

**Model-Data Weak Formulation  
for State and Model-Bias Estimation  
or  
In-Painting  
for Partial Differential Equations**

AT Patera, JD Penn, and M Yano  
Massachusetts Institute of Technology

Laboratoire Jacques-Louis Lions  
Université Pierre et Marie Curie  
Paris, France

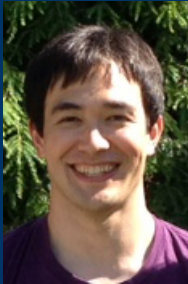
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Chaire d'Excellence,  
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Host: Professor Yvon Maday  
Laboratoire Jacques-Louis Lions  
Université Pierre et Marie Curie

AFOSR/Office of Secretary of Defense

Office of Naval Research

MIT-Singapore International Design Center



JD Penn

Apparatus & Diagnostics

Conception

Implementation

Data Acquisition

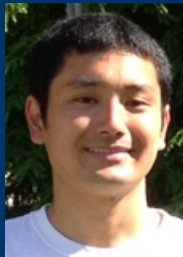
Calibration

Model Components (spk, ...)

Transducers (mic, ...)

Robotics

↕ *Mathematical Modeling and Data Reduction* ↕



M Yano

Mathematical Formulation (MDWF)

Computational Methods (FE, MDWF)

Conception

Algorithms

Implementation

Numerical Analysis (MDWF)

Reduced Basis Approximation

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M Yano

J Eftang

P Huynh

D Knezevic

T Tonn

S Vallaghé

## Collaborators

Y Maday

E Rønquist

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# A Physical System: Raised-Box Acoustic Resonator

Apparatus

Frequency Response

Objective

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