

OS21: The 21st International Symposium on Advanced Fluid Information (AFI-2021)

IFS Collaborative Research Forum

- CRF-1 **Radiation and Convection Coupling Calculation for Development of Thermal Barrier Fire Extinguishing Devices**
Hiroki Gonome, Yuto Takagi (Yamagata University, Japan), Takuma Kogawa (National Institute of Technology, Hachinohe College, Japan), Junnosuke Okajima (Tohoku University, Japan)
- CRF-2 **Study of Heat Transfer Problem of Human Bathing in Sauna Room**
Takuma Kogawa, Nanaho Osaka, Hikaru Ishibashi (National Institute of Technology, Japan), Junnosuke Okajima (Tohoku University, Japan)
- CRF-3 **Study of Hydrothermal Behaviors of Impinging Droplets on a Heated Wall**
Takahiro Okabe, Kohki Nishiyama (Hirotsuki University, Japan), Junnosuke Okajima (Tohoku University, Japan), Minori Shirota (Hirotsuki University, Japan)
- CRF-4 **Modeling on Boiling and Bubble Dynamics Induced by Laser Emitted from Optical Fiber**
Junnosuke Okajima (Tohoku University, Japan/ Far Eastern Branch of the Russian Academy of Sciences, Russia), Roman Fursenko (Institute of Theoretical and Applied Mechanics, Siberian Branch of the Russian Academy of Sciences, Russia), Sergey Mokrin (Far-Eastern Federal University, Russia), Vladimir Gubernov (Lebedev Physical Institute of the Russian Academy of Sciences, Russia), Sergey Minaev (Institute of Applied Mathematics, Far Eastern Branch of the Russian Academy of Sciences, Russia)
- CRF-5 **Analysis of Reaction Field in Cavitation Plasma for High-Speed and Eco-Friendly Synthesis of Carbon Catalysts**
Nozomi Takeuchi, Masahiro Chiba (Tokyo Institute of Technology, Japan), Hidemasa Takana (Tohoku University, Japan)
- CRF-6 **Study on MHD Phenomena in Co-Axial Energy Conversion Device**
Hirofumi Kobayashi (Keio University, Japan), Hidemasa Takana (Tohoku University, Japan), Ryo Sasaki, Takayasu Fujino (University of Tsukuba, Japan)
- CRF-7 **Numerical Analysis on Plasma Torches and Thermal Plasma Reactor for Waste Treatment**
Hyeokjun Kang, Jeong-Hwan Oh, Daeun Choi (Jeju National University, Republic of Korea) Hidemasa Takana (Tohoku University, Japan), Sooseok Choi (Jeju National University, Republic of Korea)

- CRF-8 **A Study on Nano-Scale Interfacial Phenomena of Surface-Modified Nanoparticle Suspensions**
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- CRF-10 **Large-Scale Simulation of Gasification Reaction with Mass Transfer for a Full-Scale Porous Model: Temperature Dependency**
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- CRF-13 **Detection of S-Wave Arrival of Low SNR Event Using Polarization**
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- CRF-14 **Modelling Core Scale: Investigation of Multiscale Porosity Using 3D Printed Micromodels**
Julien Maes (Heriot-Watt University, UK), Anna Suzuki (Tohoku University, Japan)
- CRF-15 **Data-Driven Modeling of Flow in Complex Structures**
Anna Suzuki (Tohoku University, Japan), James Minto (University of Strathclyde, UK)
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Elvar K. Bjarkason (Tohoku University, Japan), Ruanui Nicholson, Oliver J. Maclaren (University of Auckland, New Zealand), Anna Suzuki (Tohoku University, Japan)
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Gota Kikugawa, Yuki Kawamoto (Tohoku University, Japan), Hari Krishna Chilukoti (National Institute of Technology, Warangal, India)

- CRF-18 **Molecular Dynamics Study on Effect of Surfactant on Surface Nanobubble**
Takuma Hori (Tokyo University of Agriculture and Technology, Japan),
 Gota Kikugawa (Tohoku University, Japan), Ichiro Ueno (Tokyo University of Science, Japan), Yoichiro Matsumoto (The University of Tokyo, Japan)
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 Hidemasa Takana (Tohoku University, Japan)
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- CRF-22 **Lattice Constant Prediction of Magnesium Oxide on Defect Model**
Satoru Kaneko (National Cheng Kung University, Taiwan/ KISTEC, Japan), Sumanta K. Sahoo, Kripasindhu Sardar, Jyh-Ming Ting, Masahiro Yoshimura (National Cheng Kung University, Taiwan), Rieko Sudo (Sagamihara Surface Laboratory, Japan), Shigeo Yasuhara, Tamio Endo (Japan Advanced Chemicals, Japan), Manabu Yasui, Masahito Kurouchi (KISTEC, Japan), Masaki Azuma (Tokyo Institute of Technology, Japan), Chiemi Kokubun, Takashi Tokumasu (Tohoku University, Japan)
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Hiroki Nagashima, Takumi Ijichi (University of the Ryukyus, Japan), Jeongmin Ahn (Syracuse University, USA), Takashi Tokumasu (Tohoku University, Japan)
- CRF-24 **Reinforcement of Hybrid 2D Nanoparticles on Bio Based Lubricants in Molecular Dynamics Simulation Perspective**
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Ryuji Takahashi, (Kyushu University, Japan), Hiroki Nagashima (University of the Ryukyus, Japan), Takashi Tokumasu (Tohoku University, Japan), Satoshi Watanabe, Shin-ichi Tsuda (Kyushu University, Japan)

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Kosuke Morita (University of Miyazaki, Japan), Tomoki Harada (University of Miyazaki/Japan Society for the Promotion of Science, Japan), Yuki Arata (University of Miyazaki, Japan), Daisuke Ohori, Seiji Samukawa (Tohoku University, Japan), Tetsuo Ikari, Atsuhiko Fukuyama (University of Miyazaki, Japan)
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Tomoki Inoue, Yu Matsuda (Waseda University, Japan), Tsubasa Ikami, Taku Nonomura (Tohoku University, Japan), Yasuhiro Egami (Aichi Institute of Technology, Japan), Hiroki Nagai (Tohoku University, Japan)

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Keiichi Kitamura, Yoshikatsu Furusawa (Yokohama National University, Japan), Tsubasa Ikami, Koji Fujita, Hiroki Nagai (Tohoku University, Japan)
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Seoem Han, Bok Jik Lee (Seoul National University, Republic of Korea), Michiko Ahn Furudate (Chungnam National University, Republic of Korea), Kazuma Yomo, Hiroki Nagai (Tohoku University, Japan)
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Michiko Ahn Furudate, Minji Jo (Chungnam National University, Republic of Korea), Bok Jik Lee (Seoul National University, Republic of Korea), Kazuma Yomo, Yudai Hamashima, Hiroki Nagai (Tohoku University, Japan)
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Masato Yamagishi, Jin Narayama, Shoki Sato, Masanori Ota (Chiba University, Japan), Yusuke Hirose (Tokyo Salesian College of Technology, Japan), Kazuma Yomo, Koji Fujita, Kiyonobu Ohtani, Hiroki Nagai (Tohoku University, Japan)

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Yuki Kawamoto, Shun Takahashi, Shuusuke Kawamata, Shotaro Nara (Tokai University, Japan), Hiroki Nagai (Tohoku University, Japan)
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Akbar Mohammadi-Ahmar, Arash Mohammadi, Mehrdad Raisee (University of Tehran, Iran), Koji Shimoyama (Tohoku University, Japan)
- CRF-44 **Shapley Effects with Polynomial Chaos for Global Sensitivity Analysis in Aerodynamics**
Pramudita Satria Palar, Lavi Rizki Zuhail(Institut Teknologi Bandung, Indonesia), Koji Shimoyama (Tohoku University, Japan)
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Seiichiro Morizawa (National Institute of Technology, Okinawa College, Japan), Ryotaro Sakai (Japan Aerospace Exploration Agency, Japan), Ryota Kikuchi, (Kyoto University, Japan), Hayato Kaneku, (National Institute of Technology, Okinawa College, Japan), Shigeru Obayashi (Tohoku University, Japan)
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Kenichi Funamoto (Tohoku University, Japan), Eugenia Corvera Poiré (National Autonomous University of Mexico, Mexico)
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Suguru Miyauchi (University of Miyazaki, Japan), Shuta Kosaka, Toshiyuki Hayase, Kenichi Funamoto (Tohoku University, Japan)
- CRF-76 **Development of a Novel Arterial Lesion Vessel Model for Pulsatile Cerebrovascular Circulatory Simulation**
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- CRF-77 **Effect of Wall Property on Frequency Characteristics of Full-Scale Cerebral Aneurysm Model**
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Hanbing Zhang, Shiliang Chen, Yu Zhang, Aike Qiao (Beijing University of Technology, China), Hongfang Song (Capital Medical University, China), Wenyu Fu (Beijing Union University, China), Hitomi Anzai, Makoto Ohta (Tohoku University, Japan)
- CRF-79 **Pressure Measurement in Laser-Cavitation Bubbles**
 Satoshi Uehara, Sayaka Kamata, Tomoki Nakajima, Yuka Iga (Tohoku University, Japan), Seiji Kanazawa (Oita University, Japan), Mohamed Farhat (Ecole Polytechnique Fédérale de Lausanne, Switzerland) Takehiko Sato (Tohoku University, Japan)
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 Mu-Chien Wu (National Yang Ming Chiao Tung University, Taiwan/ Tohoku University, Japan), Satoshi Uehara, Tomoki Nakajima, Takehiko Sato (Tohoku University, Japan), Jong-Shinn Wu (National Yang Ming Chiao Tung University, Taiwan)
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Takehiko Sato (Tohoku University, Japan), Masao Watanabe (Hokkaido University, Japan), Takeru Yano (Osaka University, Japan), Yuka Iga (Tohoku University, Japan), Kazumichi Kobayashi (Hokkaido University, Japan), Atsuki Komiya, Hidemasa Takana, Kiyonobu Ohtani, Junnosuke Okajima, Kenichi Funamoto, Yunchen Xiao, Tomoki Nakajima, Siwei Liu (Tohoku University, Japan)
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 James S. Cotton (McMaster University, Canada), Takehiko Sato (Tohoku University, Japan)
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Rei Sumita, Ryoya Tabata (Kyushu Institute of Technology, Japan), Taizo Kobayashi (Kyushu University, Japan), Kin'ya Takahashi (Kyushu Institute of Technology, Japan), Yuji Hattori (Tohoku University, Japan)
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 Yi Zhou (Nanjing University of Science and Technology, China), Yasumasa Ito, Koji Nagata, Tomoaki Watanabe, Koji Iwano, Yasuhiko Sakai (Nagoya University, Japan), Yuji Hattori (Tohoku University, Japan)

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Katsuyuki Nakayama (Aichi Institute of Technology, Japan), Yuji Hattori (Tohoku University, Japan)
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Adrian Sescu (Mississippi State University, USA), Mohammed Afsar (University of Strathclyde, UK), Yuji Hattori, Makoto Hirota (Tohoku University, Japan)
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Yuji Hattori (Tohoku University, Japan), Ivan Delbende (LIMSI/ CNRS, France), Maurice Rossi (UPMC/ CNRS/ IJLRA, France)
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Petrus Canisius Astuto Santosa, Narendra Kurnia Putra, Bonfilio Nainggolan, Suprijanto (Insitut Teknologi Bandung, Indonesia), Makoto Ohta, Hitomi Anzai (Tohoku University, Japan)

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23-3 **Local Stabilization Dynamics of a Methane/ammonia Non-premixed Jet Flame Up to Liftoff**
Sophie Colson (Tohoku University, Japan), Manuel Kuhni (Université de Lyon/ CNRS/ INSA Lyon/ Université Claude Bernard Lyon1, France), Akihiro Hayakawa, Hideaki Kobayashi (Tohoku University, Japan), Cedric Galizzi, Dany Escudie (Université de Lyon/ CNRS/ INSA Lyon/ Université Claude Bernard Lyon1, France)
- OS22-2 **Microstructure and Mechanical Properties of An Al-TiC Metal Matrix Composite Obtained by Reactive Synthesis**
Hiroki Kurita, Sho Takeda (Tohoku University, Japan), Olivier Dezellus (Université Claude Bernard Lyon1, France), Tetsuya Uchimoto, Fumio Narita (Tohoku University, Japan)
- OS22-3 **Effect of Flow-Focusing Channel Geometry on Field-Assisted Alignment of Cellulose Nanofibrils**
Hidemasa Takana, Satoru Fukumori (Tohoku University, Japan)
- OS22-4 **Methodology to Detect Water Uptake in Polymer Materials Using Non-Contact Capacitor Sensor**
Lucas Ollivier-Lamarque (Tohoku University, Japan/ CNRS/ Université de Lyon/ INSA Lyon, France), Tetsuya Uchimoto (Tohoku University, Japan/ CNRS/ Université de Lyon, France), Nicolas Mary (CNRS/ Université de Lyon/ INSA Lyon, France/ Tohoku University, Japan), Sabrina Marcelin, Sébastien Livi (CNRS/ INSA Lyon, France)
- OS22-5 **MAGIC: Magnetic AGing in Ferromagnetic**
Benjamin Ducharne (CNRS/ Université de Lyon, France/ Tohoku University, Japan), Laurent Model, Marie-Ange Raulet, Rania Saoudi (Université de Lyon, France), Tetsuya Uchimoto (Tohoku University, Japan)
- OS22-6 **Heusler Alloy Based Heat Engine with Pyroelectric Energy Conversion**
Mickaël Lallart (Université de Lyon/ INSA Lyon, France), Hiroyuki Miki (Tohoku University, Japan), Linjuan Yan (Université de Lyon/ INSA Lyon, France), Gaël Sebald, Gildas Diguët (Université de Lyon, France/ Tohoku University, Japan), Makoto Ohtsuka (Tohoku University, Japan), Manfred Kohl (Karlsruhe Institute of Technology, Germany)
- OS22-7 **In-Flight Thermal Gradient of Polymer Particles During Cold Spray Process**
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