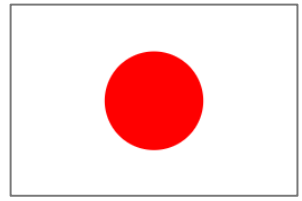
International Student Conference 2022 Online

Proceedings



13th December 2022

-Program Office-
Dalian Neusoft University of Information, China
National Institute of Technology, Tsuyama College, Japan

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Foreword

在当今的现代社会里，四处都留下了国际化的烙印。对于当代的学生来说，国际化的学习方式已经成为一项基本能力要求。为了培养学生的国际化学习能力，我校自成立以来，立志于为教师和学生们的跨文化学习交流提供快捷的渠道和优质的平台。基于双方在办学理念及人才培养方面的共识，我们与津山工业高等专门学校于两年前创立了此项联合交流发表会。这项联合发表会为两国的学生提供了一个交流平台，为提高双方学生的外语表达及国际化学习能力起到了积极的促进作用。希望通过此次的交流会，大家互相学习、共同进步，为两校今后的合作发展展开新的篇章！

Globalization is one of the key features of the contemporary society, which affects each and every one of us. An international approach of study has become a basic competency requirement for today's students. Since the establishment of our university, we have been committed to providing fast channels and high-quality platforms for teachers and students' cross-cultural learning exchanges in order to develop students' international learning ability. Based on the consensus of both institutions on the philosophy of running school and talent cultivation, we established this joint online conference with National Institute of Technology, Tsuyama College two years ago. This joint conference has provided a platform for students from both countries to exchange ideas and has contributed to the improvement of their foreign language expression and international learning ability. We hope that through this conference, we can learn from each other and make progress together, to start a new chapter for the future cooperation between us!

李迎秋

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Foreword

Industrial activities of any country are inevitably becoming international for core staff members, not to mention for leaders of companies. It is easy to focus only on their command of foreign languages. However, the key to propel them forward to acquire language ability and mental readiness is actual and close contact with foreign people who have had different cultures in their youth. They, then, can jump over the fence that separates multiple cultures.

The Japanese geographical condition is symbolized by the term, “islands”, meaning that the territory is separated by open sea from other countries of different languages and cultures. Japanese youth have little opportunity to come into contact with foreigners during their school days. Pedagogical activities provided by teachers with only the domestic culture background cannot overcome such challenges.

Therefore, by attending this conference, students are expected to moderate their fear of communicating with foreigners and to prepare for their future careers in industry. Chinese students are also expected to take advantage of such an opportunity.

People all over the world have been restricted to go anywhere domestically, not to mention abroad since COVID-19 pandemic, therefore students have had less opportunities to interact internationally. Under such circumstances, it is pleased to provide the opportunity that can interact with Chinese and Japanese students online.

I deeply thank Dalian Neusoft University of Information, which has done so much preparation for this event as well as promoting Chinese students to join us. I believe this conference will strengthen the relationship between Dalian Neusoft University of Information and NIT.

I hope the spread of COVID-19 infections will settle down and things will get back normal as soon as possible.

Takeshi IWASA
President, National Institute of Technology, Tsuyama College

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Yuka YAMAMOTO
Kaori FUKUDA

Program

DATE: December 13, 2022 (Tuesday)

JST	*CST*	Main Channel		
14:15 -14:30	13:15 -13:30	**Opening Ceremony** Moderator: Ken KAMIYA Yingqiu LI / Vice President of DNUI, CHINA Hitoshi YAMAGUCHI / Chief of International Exchange Center of NIT, Tsuyama, JAPAN		
14:30 -14:35	13:30 -13:35	Break		
		Channel Ⅰ	**Channel Ⅱ**	**Channel Ⅲ**
		Session Ⅰ Moderator: Manabu KATO / Haiyan CAO	**Session Ⅱ** Moderator: Fumiko NAKAMURA / Xia YANG	**Session Ⅲ** Moderator: Ken KAMIYA / Cong YU
14:35 -14:50	13:35 -13:50	Hidenori IWAMOTO (NIT, Tokuyama)	Qingchuan LI (DNUI)	Jiayu LU (DNUI)
14:50 -15:05	13:50 -14:05	Ruixi SU (DNUI)	Nanami OKADA, Kokoro EMI (NIT, Tsuyama)	Kotaro JINO (NIT, Tsuyama)
15:05 -15:20	14:05 -14:20	Yukihiro MINEYAMA (NIT, Tsuyama)	Xuanyahan YU (DNUI)	Ying LI (DNUI)
15:20 -15:35	14:20 -14:35	Ziming HE (DNUI)	Masaharu TSUKIYAMA, Natsuka TSUTSUMI, Nguyen Hoang TUONG (NIT, Tsuyama)	Shoko Ono (NIT, Hiroshima)
15:35 -15:50	14:35 -14:50	Seishiro NAKAMURA (NIT, Tokuyama)	Cong QIN (DNUI)	Xirui PIAO (DNUI)
15:50 -16:00	14:50 -15:00	Break		
		Session Ⅳ Moderator: Manabu KATO / Haiyan CAO	**Session Ⅴ** Moderator: Fumiko NAKAMURA / Xia YANG	**Session Ⅵ** Moderator: Ken KAMIYA / Cong YU
16:00 -16:15	15:00 -15:15	Bingze WU (DNUI)	Yutong SU (DNUI)	Yutong LEI (DNUI)
16:15 -16:30	15:15 -15:30	Noa WATANABE (NIT, Tsuyama)	Kanna FURUMAI, Ayano KOBAYASHI, Gundalai ZORIGT (NIT, Tsuyama)	Hitoki ISHIKAWA (NIT, Tsuyama)
16:30 -16:45	15:30 -15:45	Shuaibo WANG (DNUI)	Boyang LIU (DNUI)	Jiayi LEI (DNUI)
16:45 -17:00	15:45 -16:00	Ryuta USHIMARU (NIT, Tsuyama)	Chen LIU(DNUI)	
17:00 -17:10	16:00 -16:10	Break		
17:10 -17:25	16:10 -16:25	**Mutual Exchange**		
		Main Channel		
17:25 -17:40	16:25 -16:40	**Photo & Closing Ceremony** Moderator: Ken KAMIYA Closing: Moderator from Channel Ⅰ Moderator from Channe Ⅱ Moderator from Channel Ⅲ		

* 3 sessions are held at the same time.

*Each presenter has 13mins, presentation for 10 mins and question and answer for 3 mins.
(Please manage the time on your own.)

Channel I

Session I (Channel I) Moderator: Manabu KATO / Haiyan CAO				
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14:50-15:05	13:50-14:05	C1-02	**Data Communication Design Practice Project based on SCM** Ruixi SU (DNUI)	13
15:05-15:20	14:05-14:20	C1-03	**A Method for Evaluating the Planar Elongational Viscosity of Low Viscosity Fluids Using a Disc Ring** Yukihiro MINEYAMA (NIT, Tsuyama)	14
15:20-15:35	14:20-14:35	C1-04	**Semiconductor Manufacturing Process** Ziming HE (DNUI)	15
15:35-15:50	14:35-14:50	C1-05	**Universalization of Boccia Ramps Through Motorization - Application of Assistive Technology to Adapted Sports -** Seishiro NAKAMURA (NIT, Tokuyama)	16

Channel Ⅰ

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16:15-16:30	15:15-15:30	C1-07	**Creation of phase diagrams of titanium-based compounds ~ How to treat phase diagram? ~** Noa WATANABE (NIT, Tsuyama)	18
16:30-16:45	15:30-15:45	C1-08	**Improved Portable Wireless Remote Control Quadcopter** Shuaibo WANG (DNUI)	19
16:45-17:00	15:45-16:00	C1-09	**Creation of a Device That Gives Humans the Illusion of Being Wet** Ryuta USHIMARU (NIT, Tsuyama)	20

Channel Ⅱ

Session Ⅱ (Channel Ⅱ) Moderator: Fumiko NAKAMURA / Xia YANG				
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14:50-15:05	13:50-14:05	C2-02	**Maker-less Motion Capture for Human Body Using Azure Kinect** Nanami OKADA, Kokoro EMI (NIT, Tsuyama)	23
15:05-15:20	14:05-14:20	C2-03	**Meeting Room Management System** Xuanyahan YU (DNUI)	24
15:20-15:35	14:20-14:35	C2-04	**Creating Place for The College Mascot Character "Technyan" in Campus life** Masaharu TSUKIYAMA, Natsuka TSUTSUMI, Nguyen Hoang TUONG (NIT, Tsuyama)	25
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Session V (Channel Ⅱ) Moderator: Fumiko NAKAMURA / Xia YANG				
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Channel Ⅲ

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14:50-15:05	13:50-14:05	C3-02	**About the Traditional Culture Danjiri of Japan** Kotaro JINO (NIT, Tsuyama)	33
15:05-15:20	14:05-14:20	C3-03	日本アニメのグッズ文化が新世代の人々の消費心理への影響について Ying LI (DNUI)	34
15:20-15:35	14:20-14:35	C3-04	**How to achieve a balanced international trade based on international law (WTO Agreements)** Shoko Ono (NIT, Hiroshima)	35
15:35-15:50	14:35-14:50	C3-05	中国移動の支払いが人々の生活にもたらす変化について Xirui PIAO (DNUI)	36

Channel Ⅲ

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16:15-16:30	15:15-15:30	C3-07	How We Can Go Underwater in VR Hitoki ISHIKAWA (NIT, Tsuyama)	38
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Abstract

Channel /

Characteristic Analysis of Muscle Activity During Swallowing Depending on Physical Properties and Amount of Food Intake

Hidenori IWAMOTO*, Seiichiro MIURA, Shoko KAICHIDA

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Keywords: EMG, Miss swallowing, Mylohyoid muscle, Sternohyoid muscle, Dysphagia

Abstract:

One of the health problems that is likely to occur in the elderly is aspiration, in which food accidentally enters the trachea. To prevent aspiration, it is necessary to select foods at mealtime that are appropriate in quantity and consistency for swallowing ability, but there is currently no method to assess swallowing ability based on biological signals. Previous studies have shown that there is a certain trend in the activity of swallowing-related muscles in young people depending on the food. If the characteristics of muscle activity by physical properties and amount in young people can be clarified, it may be possible to evaluate the swallowing ability of the elderly in comparison with this information. Therefore, the purpose of this study was to clarify the characteristics of muscle activity by physical properties and volume in young subjects.

Two swallowing-related muscle EMG potentials were obtained in young subjects while swallowing five foods of different physical properties and amounts. From the obtained data, power, duration of muscle activity, the difference in the start time and the difference in the end time of activity of the two muscles were calculated as characteristic quantities.

The results showed that the power and the duration of muscle activity were increased in the food with high viscosity.

Data Communication Design Practice Project based on SCM

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Keywords: SCM, Router

Abstract:

In this project, we designed a sailboat ornament with router function. We placed the router's circuit board inside the hull of the sailboat and combine the antenna of the router with the mast of the sailboat.

This project begins with setting up a hull embedded in the board. The circuit board is embedded with electrical connections of read-write memory, flash memory module, read-only memory, information processing unit and WIFI module, and the bottom end of the hull is equipped with WAN interfaces and several LAN interfaces in parallel. The bottom end of the hull cavity is equipped with a battery to provide power. Through the design of the oval chute and arc slider, the signal strength in a specific direction can be enhanced by reflecting the signal emitted by the signal antenna in a specific direction, thereby providing network transmission.

Wireless routers are affected by the rapid development of intelligent technology and wireless network technology, and the user's intelligence in the application and personalization in the choice will become more and more intense. In traditional Chinese culture, sailboat has the meaning of plain sailing. It constitutes a sailing ornament that is both beautiful and practical. It not only solves the technical problem that the placement of traditional routers is not beautiful and has low practical value, but also expresses the yearning and fighting spirit for the future through the shape of the sailboat.

A Method for Evaluating the Planar Elongational Viscosity of Low Viscosity Fluids Using a Disc Ring

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Advanced Mechanical and Control System Engineering Course
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Keywords: Rheology / Rheometer / Disc ring

Abstract:

Rheology is the study of the deformation and flow behavior of any materials. Deformation includes shearing and elongation deformation. A rheometer is an instrument that measures and evaluates flow properties such as viscosity and elasticity. Many rheometers have been developed in the past. However, there is no commercially available rheometer that can measure a planar extensional viscosity of low viscosity fluids. First, it is difficult to generate a steady elongational flow field. Second, it is not possible to measure an extensional stress directly. To determine the extensional viscosity of a low-viscosity fluid, both elongation stress and elongation rate are required.

In the new elongation rheometer that we have proposed, sample fluids are filled between two parallel disk rings, and one moves to stretch the sample fluid with certain speed. The cylindrical film is formed between the disks by planer elongation deformation. During sample stretching, elongation rate is obtained from the time variation of the film thickness. To determine elongational stress, the extensional force and the cross-sectional area of the sample measure with load cell and thickness sensor. It has been confirmed that plane stretching viscosity can be evaluated by this apparatus. The extensional viscosity of the sample could be determined.

Semiconductor Manufacturing Process

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Key words: Microelectronic Technology, Integrated Circuit, Semiconductor Manufacturing Process

Abstract:

As the core of the electronic information industry, microelectronic technology has become the biggest industry in the world. And even it becomes a powerful engine and technical base to transform and draw the traditional industry in our country. Microelectronic technology in the national economy has a very important position. As the core technology of chip development, the design and process of integrated circuit has the direct influence on chip development and manufacturing. With the rapid development in recent years, the design and process also drive a series of integrated circuit chip technology. In the study of microelectronic courses, the knowledge of semiconductor manufacturing process is the core part, which involves the whole process of integrated circuit manufacturing. So how are chips produced? There are more than 6,000 steps from sand to chip, and the top 5,000 of processes are from sand to silicon wafer. In this paper, we will introduce the manufacturing processes of semiconductor, which are wafer processing, oxidation, lithography, etching, doping, thin film deposition, interconnection and packaging, etc. However, in order to be familiar with the interrelation between the front and back processes in the whole process, we should study carefully the principle of each single process.

Universalization of Boccia Ramps Through Motorization
- Application of Assistive Technology to Adapted Sports -

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Keywords: Boccia, Sports for Disabled Persons, Remote Control, Assistive Technology

Abstract:

In the recent years, interest in adapted sports has been growing worldwide. Among them, Boccia is one of the most popular sports that can be enjoyed by all generations, from children to the elderly, as well as people with disabilities. In this study, we designed and developed a Boccia device for motorized ramps so that more people could enjoy Boccia competitions. The device requires three elements: “Release mechanism”, “Release height control mechanism”, and “Azimuth control mechanism”. Considering the widespread use of motorized ramps, we designed and developed a universalized prototype by simplifying and generalizing the device. After development, the device was demonstrated at three events and user questionnaires were distributed to obtain data. The results showed that not only people with disabilities but also children and adults tended to enjoy Boccia competitions when using this device. This paper reports on this universalized Boccia device.

Artificial Intelligence for Science and Technology

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Key words: Artificial intelligence for science and technology, Classic Control Theory, Pattern Recognition, Machine Learning

Abstract:

Artificial intelligence for science and technology is a basic major during undergraduate. Different from Computer Science or Embedded System, Artificial intelligence for science and technology offer courses involves basic programming, artificial intelligence, sensor, machine learning and so on.

Among all of these, the first course I will introduce is Automatic Control Theory. One of the most important chapters is mathematical models of system-the mathematical relationships between the system's variables, it is the basis of analyzing and designing control systems and have different types like different equations, transfer function and state variables.

The other course I will introduce is Pattern Recognition, it can be used in plenty of areas like computer vision, medical image analysis, medical biometrics and natural language processing. Many people think that Pattern Recognition and machine learning is the same thing, but they are different in some ways. The difference between pattern recognition and machine learning is that the former feeds the machine a variety of feature descriptions, so that the machine can judge the unknown; The latter feeds the machine a massive sample of a certain thing, allowing the machine to discover its own characteristics through the sample, and finally judge some unknown things.

Creation of phase diagrams of titanium-based compounds
~ How to treat phase diagram? ~

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Keywords: Phase Diagram, Titanium, Equilibrium Constant, Chemical Reaction

Abstract

Thermal dynamic thinking is necessary when make metals. Use phase diagram, can confirm process of making metal. Phase diagram is drawn by gas partial pressure and temperature, can confirm stability phase. Equilibrium constants are required to make a phase diagram. Reactions of equilibrium constants can be referred from Barin's[1)] thermodynamic database. From the equilibrium constant, the gas ratio of react is determinate. My research is focus on reduction of titanium dioxide using phosphorus, so making phase diagram of titanium oxide and titanium phosphorus will be explained.

<Reference>

1) Ihsan Barin, Therrnochernical Data of Pure Substances, VCH, 1955

Improved Portable Wireless Remote Control Quadcopter

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Keywords: portable quadcopter; quaternion posture solution; wireless remote control; automatic control technology

Abstract:

A portable small wireless remote-control quadcopter is designed and realized in this paper. The main control module is designed by the microcontrollers based on the STM32s, and by using automatic control and digital wave filtering technologies. The wireless remote-control function is realized through the wireless radio frequency module. The motor control is realized by the motor drive circuit based on the MOSFET, through our improved quaternion posture solution algorithm. The sensor circuit, composed of MPU6050 and BMP280, realizes more accurate posture and height control. The user operation control and data acquisition/processing are realized by the analog-digital (A/D) conversion module on the microcontrollers. After debugging and testing, the system finally realizes the flight function, it includes wireless remote control, two-way data interaction, front and rear, left and right movements, and speed control. It has the advantages of small size, light weight, and low cost. It is suitable for outdoor flight operation environment.

Creation of a Device That Gives Humans the Illusion of Being Wet

Ryuta USHIMARU*

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Keywords: VR, wet feeling, underwater

In recent years, VR and AR have been rapidly developing and are being actively researched. However, the technology is still in its infancy. There has not been much research on methods to reproduce the sensation of being underwater. Currently, it is possible to create the underwater experience by combining video and sound. However, these two elements alone lack a sense of realism, so in this research, I would like to create a device to give people a "wet feeling" as the third element. A person wears an HMD and is shown underwater images and the sound of water, while at the same time wearing a device that gives a cold sensation to the skin. The objective is to give people the feeling of wetness without water. Therefore, I will create a device that directly gives coldness to sensitive parts of the body, such as the arms and neck. Specifically, I am considering a belt-like device that would be wrapped around the neck or arm. The structure of the device would be an electronic cooling device using a thermo-cooler or thermo-module, which would be attached to the body. Ideally, the device should also be linked to the movements of the people.

Abstract

Channel //

Bank Account Management System

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Keywords: REGISTER, LOGIN, QUERY, MODIFY, CANCELLATION

Abstract:

We implement a simple bank management system, which consists of 3 modules: registration-module, login-module and menu-module. The registration-module provides a function of creating account for new users. The account consists of eight random numbers generated by the system. The password is set by users, and they must input the same password twice. After passing the verification, the registration is completed. The login-module is used to verify the user's identity. The user inputs his account information, and the system will compare it with the information stored in the database. If the account matches successfully, the user can login the system. Otherwise, the user will see a login failure message. The menu-module realizes some main functions of the bank management system. For example, querying the quota, setting the deposit amount and the withdrawal amount, transferring the corresponding account, modifying the account password, and cancel the account, etc. The brief work of bank management system can be completed through the above 3 modules.

Maker-less Motion Capture for Human Body Using Azure Kinect

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Keywords: Motion Capture, Maker-less, Azure Kinect

Abstract:

Recently, high-accuracy depth cameras have been widely used in 3D face recognition or automatic driving technology. Azure Kinect is the latest version of the ToF-based depth camera developed by Microsoft, which was originally released as a motion controller accessory for Xbox 360 game devices. Previously, large and expensive equipment was required for motion capture or human recognition, but now small and low-cost Kinect can be used for this purpose, and its adoption is being considered not only for gesture-based machine control, but also for medical and nursing care applications.

Depth cameras using ToF (Time of Flight) method, which Kinect employs, take an image and simultaneously measure the time required a round trip by infrared rays fired at the object to calculate the distance for each pixel. Unlike conventional stereo photography, this method enables the simultaneous capturing of an image and detailed pixel-by-pixel depth information with a single camera. Similar ToF sensors are installed in Apple's iPhone 12 Pro series or iPad Pro from 4th generation or later, and are used for face recognition and autofocus control.

In this research, high-precision depth data from Azure Kinect is used to measure the movement of the human body with sub-millimeter accuracy. Based on this measurement data, the results will be discussed and compared with conventional examination results and diagnostic methods, and the significance of this data will be examined.

Meeting Room Management System

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Keywords: Java, SQL Server, the MVC design pattern

Abstract:

This is a Meeting Room Management System. The system is conductive to the maximum utilization of demand resources and improve the quality of meetings.

This system mainly has four parts, including staff management, department management and meeting room management. Through the connection of each module, it can add, delete, modify, find and reserve.

This system is divided into three layers, based on the MVC design pattern. Firstly, this layer contains two parts, the part of the entities and the Dao. These entities describe the most basic attributes, using the all-parameter and no-parameter constructs, which can represent the meaning clearly and accurately. The part of the Dao includes the interfaces and implementation classes for each entity. Secondly, we build a “view” layer in the project. The customs can intuitively use the HTML pages to connect other layers. Thirdly, we define a control layer in the system. This part uses the business logic to maintain personal information and the information of the meeting room.

This system is developed with Java and SQL Server. Finally, it is proved to be a complete and usable system by using relevant test cases.

Creating Place for The College Mascot Character "Technyan" in Campus life

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Keywords: Online timer, Original line stamp, Mascot character Technyan,

Abstract:

“Technyan” is the mascot character of Tsuyama KOSEN, and was designed by students of Tsuyama KOSEN several years ago. The name "Tecnyan" comes from two words: "technology" and "nyan," meaning meow. Technyan is active in school public relations. On the other hand, they rarely see them on campus. We propose a new place for Teknyan to play an active role in school life. We create two places for Tecnyan in the campus which are study online timers and LINE stamps.

The study online timer is a timer that runs on your internet browser, and Technyan sometimes appears to cheer you up. Also, Technyan will give advice to keep your concentration to study. She (or he) may say that “ turn off your mobile phone”, “Try a little harder” or “good job and well done”. LINE stamps were designed by students using Technyan to be useful in student life and they are related to SDGs. Although registration as a LINE stamp has not been completed yet, we plan to release it so that students can use it as soon as the registration is completed.

By increasing the opportunities to meet Technyan in campus life, school life will become more enjoyable. We hope that this activity will lead to make more places for Technyan to play an active role.

Development History and Future Prospect of Integrated Circuits

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Keywords: Integrated Circuits/Development/Prospect

Abstract:

Integrated circuit is a kind of micro electronic device or component.The inventors of integrated circuit are Jack Kilby (integrated circuit based on germanium (Ge)) and Robert Noyes (integrated circuit based on silicon (Si)). Nowadays, most applications in semiconductor industry are silicon based integrated circuits.Integrated circuit refers to the connection between necessary electronic components (resistors, transistors, etc.) and these components through certain process technologies.In order to get a clear prospect of the development future of integrated circuits,this paper studies the development of integrated circuits at home and abroad.It is found that the development of integrated circuit has several advantages, such as simple circuit, high cost performance, strong reliability, etc. With the development of science and technology, high-performance circuits have been developed. Integrated circuits are also constantly innovating. And a large number of nanotechnology applications have greatly improved the performance of memory and people's living standards.In the future, integrated circuits will still be an important strategic resource.This paper fully discusses the development process of integrated electronics and analyzes its future prospects.

Design and Implementation of Astronomical Website Based on Bootstrap

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Keywords: Bootstrap, HTML, Javascript, Css, Assets

Abstract:

Haoxing Astronomical Academic Website is an astronomical academic website designed based on bootstrap, which mainly uses front-end and local storage related technologies.

The website is mainly composed of six pages, including the home page, science popularization knowledge page, details page, personal center page, specific content page and login registration page.

Bootstrap includes a responsive, mobile device first, and unfixed grid system, which can be appropriately expanded to 12 columns as the size of devices or viewports increases. It contains predefined classes for simple layout options, as well as powerful hybrid classes for generating more semantic layouts. So, the website designed based on bootstrap can also be adaptive in different device environments to automatically adjust the page layout.

The login registration page uses local Storage for local storage, so that the user's registered information can be saved locally, and the username can be displayed on the home page after login, and the word "Please login" will be displayed when not logged in. You can log in with the registered information when you click to open the web page next time. After logging in, you can use the favorite, like, and other functions of the content page.

Hands-on Classes for Junior High School Students by KOSEN Students to Share The Fun of Science and Technology

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Keywords: Hands-on class for junior high school student, Artificial Intelligence, Superconductivity

Abstract:

In order to increase the number of people interested in science and engineering, we have proposed hands-on classes for junior high school students. We have proposed two kinds of classes and the content of both classes are based on our graduation research, that is "Artificial intelligence" and "Superconductor"

In the Artificial Intelligence class, we will explain Neural Networks. In the class, we mainly explain that Neural networks is reflect the behavior of the human brain, allowing computer programs to recognize patterns and solve common problems in the fields of AI, Machine Learning, and Deep Learning. And we will also introduce the work of CIFAR-10 Image Classification process and result created with Google Colaboratory.

In the superconductivity class, we will briefly explain mechanism of superconductivity and will show some of superconductor with different components. And then students will choose one to be able to float a magnet the highest based solely on its appearance and materials. Once they have chosen, students will cool them down in liquid nitrogen and compete to see which superconductor floats the highest. In the presentation, we would like to show you a video of the experiment and invite you to hands-on class.

We believe that both classes will increase junior high school students' interest in science and engineering.

Domestic Epidemic Crawling in Clove Garden

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Keywords: BS4, Pandas, Requests, CSV, visualization

Abstract:

In the first part, let's introduce the three libraries used in the project. Beautiful Soup (BS4 for short) is a Python third-party library, which can quickly extract specified data from HTML or XML documents. Pandas is a third-party python library that provides high-performance and easy-to-use data types and analysis tools. Requests is a very practical Python HTTP client library. It is often used when crawling and testing server response data. Requests are specially used to send HTTP requests.

In the second part, we introduce the creation of the database, find the url of the page you want to crawl, obtain the data and write them to the database, and finally generate a csv file that can see all the data you crawl.

In the third part, we need to make a visual part, showing the total number of confirm cases, cumulative deaths and cures, and the number of confirm cases through line chart, pie chart, and column chart.

Finally, I inquired about the attitude of leaders of various countries towards China's treatment of the COVID-19 epidemic, and I summarized the significance of my project, and then wrote my outlook for the future epidemic situation.

Web Design of Chinese Opera

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Keywords: BOX, HTML, CSS, JS, WEB, MySQL

Abstract:

This is an HTML page design project, which is divided into six parts. Part 1, design a BOX model, and set the spacing between boxes and the size of boxes through the web interface layout you set yourself.

Part 2, write HTML code, which can be realized by linking and HTML code with the required images and the page layout you have built.

Part 3, write CSS code. Through the use of CSS code, you can make your web page layout more beautiful and fit your web page architecture.

Part 4, add JS script, which can realize dynamic pages, such as automatic rotation of pictures and real-time update of time.

Part 5, link the WEB framework. Through the connection with JAVE code, you can call the servlet method to obtain the content in the web page and realize the content interaction between users and developers.

Finally, connect to MySQL. Through the MYSQL connection, you can develop and store user information to facilitate the login and use of your own account.

The software used in this project mainly includes Visual Studio Code, MySQL and IntelliJ IDEA.

Abstract

Channel ///

新型コロナウイルスの中国対策

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キーワード: 新型コロナウイルス、中国、防疫措置

要旨:

新型コロナウイルスの流行が全世界で猛威を振るって以来、世界経済は不安定で、不確定要素が増加しており、感染症の予防・コントロールと経済回復をうまく調整することが各国の共通の課題となっています。中国の防疫政策は、世界の他の国とは違う独自の道を歩んでいます。中国はコロナゼロ政策の総方針を堅持し、最も速いスピードで、最も低いコストで流行の伝播を遮断し、人民の生命と安全と身体の健康を最大限保護し、流行が経済・社会の発展に及ぼす影響を最大限減らします。

中国は大量の資金を投じて国民に 3 本のワクチンを無料で注射し PCR 検査を無料で行います。一つの地域で発生した場合には、全員核酸を何回も行い、拡散を防ぎます。一人ひとりが健康コードを持っていて緑は正常です。健康コードが黄色や赤色の場合、担当者が隔離や治療を行います。コロナが常態化している現在、中国国民は定期的にPCR検査を行っています。異常が見つかれば、迅速に対処し、感染拡大を防ぎますコロナ発生から３年間、中国での感染率、死亡率は世界最低レベルを維持しています。

中国は独特な政策を堅持し、経済が着実に回復し、また国際的なペスト対策協力を積極的に展開することで、世界経済の回復により穏健な助力を提供します。

About the Traditional Culture Danjiri of Japan

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Keywords: Japanese traditional culture、Festival、History

Abstract:

My motivation was that when I talked about danjiri with Chinese students, they were surprised and interested in this traditional culture. That's why I wanted more people to know about it. Also, Katsuyama in Maniwa City, my hometown, also holds a "Danjiri Festival" and I feel the atmosphere of the place well, so I decided to introduce it.

As for the background, it is said that "Danjiri" originated on August 23, 1745 in the lunar calendar as a festival of Kishiwada Gokyuu, a shrine in what is now Osaka Prefecture, and Sannomaru Inarisha. The traditional culture of “Danjiri” has a long history of about 300 years, and some of them are registered as prefectural designated Important Tangible Folk Cultural Properties and Important Intangible Folk Cultural Properties. It is also an annual event held throughout the country. I myself participated in the Danjiri Festival in my hometown as a puller, and I have experienced firsthand the enthusiasm and bustle of the people at that time. Therefore, I think that there is something that can be conveyed to people who have not yet been to the "Danjiri Festival". I plan to introduce it using my own experiences and actual photos as a presentation method.

In conclusion, I would like more people to know about the traditional culture of the Japan called "danjiri" that has been going on for about 300 years, and to experience the liveliness of the place and the enthusiasm of the people through this announcement and video.

日本アニメのグッズ文化が新世代の人々の消費心理への影響について

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キーワード: アニメのグッズ文化、新世代、文化消費心理、心理学的体験

要旨:

新世代の消費能力が向上しずつ、消費市場においてより重要な地位を占めることになり、彼らの出現は巨大な消費市場空間を代表している。一方、我が国のインターネットと共に成長してきた新世代の人々は、様々なサブカルチャーの影響下で、その消費心理と消費行動がこれまでの各年代の消費者と明らかに異なる特質を示し、それによって様々な経済産業の発展を生み出した。

文化消費の分野を見ると、このグループの消費行為はインターネットへの依存性が強く、バブル消費の中で理性を維持し、コンテンツに対する料金支払いの受け入れ度が高く、感情、人格、価値観などの特質をより重視している。

したがって、商店にとっては、新生代の人々という文化消費心理と行為に基づいて、その需要に合うために精確なマーケティング活動を展開しなければならない。

本課題はアニメのグッズ文化における新世代の人々文化消費心理を綿密的な考察を行い、消費者の需要と市場動向を把握することは、将来のいつかに来るチャンスを掴むのに役立つかもしれない。

以上を踏まえて、本課題ではまず、文化消費心理を持つ新世代の人々の紹介や特徴分析をし、それから、アニメのグッズ文化に注目し、文化の形成と発展、特徴とターゲット集団、伝播媒介とマーケティング戦略などの面の調査を行う。最後に、アニメグッズ文化が新世代に齎した文化消費心理への影響について語り、それがどのように新世代の人々心を掴んだか、どんな心理学的体験を与えたのか、彼らをどのように消費行為に仕向けたのか、及び彼らの消費行為の特徴までの研究を加わっている。

故に、今回の交流会では、最も重要な「心理学的体験」を語りたいと思う。

How to achieve a balanced international trade based on international law (WTO Agreements).

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Keywords: WTO, international trade, service trade, e-commerce

Abstract:
The aim of this study is to examine how to achieve a balanced international trade based on international law (World Trade Organization (WTO) Agreements).
Our methodology is heavily based on secondary data collection. which consist of reports articles and books from WTO and international and national institutions. The result of the analysis showed that the importance of service trade has increased significantly in international trade. Actually, it generates more than two-thirds of GDP. However, it is found to be uneven among countries.
In fact, there is a gap between developing and developed countries, and China is considered a global leader in e-commerce market. Indeed, the main issues faced by developing countries are lack of opportunities to access e-markets such as the absence and inadequate financial institutions and infrastructures. On the other hand, it was found that conflict of interest occurred between different countries including liberalization and privacy issues where WTO appeared to be inefficient in resolving them. Therefore, it is critical to reduce the existing gaps between developing and developed countries and the role of WTO should be strengthened in implementing and enforcing the rules. Nevertheless, regional trade agreements could play an important role in more equitable trade.

中国移動の支払いが人々の生活にもたらす変化について

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キーワード: 中国のモバイル決済、特徴、機会の使用

要旨：

近年、中国の科学技術の発展に伴い、ますます多くの産業が革新し、ブレーンストーミングを行い、人々指向の原則に基づき、人々にサービスを提供する技術製品を継続的に開発し、モバイル決済もその一つです。

モバイル決済とは、モバイルクライアントが携帯電話などの電子製品を使用して電子マネー決済を行い、モバイル決済がインターネット、端末機器、金融機関を効果的に統合し、新しい決済システムを形成し、モバイル決済は通貨決済だけでなく、通話料、ガス、水道、電気などの生活費も支払うことができることを意味します。 モバイル決済は、電子マネーの普及を開始するための新しい支払い方法を開拓しました。

モバイル決済は、モバイル端末を中心に、モバイル端末を介して購入した製品の決済支払いを行うインターネット時代の新しい支払い方法であり、モバイル決済の主な表現はモバイル決済です。

モバイル決済は、第三者が支払うデリバティブです。 第三者決済とは、第三者決済プラットフォームを通じて取引において、購入者が商品を購入した後、第三者プラットフォームが提供する口座を使用して支払いを行い、第三者が売り手に商品の支払いが到着し、出荷されたことを通知することを意味します。 購入者が商品を検査した後、支払いは販売者に通知され、第三者は売り手の口座に送金します。 研究者は、第三者の支払いは、本質的に信用仲介者として、取引の支払活動のための信用保証を提供し、したがって、買い手と売り手の非対称情報から生じる信用リスクの問題を排除すると考えています。

(1) 時空間制限が小さい。 (2)管理が容易。(3)プライバシーが高い。(4)総合度が高い。モバイル決済のこれらの利点は、人々の生活を変え、人々は商品を購入するために現金を運ぶ必要はありません、唯一の携帯電話を必要とし、携帯電話で WeChat Alipay や他のアプリをダウンロードし、購入時に直接支払うことができ、これは人々の生活に大きな利便性を変更し、人々は毎日どのくらいの現金を運ぶために苦労する必要はありません、同時に、この変更はまた、インターネット上の現金の流れを増加させ、仮想経済の役割を高め、中国の経済発展に大きな貢献をしました。

「エコ文明」に関する中国語四字格の和訳について

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キーワード: エコ文明、環境保護、四字格、翻訳ストラテジー

要旨:

「エコ文明」は「生態文明」ともいわれている。それは、人間と自然と社会が調和した発展という規律にしたがい、獲得した物質的と精神的な成果のことである。中国政府が提唱した「エコ文明」は中国人の生活に変化を徐々にもたらしてくると共に、地球という人類共同の「家」を皆で守ろうという理念を世界の人々に伝えている。地球を大きな「緑の家」にすることは人類共通の夢であることから、「エコ文明の構築」は人類の未来に関わる問題である。

中国は全面的な小康社会（ややゆとりのある社会）実現を目指して、勢いよく発展している。中国政府の主張や理念などについて余り知らない外国人が多くいるので、誤解を招きかねないと思う。中国のことをより多くの外国の方々に理解してもらうことはわれわれ外国語専攻の学生の使命だと思う。特に、「エコ文明」は中国政府の「五位一体」構想の中で、「経済建設」「政治建設」「文化建設」「社会建設」とともに憲法に盛り込んだ重要な理念であり、世界の人々に関わっていると思う。

「エコ文明」という理念を日本の方々に説明しようと思い、この小論文をまとめたのである。『習近平国政運営を語る』という著作から「エコ文明」に関する二つの文章を中心に、内容をまとめた上で、その中に含まれている中国語四字格表現と日本語の訳し方について研究したいと思う。中日両国語には于四字格表現が数多く挙げられるが、意味の同じ表現もあれば、類似でありながらやや異なる表現もある。本研究によると、「エコ文明」に関する四字格は「形は似て意味は同じ」ものが最も多いことがわかり、直訳という翻訳ストラテジーがよく使われていることが分かったのである。

How We Can Go Underwater in VR

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Keywords: VR, fluid phenomenon, underwater

Abstract:

In recent years, VR/MR technology has developed rapidly and is an area of active research. However, the technology is still in its infancy. In particular, there remains little research on methods to reproduce underwater scenes. Currently, head-mounted displays and acoustic devices using binaural sound are in practical use. The purpose of this research is to develop a device that creates the illusion of being underwater. I thought that it would be possible to recreate the feeling of being underwater by reproducing fluid resistance. To this end, I am creating a device that generates acceleration in a direction that cancels out the body's movement. The structure could be one in which the weight moves in parallel, one in which the weight rotates, or one that is a derivative of these using a reaction wheel. There are two possible control methods: mechanical and electronic. The goal is to create a device that allows users to experience being underwater by generating images, sounds, and physical loads.

日本一年交換交流生活感想について

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キーワード: 留学生活、日本文化

要旨:

私は、他の留学生と一緒に、大学の寮で住んでいます。春学期は、20 人ぐらいの寮生で、特にチリの人が多かったです。ヨーロッパの人もいました。どのような人と会うのかちょっと不安で、初めて来た時は緊張していました。でも会った後、皆優しい人だと気づきました。ちょうど三年ぶりに再開した祇園祭を、皆と一緒に見に行きました。夜の時街の中で屋台があり、山鉾の中でプロの中で演奏していました。友達と美味しいもの食べて、日本っぽい音楽を聞いて本当に幸せでした。寮生活では、偶然、みんなが餃子好きだと知って、みんなと一緒に水餃子を作りました。おかげで、私と他の学生との関係も近づけました。学校に通っている間、空いている時間を利用して京都の多くの有名な観光地に行って、日本の伝統文化を体験しました。夏休みは、友達と旅行に行きました。様々な経験を通して、私は日本について多くの知識を学び、日本と中国の文化や生活の違いを感じることができました。

夏休みが終わった後、寮に新しい交換留学生が来ました。日本の入国制限が解除され、今回は 40 人以上の留学生が来ました。ヨーロッパ人がとても多かったため、私の英語のレベルもすごく向上しました。もちろん、私の日本語も上達しました。そして、周りのクラスメートがみんな大阪人だからでしょうか。特に関西弁のレベルが上がりました。一年も日本で過ごせること、そして多くのことを経験できていることに、とても感謝しています。残り 4 ヶ月の留学生活も楽しみたいと思います。

International Student Conference 2022 Online

Date of Issue 13th December, 2022

Cosponsorship Dalian Neusoft University of Information

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