

Benoit BECKERS

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Benoit Beckers is a full professor at the University of Pau (France). Born in 1969, Liège, Belgium, he has obtained an Engineering Degree in Physics from University of Liège in 1992 and his PhD in architecture at Polytechnic University of Catalonia, Spain, in 2005. In 2012, he edited the book "Solar Energy at Urban Scale", ISTE-John Wiley. In 2014, he published "Reconciliation of Geometry and Perception in Radiation Physics", ISTE-John Wiley. In 2016, he organized the "First International Conference on Urban Physics" (FICUP), in Quito and Galapagos (Ecuador). His main research theme is radiation modelling for Architecture and Urban Physics. He is currently supervising several doctoral students whose work deals with the propagation of light, heat and sound in architectural and urban spaces.

His most important publications concern computational geometry, and more particularly the partitions and projections of the sphere, which are the bases of geometric methods for radiative transfer simulation. Currently, he is working on their connection with the Finite Element Method in problems related to urban physics. At the same time, he is developing more personal research on the perception of waves, taking into account its influence on the history of architecture and the city. He is the author of monographs on the evolution of concert halls, perspective representation, color systems, and, in progress, the shape of cities, presented in the form of conferences and reports on his personal site, www.heliodon.net.

He has created a series of courses given regularly in different universities of Europe and the Americas: "Computer Aided Geometry", "Introduction to Urbanism", "Urban Physics", "Acoustics, Optics, Illumination", and "Finite Element Method applied to Heat Transfer". These courses are mainly intended for undergraduate and graduate students in architecture and engineering. They are documented in French, Spanish and English and are generally based on original software, like *Fiammetta* ("Finite Element Method and Meshing Applied to Thermal Analysis", 2018-20).