

Abstract Submitted
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**Temperature Cancellation Method of
Motion-Capturing Pressure-Sensitive Paint System** HIROTAKA SAKAUE,
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sity of Electro-Communications — Motion-capturing pressure-sensitive paint sys-
tem uses two luminescent outputs to extract the pressure field on an aerodynamic
object. This uses a luminescent imaging technique to relate the luminescent out-
put to the pressure. In the previous study, this system is applied to capture the
time-resolved unsteady pressure fields on a fluttering airfoil, and a bullet-shaped
model. Pressure-sensitive paint (PSP) has a temperature dependency, which is a
major error source for the PSP measurement. Motion-capturing PSP system also
involves the temperature dependency of PSP itself. In the presentation, we pro-
pose a temperature-cancellation method of the motion-capturing PSP system. This
method does not require a separate temperature measurement for the temperature
correction that is advantage for capturing the pressure field on a moving object.

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