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Jean Dumoulin received his Ph.D. in Energetic Systems from the National Institute of Applied Sciences (INSA) of Toulouse in 1994 and is specializing in disturbed aerodynamics wall heat transfer identification by infrared thermography (research work conducted in the French National Aerospace Research Institute ONERA). From 1994 to 1997, he was associate research engineer in the former Department of Studies and Research in Mechanics and Energetic Systems at ONERA and associate lecturer at INSA Toulouse. He joined the French Institute of science and technology for transport, development and networks (IFSTTAR) in 1997. Since 2012, he is Associate Professor at Laval University in Québec (QC), Canada in the research team MiViM (Canada Research Chair in Multipolar Infrared Vision). In 2013, at its creation, he was invited to join the Inria and IFSTTAR joint research team I4S (Statistical Inference for Structural Health Monitoring). He is currently involved as scientific officer at the European Geosciences Union (EGU) for the Division on Geosciences Instrumentation and Data Systems (GI), and member of the steering committee of the Quantitative Infrared Thermography (QIRT) international scientific organization.

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ABSTRACT



PRESENTATION



PAPER



THERMAL MONITORING OF STRUCTURES AND SYSTEMS BY INFRARED THERMOGRAPHY IN OUTDOOR CONDITIONS

The main topics are:

- uncooled infrared cameras: main features
- simplified radiometric heat balance: in-situ environmental corrections approaches
- apparent surface temperature estimation: toward joint estimation of emissivity and temperature.