

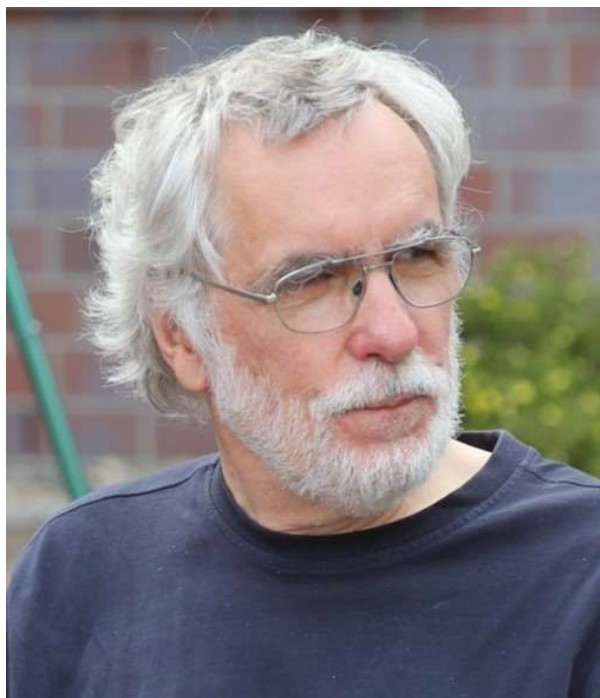
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IOCCG Announcement

Roland Doerffer (1947 - 2021)

With great sadness, we announce the passing of Roland Doerffer, our distinguished colleague, friend, and former IOCCG Committee member. Roland was invited to serve on the IOCCG Committee for several terms (2002-2014) because of his wealth of experience and extensive knowledge of neural network analysis and remote sensing in optically-complex waters. He was a pioneer of ocean colour remote sensing as well as an excellent teacher, and we will all fondly remember his warm but unassuming personality and his remarkable contributions to remote sensing of ocean colour.

On behalf of the IOCCG Committee, we extend our deepest condolences to Roland's family and friends. Below is a remembrance of his life and contributions to science, as shared by his colleagues Carsten Brockmann and Hajo Krasemann.



Dr. Roland Doerffer was a pioneer in ocean colour remote sensing. His profound understanding of biology and physics, and his visionary methodological developments are fundamental work that resulted in significant contributions to satellite technology and understanding of marine biology.

Roland Doerffer was born in 1947 and showed an enthusiastic interest in nature since childhood. He graduated with a degree in Biology from the University of Hamburg and gained his Ph.D. in Marine Biology in 1976. His early work laid the foundation for a quantitative evaluation of airborne and later spaceborne remote sensing of water constituents. In the mid 1970's he visited Dr. Jim Gower and Dr. Gary Borstard in Canada to further develop his ideas in optical remote sensing of water quality.

In the early 1980's Roland Doerffer became head of the bio-optical remote sensing department at the GKSS Research Centre. The Centre gave him the opportunity to combine his interests in biology, mathematics, and physics with his skill as a pilot, photographer, and computer engineer. He developed airborne cameras, special mountings for aircraft, piloted airborne campaigns, compiled early powerful image processing computer systems, and wrote software for radiative transfer inversion. Together with a growing network of colleagues, he developed the conceptual design for a novel multispectral imaging spectrometer, ROSIS, that significantly influenced the later MERIS instrument onboard ENVISAT. Together with his colleague Helmut Schiller, he developed the methodology of a neural network based full spectrum inversion. In subsequent years he continued to advance this technology, which now forms the basis for the optically complex water processing of

the OLCI instrument currently in orbit on the Sentinel 3 satellite series. Roland Doerffer contributed to the continuous evolution of this technique even after his retirement in 2013, as a team member of Brockmann Consult company.

Roland Doerffer's professional and private interests were not limited to ocean colour remote sensing. His North German nature was not to be overlooked, nor was his love for the natural beauty of this rugged landscape. The Wadden Sea on the North Sea coast has an enormous biological diversity, and it is thanks to the work of Roland Doerffer that we can further develop our understanding of this natural World Heritage Site using remote sensing.

He achieved all this with great commitment, but at the same time with an openness, friendliness and collegiality that selflessly promoted and encouraged others. It was always his concern to pass on his knowledge to the younger generation and likewise his opinion was sought after in professional bodies such as the IOCCG where he was a member for many years, the MERIS Science Advisory Group and Quality Working Group, and the Enmap Science Advisory Group.

In his last years, Roland Doerffer spent much of his time as a photographer and videographer. Unforgettable are his thematic 3D animation movie on ocean colour and the film interviews he made with famous ocean colour scientists. He was very active in his local nature conservation society, and participated in international film festivals where his nature films were presented with great success in local cinemas. The day before his unexpected end, he gave an online webinar "Recognising birds by song" (<https://www.youtube.com/watch?v=mQwGXjWa2ol>).

Roland Doerffer passed away on 24 March 2021 at the age of 74 years.

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