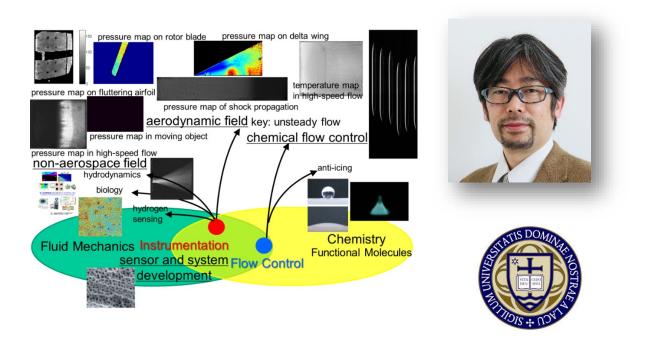
## **Luminescent Imaging and Chemical Flow Control for Fluid Science Studies**

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A luminescent imaging and a chemical flow control are introduced for fluid science studies. For luminescent imaging, spatiotemporal information of a fluid flow can be captured by using the light emission from a luminescent molecular probe. The fundamental principle of luminescent imaging and its features for unsteady flow measurements will be presented. For chemical flow control, super-hydrophobic coating for anti-icing of aircraft is presented.



Dr. Hirotaka Sakaue is an associate professor at the Department of Aerospace and Mechanical Engineering, University of Notre Dame. He had spent over ten years at Japan Aerospace Exploration Agency (JAXA) as a researcher before joining Notre Dame. He received his BS in Biomolecular Engineering from Tokyo Institute of Technology, Japan, in 1996, and MS and PhD in Aeronautics and Astronautics, Purdue University in 1999 and 2003, respectively.