

World Center of Education and Research for Trans-disciplinary Flow Dynamics

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Research title: HEATER POWER ESTIMATION FOR UNIFORM THERMAL CONDITIONS IN A RADIANT FURNACE.

Supervisor: Prof. Shigenao MARUYAMA.

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This is my second time with I.F.S. Sendai, and that to the laboratory where I have worked previously. My arrival to Sendai was planned to attend the I.C.F.D. and then to continue the research work. I.C.F.D was very nice experience to me. I have presented one paper in the same. During the present stay, I have worked for the boundary design of radiant furnace for irregular shaped three dimensional objects. This kind of work is useful in the real life material heating processes in industries. I have done the optimal heater power estimation for uniform thermal conditions over the car body. This is useful in the drying of car after painting process in the automobile industries. I am also doing the experimental validation of my numerical work and setting the correlation of computational and the numerical results. I learned many new things under the valuable and continuous guidance of Professor Maruyama. I am impressed by the high level of teamwork among the lab members and Professors in Maruyama-Komiya laboratory. My work is especially related to the optimization in heat transfer problems and its applications in various fields. I used to present my work in the weekly seminar of Maruyama-Komiya lab. It was very directive to me to get the feedback and a chance to discuss the topic with professors that kept me update to my work and to the right direction. I spent most of my time in the laboratory; meantime I also enjoyed the colorful light decoration on the streets for upcoming charismas festival.

Overall I found the Japanese peoples are very much sincere, friendly, work loving and cooperative. I would like to visit here again for further research work. I thanks Professor S. Maruyama, Professor Wada and the all the Global COE program members for making my trip possible and hope that the cooperation between will be continue in future.



A good time with professor and friends.



Enjoying the year end party with lab members.