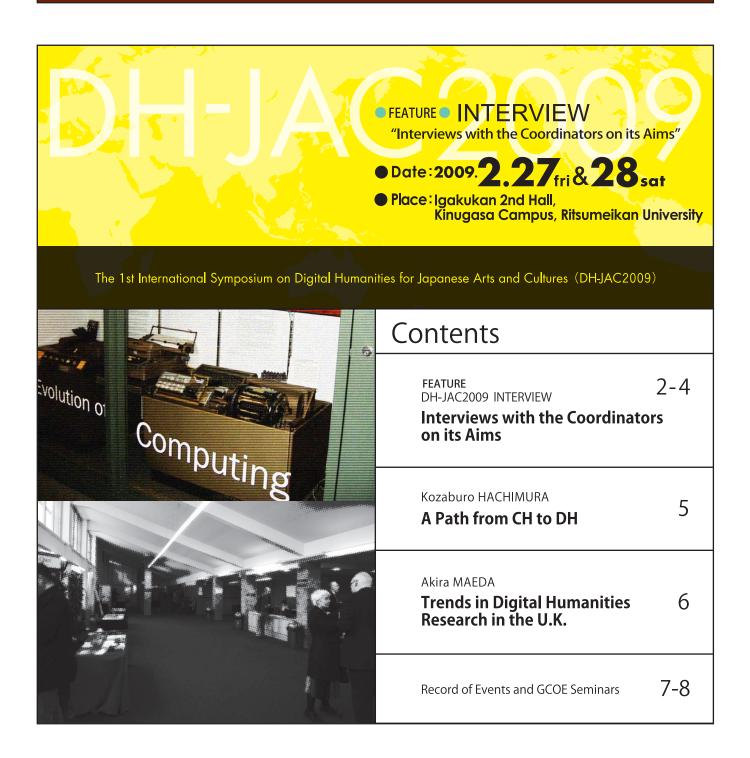


# **NEWS LETTER**

Jan. 2009 **05** Special

Ritsumeikan University Global COE Program "Digital Humanities Center for Japanese Arts and Cultures," News Letter.





## DH-JAC 2009

#### —Interviews with the Coordinators on its Aims—

Interview

Interview with Professor Ryo Akama, the Coordinator of "Innovation of Image Database and Museum Networks"

Ryo Akama (Professor, Graduate School of Core Ethics and Frontier Science, Ritsumeikan University / Leader of the Japanese Culture Research Group)

The upcoming Symposium is entitled "Innovation of Image Database and Museum Networks." Could you explain the aims of the project starting with the innovation of image database (image DB)?

As a matter of fact, creating an image DB itself is not particularly innovational on the technological level.

It takes some time, however, for the technology to be polished enough to withstand practical use and actually spread widely. This is especially true in the field of the humanities.



Nevertheless, the image DB is finally being recognized as a research tool in the field.

Researchers in the humanities used to rely on verbal communications when discussing an image. Now that shared platforms such as image DB have been recognized, however, they can communicate directly using digital images. This may already be a matter of course and may not draw much attention by now, but in the upcoming Symposium, I would like to assert once more that image DB will be vital to bring about the innovation in Japanese studies.

# What about the innovation of museum networks then?

It is a well-known fact that there are numerous works and research materials related to Japanese arts and cultures in Western countries. With the exception of collections in a few large-scale museums, however, most of those that are owned by small to mid-sized museums and individual collectors catch the eye of only a very limited number of people for now. In terms of presenting them to the public and sharing information, things are lagging behind seriously.

There are various reasons for the current situation, but we need to think more earnestly about what Japan and researchers of Japanese arts and cultures can do to change the status quo, and how we can awaken the abundant works and materials related to Japan from their deep sleep. Indeed, there are plenty of things that should and can be done.

One of those things is to link museums through

networks and let them share a range of information. Our activities center on the keyword "digital." We do possess practical methods with digital technologies to make museum networks much tighter. We would like to propose these plans, while examining their possibilities and problems.

Professor Josef Kreiner, who is scheduled to deliver a key-note speech at the upcoming Symposium, is the key person in the European museum network, isn't he?

Yes, he is. Professor Kreiner, who is currently at Hosei University, organized the ENJAC, a network of European museums that own collections of Japanese arts. Also, Dr. Helena Honcoopová at the National Gallery in Prague chaired the 2nd International ENJAC Conference, which set "database" as its keyword. I would like to ask them once again what their objective was in organizing the ENJAC. As for this ENJAC, I must say regretfully that it has lost the vigor it used to have. I would like to hear about what kind of problems they have faced on this matter as well. I sincerely hope that we will find some clues to solve these problems during this Symposium.

There are also speakers invited from large-scale museums such as the Museum of Fine Arts, Boston and the British Museum.

Needless to say, both museums are world-class, large-scale museums. Today, many of these world-class museums are actively developing projects to open all of their collections to the public by utilizing image DB. This is



partly because these kinds of projects tend to win outside funds relatively easily, and partly because these museums have technological and organizational advantages to proceed with such massive projects.

## **DH-JAC2009**

#### —Interviews with the Coordinators on its Aims-

For the Symposium, we have also invited Dr. Sarah Thompson and Mr. Abraham Schroeder from the Museum of Fine Arts, Boston. They will be reporting on the collection of Japanese arts at the Museum as a successful example of online publications. It will not be a superficial success story, though. We have asked them to recount as realistically as possible the specific problems which they have had to solve on site.

In the meantime, at the British Museum, a digital publication in collaboration with this Center is currently



underway. Young researchers from our Center have traveled to the Museum to join their archive team, and they have been working on the tasks needed to be done for digital-archiving their collection, from cataloguing artworks and research materials, to photographing them, and to organizing their data. We have asked Dr. Rosina Buckland to talk about this collaborative work from the side of the British Museum.

Actually, each participant of the upcoming Symposium, including the guest speakers, stands in a slightly different position from each other, while sharing a common theme to deal with works and materials that are related to Japanese arts. Nevertheless, I expect that, by getting together at the Symposium, we will be able to overcome these differences and come up with ideas that have never existed before—the ideas that, I hope, may lead to development of even more extensive networks.

(December 10, 2008, at the Art Research Center, Ritsumeikan University)

Interview 02

Interview with Professor Keiji Yano, the Coordinator of "What is Digital Humanities?: Its Present and Future"

Keiji Yano (Professor, Graduate School of Letters, Ritsumeikan University / Leader of Historical Geographic Information Systems Research Group)

# First, could you explain the aims of hosting the 1st International Symposium on Digital Humanities for Japanese Arts and Cultures?

Our Center was launched, following the decision adopted in June 2007, as a center for education and research, built on the achievements of its predecessor, the 21st Century COE Project called the "Kyoto Art Entertainment Innovation Research." A major theme of the upcoming International Symposium is, through discussions with the guest speakers from inside and outside of Japan, to reflect on our activities in the past two years as well as to reexamine what paths should be taken in our future endeavors.

Of course, that is not the only aim we set for the Symposium. In a broader context, it has often been suggested lately that research in the humanities is in crisis. Various studies conducted within their purview have been stagnant and at a standstill as if the humanities are in "octopus traps," that is, trapped in numerous sub-fields and separated from each other. In fact, within university

education systems, departments in the humanities have been urged to take some drastic measures to rectify the situation. We have come to host this International Symposium, hoping to examine how effective our methods, which center on the keyword "digital," can be to cope with such

circumstances. We would like to achieve this by looking back at our activities in the past two years with those who have been sensing the crisis of the humanities and the impasse in which Japanese studies find themselves.

What would be the important points to note in "What is Digital Humanities?" which you have coordinated?

Recently, scholars, research centers, and academic societies that advocate digital humanities all over the world have intensified their activities rapidly.



What will highlight the upcoming Symposium is that we will be hearing about cutting-edge trends in these worldwide studies of the humanities at first hand from the very researchers who are directing such studies. Regardless of their backgrounds, the humanities or science, all the guest speakers for this Symposium have deepened their researches by achieving a collaboration or integration between the humanities and information

## **DH-JAC2009**

#### —Interviews with the Coordinators on its Aims-

technologies, and utilizing their respective perspectives and methods such as extensive database, Web2.0, GIS, or visualization. Not only that, but have they also returned whatever they gained to society through their various projects.

Hearing directly from these world-class key individuals in digital humanities, we would like to understand how they perceive digital humanities, first. Then, with these guest speakers as well as those who will join us in the conference hall on the day, we would like to deliberate and discuss what significance we can hold in and how we can contribute to the emerging academic field of digital humanities—we at the Center located in the historical city of Kyoto and with a good deal of digital contents useful to Japanese studies such as Ukiyo-e Database and Virtual Kyoto. I believe that this will lead to a path to resolve the critical condition which Japanese studies is currently in.

# One of the keywords that comes to one's mind when thinking about digital humanities would be "network." Could you explain how network has been utilized for this Symposium?

In June 2008, a conference called "Digital Humanities 2008" was held in Oulu, Finland, and Professor Mitsuyuki Inaba from our Center attended this conference (see the Newsletter, No.4). Many researchers in the field of digital humanities, mainly from Western countries, attended this conference, and Professor Inaba publicized the activities of this Center. At the conference, not only scholars from the West but also those from Japan took notice of what we were pursuing at this Center and, in a way, this has led to the materialization of the upcoming Symposium.

We consider building networks among researchers and research centers, real or virtual, as imperative. As reported by Professor Kozaburo Hachimura and Associate Professor Akira Maeda in this very edition of the Newsletter, we have been participating in digital humanities conferences as well as those on Japanese studies, held in both Japan and abroad, visiting other research centers, and energetically presenting our research outcomes. I suppose that all these accomplishments fitted together with the worldwide networks very nicely, which culminated in the upcoming Symposium.

# Finally, could you tell us what kind of future prospects you have for digital humanities for Japanese cultures?

Let me take my own research field of Geographic Information Systems as an example. As GIS became widely used as a tool to handle geographic information, meaning paper maps changed to digital ones, work efficiency improved dramatically. When it became possible to process a large quantity of information, the conventional research that required the use of maps went through qualitative transformation. Furthermore, various innovative devices such as GPS and laser surveying have

made it possible to convert the two-dimensional representations of the conventional maps into three-dimensional images. We are also becoming capable of adding the temporal axis and examining them on the fourth-dimensional level in a concrete manner. Traditionally, three- to four-dimensional phenomena were to be examined only on the conceptual levels, but now they can be handled as visualized, tangible occurrences. Thanks to the development of innovative technologies and equipments, there emerged kinds of research themes that had not existed in any conventional academic fields, which have become established as new academic fields.

Setting digital as the keyword enables us to consider reformation of Japanese studies in two ways. One way is to place Japanese studies within the research trend of digital humanities, increase the quantity of information we can handle by digitalizing it, and by doing so, improve the quality of research and gain more extensive knowledge. The other way is to develop new kinds of Japanese studies, not restricted by the conventional ones.

Fostering new types of researchers who can conduct research in both ways is one of our Center's objectives.



(December 11, 2008, at the Art Research Center, Ritsumeikan University)

## FEATUREINTERVIEW

"Interviews with the Coordinators on its Aims"

DH-JAC 2009

The 1st International Symposium on Digital Humanities for Japanese Arts and Cultures (DH-JAC2009)

- Date: 2009. 2.27 fri & 28 sat
- Place: Igakukan 2nd Hall, Kinugasa Campus, Ritsumeikan University
- Admission Free (Seating Capacity 300; First come, first served)

  \*\* Please register in advance by following the instructions below.

  \*\* Participation without advanced registration will cost you 1000 yen.

Staff Research

# A Path from CH to DH



Kozaburo Hachimura (Professor, Graduate School of Science and Engineering, Ritsumeikan University / Digital Archiving Technology Group)

The collaboration between the humanities and information processing technologies has been called "Humanities and Computer" in Japan and "Computers in the Humanities" or "Humanities Computing" in the West (hereinafter referred to as CH). At the beginning of the 21st century, however, the term "Digital Humanities (DH)" emerged out of the blue in the West, and it is now used widely in the titles of conferences and university courses.

Changing a name, in general, is a sign of the will to reform what the name indicates. What are the intentions of those Western scholars who started using this term? I recently had an opportunity to visit several universities and institutes in Canada and the U.S. that are associated with DH and to hear from those who are involved. In what follows, I would like to introduce briefly what I learned from the conversations with them on what characterizes DH.

#### The Role of Computers

CH means "the application of computers to the humanities." The term "computer" primarily indicates "calculator," but these days it is rather unusual that this machine is used just for "calculation." "Computer" is already a built-in component of society. Thus, instead of accentuating it, they employed the term "digital," which denotes information technology as a whole. By doing so, they declared their intention to renovate the humanities in a new and different way from conventional CH.

#### From Tool to Information

We could also say that they have switched their frame of reference from "tool" to "information." The Web is overflowing with truly diverse information and we have come to enjoy seamless access to it. With information infrastructures such as the PC and the Web, we have obtained the means to easily handle enormous amount of information in the humanities as well. Of course, research activities in conventional CH also valued information, but they tended to confine the information within closed groups and institutes. What is different now is that, by setting the Web as their base, they intend to retrieve information more globally and vigorously.

#### **Information Infrastructures**

During this trip, I heard from several scholars in the humanities the need for "Cyber Infrastructures for DH," which seemed to suggest their intentions to use scientific technologies such as supercomputers and high-speed Internet. Of course, they are eyeing possibilities of research in the humanities, utilizing extensive corpora made available by these technologies. Furthermore, they intend to develop a web-based portal that links information possessed by numerous universities, research institutes, museums, and archives from all over the world so that extensive knowledge should be accumulable and available for cross-searching and linking. The ways to use the web have gone through qualitative transitions in the past several years. The web is no longer just for "browsing," but it is now for "utilizing." They

intend to renovate their research activities in the humanities to correspond to these transitions in the informational environment.

#### From Text to Multimedia

Early Studies in CH mainly dealt with text information such as corpora. As images, sounds, and other multimedia information became more manageable on the web, however, objects of research expanded. Now, scholars in the humanities can manipulate them with ease, as well. It is anticipated, therefore, that they will apply to their studies such technologies as high-speed network, image processing, computer graphics (CG), virtual reality (VR), XML, GIS, and simulations.

#### Scientific Methods

Clearly, DH puts an emphasis on management methods of projects and information, employed in software and system development. By adopting these methods, they aim to develop the kinds of databases and systems that can be sustainable over a long period of time and friendlier to users, instead of the conventional data processing systems that can only be used by their developers or databases that require complicated maintenance.

#### The Foundation of DH

As indicated above, the idea of DH finds its root in the popularization of information sharing and information technology, both centering on the web, and the emphasis on scientific methods. Meanwhile, we also need to note the fact that, as its foundation for information disclosure and sharing, the conventional CH in the West has its background of prevailing TEI (Text Encoding Initiative) and extensive research and education in Library and Information Science. In addition, they already have the mind-set for information sharing and international collaboration utilizing the web.

#### The Shift to DH

The Shift to DH is steadily underway at several leading universities. It is hard to say, however, that things are coming along everywhere else as well. One of the comments that I heard still lingers in my ears is "It is imperative to keep on demonstrating potentials of digital technologies to graduate students." This is also true for the GCOE activities at our university. In this sense, we must pay close attention to the annual open institute, Digital Humanities Summer Institute, at the University of Victoria.

#### Support from the Governments

We also need to note the fact that the American and Canadian governments have invested a great amount of effort to facilitate the development and international collaboration in DH. Their collaboration with European (EU in particular) and Pacific regions has already proved fruitful, and I felt that they wish to extend the circle to East Asia in the future.

In light of what I have described above, our Center needs to establish the intellectual groundwork for DH with concrete examples in order to promote education of young researchers.

Staff Research

# Trends in Digital Humanities Research in the U.K.:

A Report from My Visit to King's College London and Participation in DRHA08



Akira Maeda (Associate professor, Graduate School of Science and Engineering, Ritsumeikan University; Digital Archive Research Group)

On September 12, 2008, I visited the Centre for Computing in the Humanities (CCH) at King's College London, and from September 14 to 17, I participated in DRHA08 (Digital Resources for the Humanities and Arts 2008), an international conference on digital humanities, hosted by Cambridge University.

One of the leading digital humanities research centers in the U.K., the CCH with more than forty teaching and research staff members is engaged in over thirty research projects. Each project covers a broad range of the fields such as history, literature, social science, library science and information sciences, which indicates that researchers with very different backgrounds collaborate closely with each other to conduct research.

I learned about the CCH and its ongoing research projects directly from Mr. Simon Tanner, Director of King's Digital Consultancy Services, and Dr. Hugh Denard, Lecturer and Associate Director of King's Visualisation Lab. Speaking with these two, I could see that the CCH and our Center had quite a lot in common in terms of research. Furthermore, both men showed great interests in our Center when I introduced it to them. My impression was that in the future, we would be able to collaborate with the CCH in some form or other.

DRHA08 that I attended after visiting King's College is an annual international conference on digital humanities that has been held in the U.K. since 1996. With about 130 presenters and 70 presentations, this year's conference exposed me to a wide array of interesting research. As the conference name contains "Arts," many of the presentations focused on arts, and not only did we see general oral presentations and panels but also presentations in the forms of performances and installations. What impressed me most was, besides two sessions on Second Life, there were also the ones on Wikipedia, YouTube, SNS (Social Network Service), and blogs, all of which demonstrated a variety of research approaches to how to apply Web2.0 and other tools that allow the user to participate for research in the humanities and arts.

My overall impression of the conference was that, whereas in the U.K. as well as in Japan, each academic

field has its own way of thinking, and there surely are gaps between the fields, researchers in the U.K. seem much more eager to conduct collaborative research crossing their fields. Additionally, while it has been more common in recent years to publish results of research projects on the web, many at the conference went further, discussing such research's "sustainability" to secure access to such research results well after the projects end. I believe that this is an important issue to which we at the Center also need to give careful consideration.



Exterior of CCH



Exterior of hall, DRHA



# Record of Events and GCOE Seminars



#### October-December 2008

#### **Events**

- Symposium: "How to Read The Tales of Genji: From Interdisciplinary Viewpoints" on October 11, 2008, at Keigakukan, Rm 210, Kinugasa Campus, Ritsumeikan University.
- On-site Explanatory Meeting: "Dosen Chemical Pottery Manufacturing Site: Its 3rd Excavation Project" on November 1, 2008. Held in the premises of Rakushien, Higashiyama-ku, Kyoto.
- Exhibition: "Kiwame-fuda (Appraisal labels) Show" from December 1 to 12, 2008, at the Art Research Center, Ritsumeikan University.
- Study Group Meeting: The Project on "A Comprehensive Archive of the Rakuchu-rakugai-zu screen paintings and Changes in Urban Culture," on December 22 and 23, 2008.

#### **GCOE Seminars**

Held at: Art Research Center, Ritsumeikan University. Available online.

 $\fint \fint \fin$ 

■ Session 30: October 7, Tuesday

Hideo Toyama: Digital Archives and Digital Humanities

Mitsuyuki İnaba: Trends in Digital Humanities Research: Conference Report of Digital Humanities 2008

■ Session 31: October 14, Tuesday

Akira Maeda: Research Trends in Digital Humanities in the U.K.: Report of King's College London Visit and DRHA08 Conference Kozaburo Hachimura: Digital Humanities Activities in North America

■ Session 32: October 21, Tuesday

Shin Ono: Research of Combination among Chronological Events

Ayako Katsumura: Possibility of Community Culture Creation through Art Projects

■ Session 33: October 28, Tuesday

Seiya Tsuruta: Fundamental Research on Extracting Emotional Information from Music for Virtual Dance Collaboration System Xin Yin: Developing of Cultural Heritage Exhibition System for Representing Cutaneous Tactile

■ Special Seminar, No. 6: October 31, Friday

Tomoji Tabata (Associate Professor, Graduate School of Language and Culture, Osaka University): Mining Linguistic Variations in the Inaugural Addresses of US Presidents

■ Session 34: November 4, Tuesday

Kiyoko Myojo (Associate Professor, Faculty of Liberal Arts, Saitama University):

 $Matters \ to \ Contemplate \ Prior \ to \ Digitization: What is \ the \ Foundation \ of \ Research \ in \ the \ Humanities$ 

■ Session 35: November 11, Tuesday

Ping Zhou: The Current Situation of Japanese Cultural Studies in China: Related to My Research Theme Takaaki Okamoto: About a Kunten (Dialectical Information) Database on Japanese Classics and Religious Documents: Using Image Database System of Japanese Historical Materials

Session 36: November 18. Tuesday

Takashi Kirimura: Building a Website of the Catalog about Web-based Maps: The Functions of Spatial Query and Analysis Takuji Hanada: Battles in Kyoto during the Nanbokuchō Period: Seen from Military Tie Documents and Gunki monogatari

■ Session 37: November 25, Tuesday

Kenichi Honda: A Study of the Imamiya-matsuri Festival in Kyoto during the Late Medieval Period Takaaki Kaneko: Digital Archiving of Woodblock Materials

■ Special Seminar, No. 7: November 27, Thursday

Gregory Irvine (Senior Curator, Asian Department, Victoria and Albert Museum) Japan at the Victoria & Albert Museum: Acquiring and Recording the Collections

■ Session 38: December 2, Tuesday

Aki Ishigami: Survey of Ehon Overseas: The British Museum and the Museum of Fine Arts, Boston Woong Choi: Quantitative Analysis of laido Proficiency by Using Motion Capture

■ Special Seminar, No. 8: December 4, Thursday, 21:00-22:00 

\*\* Live from New York via the Internet Maiko Ota Cagno (Archivist, C.V. Starr East Asian Library at Columbia University):

The Way of Archive and Prospects on "Barbara Curtis Adachi Bunraku Collection" in C.V. Starr East Asian Library at Columbia University

■ Session 39: December 9, Tuesday

Chise Saito: Trend of the Portal Sites with the Aim of Supporting the Research of Art and Humanities Kiyofumi Kusui: The Construction and Problems of the Literary Magazine's Database published in Colonial Age of Korea

■ Session 40: December 16, Tuesday John Carpenter: Calligraphy as an Art, Medieval

■ Special Seminar, No. 9: December 18, Thursday
Gen Takagi (Professor, Faculty of Letters, Chiba University)
A Dream World in a Vase: Loneliness of Japanese Literature (and its Methodology) under the Digital Environment

■ Session 41: December 23, Tuesday Manabu Ueda: A Phase of Film Exhibitions in Kyoto during the Emerging Period of Moving Picture Theaters Shinya Saito: Visualization and Interpretation of Narrative Information Using Stratum Modeling

# The 1st International Symposium on Digital Humanities for Japanese Arts and Cultures (DH-JAC2009)



● Date: 2009. 2.27 fri & 28 sat

Place: Igakukan 2nd Hall,

Kinugasa Campus, Ritsumeikan University

Admission Free (First come, first served)

Please register in advance by following the site.

URL: http://www.arc.ritsumei.ac.jp/lib/GCOE/info/dh-jac2009.html (JAPANESE) http://www.arc.ritsumei.ac.jp/lib/GCOE/info/dh-jac2009 e.html (ENGLISH)

Sponsored/organized by:

The Ministry of Education, Culture, Sports, Science and Technology Global COE (Center of Excellence) Program "Digital Humanities Center for Japanese Arts and Cultures," Ritsumeikan University

#### **P**rogram∶

Day 1

"What is Digital Humanities?: Its Present and Future"

2.27 (fri.)

Coordinators: Kozaburo Hachimura (Professor, Graduate School of Science and Engineering, Ritsumeikan University; Vice-Director of the Center; and Leader of Digital Archiving Technology Research Group)

Keiji Yano (Professor, Graduate School of Letters, Ritsumeikan University; Leader of Historical GIS Research Group)

Speakers and

Presenters:

Masao Kawashima (Professor, Graduate School of Letters, Ritsumeikan University; Director of the Center; and Leader of Guest Speakers: Kyoto Culture Research Group)

Ryo Akama (Professor, Graduate School of Letters, Ritsumeikan University; Leader of Japanese Culture Research Group) Keiji Yano (Professor, Graduate School of Letters, Ritsumeikan University; Leader of Historical GIS Research Group)
Kozaburo Hachimura (Professor, Graduate School of Science and Engineering, Ritsumeikan University; Vice-Director of the Center; and Leader of Digital Archiving Technology Research Group)

Mitsuyuki Inaba (Professor, Graduate School of Policy Science, Ritsumeikan University; Leader of Web Technology

Masanori Aoyagi (Director, National Museum of Western Art) Neil Fraistat (Professor, University of Maryland, USA) lan N.Gregory (Senior Lecturer, Lancaster University, UK) Richard C. Beacham (Professor, King's College London, UK) **Eero Hyvönen** (Professor, Helsinki University of Technology, Finland)

Day 2

"Reports on Research Results by Young Researchers, Participants of the International Training Program"

2.28 (sat.)

Aki Ishigami (Postdoctoral Fellow, Kinugasa Research Organization, Ritsumeikan University) Satoshi Otsuki (Postdoctoral Fellow, Kinugasa Research Organization, Ritsumeikan University)

Tetsuo Mizuta (Postdoctoral Fellow, Ritsumeikan-Global Innovation Research Organization, Ritsumeikan University) Seiya Tsuruta (Ph.D. candidate, Graduate School of Science and Engineering, Ritsumeikan University; Research Assistant

Atsuko Oya (Ph.D. candidate, Graduate School of Letters, Ritsumeikan University; Research Assistant of the Center) **Shin Ono** (Ph.D. candidate, Graduate School of Policy Science, Ritsumeikan University; Research Assistant of the Center)

"Innovation of Image Database and Museum Networks: lobalization and Networking of Studies of Japanese Cultures and Arts"

Ryo Akama (Professor, Graduate School of Letters, Ritsumeikan University; Leader of Japanese Culture Research Group) Guest Speakers: Josef Kreiner (Special Professor, Hosei University; Professor Emeritus, University of Bonn, Germany)

Helena Honcoopová (Director of the Collection of Oriental Art, National Gallery in Prague, Czech Republic)

Rosina Buckland (British Museum, UK)

Sarah Thompson (Museum of Fine Arts, Boston, USA) Abraham Schroeder (Museum of Fine Arts, Boston, USA)

Colophon: Ministry od Education, Culture, Sports, Science and Technology [MEXT]

Global COE [Center of Excellence] Program

Digital Humanities Center for Japanese Arts and Cultures, Ritsumeikan University

Newsletter Vol.5, Special issue Issued January 2009

Inquiries: Human Society Research and GCOE Office, Research Division, Ritsumeikan University

Art Research Center Ritsumeikan University 56-1 Tojiin Kita-cho, Kita-ku, Kyoto City 603-8577, Japan

Tel: (+81)(0)75-466-3335 Fax: (+81)(0)75-465-8245

E-mail: jdh-jimu@st.ritsumeikan.ac.jp

