



## Celebrating the twentieth anniversary of EFM

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The years have passed quickly, and surely the journal *Environmental Fluid Mechanics* has grown in excellence, volume and reach.

In the early 1990s a small group of us began to discern that a community of scholars was coalescing on the topic of natural flow processes as they pertain to the quality of our aquatic systems and atmospheric environment. There existed venues for the publication of our research in vanguard journals such as *Tellus* (1949–), *Journal of Marine Sciences* (1926–) and *Geophysical and Astrophysical Fluid Dynamics* (1971–). These excellent journals, however, generally carried articles related to larger scale fluid motions affected by earth's rotation such as weather and oceanic circulation, which are considered in the realm of Geophysical Fluid Dynamics. Leading fluid mechanics journals such as the *Journal of Fluid Mechanics* (1956–), *Physics of Fluids* (1958–), and *Proceedings of the Royal Society* (1800–), too, carried papers of fundamental research applied, or applicable, to natural flows but the scope of these journals was broad.

But, ever growing concern for the environment, rapid development in capabilities to carry out numerical modeling studies, regulatory constraints that involves fluid environment, and the increasing role of simulations devoted to risk assessment urged the development of *Environmental Fluid Mechanics* (EFM) as a distinctly defined subject of inquiry. On the atmospheric side, EFM is concerned with the quality of air we breathe at ground level, which separates it from *weather* and *climate*, though the three disciplines are related. On the aquatic side, EFM is concerned with the quality of the water that we drink and in which many creatures live; this separates EFM from *hydraulics*, *limnology* and *oceanography*, though again the disciplines are intertwined. The centrality of air and water quality as well as rapid impacts of environmental flows on ecosystems define the scope of the EFM journal. It thus stands at the nexus of human activities and their surrounding fluids. Applications abound, including the design and control of ocean outfalls, smokestack plumes, transportation tunnels, hydraulic aeration structures, red tides, microbursts and wastewater treatment.

Continued discussions identified wide overlaps in the physics underlying the problems at hand, such as fluid turbulence and stratification, and noted, for example, that a smokestack plume does not differ in its essence from a sewage discharge pipe. From the

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discussions emerged the idea of launching a journal, distinct from existing journals, with the expressed hope that it would become the voice and platform for the EFM community.

For some time, emails went around, confirming that we were onto something, but somehow the good thoughts did not yet translate into forward momentum. There is evidently quite a step between appreciating an idea and passing to action. Then, circumstances made it happen. Most of our group was attending the XIX General Assembly of the European Geophysical Society in Grenoble in April 1994, and we discussed the idea some more over coffee during breaks ... until Gabriel Chabert d'Hières invited us for dinner at his castle with a magnificent terrace facing the Vercors Mountains. The host was gracious and the view uplifting, but what really started to generate momentum was the wine at table. Somehow, conversations over wine have a way to beat those over coffee. In fluids parlance, the small breeze began to become a strong wind, and by the end of dinner, we were all committed to action. Jacques Verron had volunteered to take the lead, and the rest, as the expression goes, is history. Benoit Cushman-Roisin was soon charged with approaching a publisher, and he turned to Petra van Steenberghe at Kluwer Academic Publishers. Her professional acumen and her extensive survey with detailed questionnaire to probe the idea of a new journal confirmed that our idea of a journal to serve a community of environmental fluid scholars had merit, and she began to move the idea up the chain of command. The key step was to secure a formal commitment, and this necessitated alignment of multiple interests and successive green lights within Kluwer. After a propitious change of boss above Petra, we had the strong wind in our sails, and the publisher agreed to launch the journal. By then, we were in late 1999. After dotting i's and crossing t's on aims and scope, negotiating the number of pages per year and the like, the formal contract was issued by Kluwer to Benoit in April 2000, appointing him as the founding Editor-in-Chief.

Our group immediately assembled an international board of Associate Editors, which included S. Pal Arya of North Carolina State University, Peter A. Davies of The University of Dundee, Harindra J.S. (Joe) Fernando then at Arizona State University, Gregory N. Ivey of the University of Western Australia, Daniela Jacob of the Max Planck Institute for Meteorology, and Sergey Zilitinkevich of Uppsala University. Jacques Verron and Jorg Imberger of the original group joined the Editorial Board.

Out went the first call for papers. Those papers were reviewed, and we targeted the publication of Volume 1 Issue 1 for the start of 2001, which happily synchronized our volume numbers with the millennium, something that obviously happens only very rarely. This inaugural issue of March 2001 contained an editorial preamble and five technical articles, presenting the design and testing of a turbulence probe for harsh environments, LES modeling of the atmospheric boundary layer, CFD modeling of environmental flows, and launching the subfield of *Urban Fluid Mechanics*. In 2004, Kluwer Academic Publishers merged with Springer Science+Business Media, but the robust march of the journal continued. Benoit served as the Editor-in-Chief for ten years, until the end of 2011 when Joe Fernando succeeded him. Now in late 2020 after more than 17,000 pages in print, we are concluding our 20th volume, which is cause for celebration, hence this editorial.

The journal has been growing steadily since its inception. It currently receives about 225 manuscripts annually with an acceptance rate of about 37%. The journal has grown from four to six issues per annual volume, with each issue now featuring approximately 12 articles. There have been numerous special issues focusing on trendy areas of EFM. We are currently working on improving vital journal statistics by carefully steering our *modus operandi* in consonance with inputs from the environmental fluid mechanics community.

The EFM journal owes its growth and quality to the members of the EFM community who publish high quality papers, provide comments on the journal, and volunteer their time

for refereeing. It owes also much to the past and present associate editors and members of the editorial board whose dedication has immensely contributed to the journal over the years. At the close of the second decade, we particularly wish to show our heartfelt appreciation to one of the original Associate Editors Peter A. Davies who just stepped aside after 20 years of service. Very special thanks go to Petra Van Steenberg, Executive Editor for Earth and Environmental Sciences at Springer, whose wise guidance and oversight have served the journal well from its start and through maturation. We are looking forward to many more years of her guidance and unflinching support.

As the current Editor-in-Chief (Joe) and the Founding Editor-in-Chief until 2011 (Benoit), we look forward to your continued input and patronage of EFM while it strives for excellence and to best serve the Environmental Fluid Mechanics community. Happy Anniversary and Godspeed EFM!

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