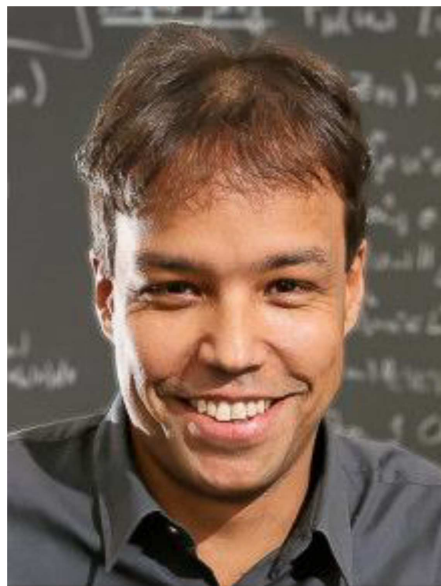


FOREWORD

IN MEMORY OF ASSYR ABDULL 1971–2021

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FABIO NOBILE AND MARCO PICASSO*



This special issue is dedicated to our colleague and friend Assyrd Abdull, 1971–2021. A memorial conference was held in February 2023 at EPFL, Lausanne, Switzerland, we asked the speakers and former colleagues, to contribute to this special issue. The speakers of the conference, in chronological order, were Gerhard Wanner and Ernst Hairer, Assyrd's supervisors, then Martin Hairer, who studied with Assyrd in Geneva, Bjorn Engquist and Weinan E, that Assyrd met during his PostDoc at Princeton, Marcus Grote, colleague of Assyrd when he was assistant professor in Basel, Benedict Leimkuhler, Greg Pavliotis, Konstantinos Zygalakis, co-workers of Assyrd when he was associate professor in Edinburgh, and finally Alfio Quarteroni and Gilles Vilmart, whom he met at EPFL.

Assyrd was born in Geneva in January 1971. He earned a degree in violin and music from the Conservatoire de Musique de Genève in 1993, but his violin teacher advised him to avoid making a living with music, so that he eventually started studying mathematics at the University of Geneva. Gerhard Wanner was his teacher for the first year calculus course, he told us that Assyrd got the maximum grade, even though the oral exam was unusually short.

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Assyr received his Ph.D. in 2001 on “Chebyshev Methods Based on Orthogonal Polynomials” which allow explicit Runge–Kutta methods to remain stable for large time steps while increasing the number of stages. He then did a PostDoc with Bjorn Engquist and Weinan E at Princeton in 2001–2002, where he started working on Heterogeneous Multiscale Methods, and another PostDoc at ETHZ in 2002–2003 with Christoph Schwab. He then got an assistant professorship at the University of Basel in 2003, and became associate professor at the University of Edinburgh in 2007, where he started working on stochastic equations. Finally, he came to EPFL in 2010.

Assyr was a world-renowned expert in the field of numerical methods for ordinary and stochastic differential equations, and multiscale problems, where he made numerous landmark contributions. He received numerous awards for his research, including the 2005 New Talent Award at the International Conference on Scientific Computation and Differential Equations. He received an Advanced Research Fellowship from the Engineering and Physical Sciences Research Council in 2007. In 2009, he received the James H. Wilkinson Prize in Numerical Analysis and Scientific Computing from SIAM for his contributions to applied mathematics. He was awarded the Germund Dahlquist Prize in 2013.

Assyr was an energetic, enthusiastic, and passionate colleague, always open to new ideas and committed to promoting mathematics at EPFL. He played an essential role in creating and shaping a unified Institute of Mathematics at EPFL, of which he was the first director. As a teacher, Assyr was very much appreciated by students, he received numerous teaching prizes, and supervised 12 Ph.D. students. Assyr was a member of the editorial board of ESAIM: M2AN journal, Raphaële Herbin and Christian Rohde, co-editors-in-chief, suggested this special issue. We warmly thank them for this opportunity.