The ubiquity of informatics is evidently seen in all aspects of our societies and scientific communities, including but not limited to health care, medical science and biological science. Large volumes of data are generated daily by electronic medical record systems, clinical trials, and genome sequencing efforts, to name a few. In addition to the sheer size of the data, their heterogeneous nature further demands advanced informatics solutions for aggregating, organizing, retrieving, and mining useful knowledge and patterns from data that originate from various sources.

The range of the informatics technologies that are involved in these processes is vast. First and foremost, establishing a robust indexing/retrieval system is the essential foundation layer for any more sophisticated information retrieval and knowledge discovery paradigms. Traditional DBMSs are used in conjunction with No-SQL solutions to accommodate a vast range of business needs. Despite the utility of databases, they can only be applied to structured data. Despite many efforts by informaticians to advocate recording data in structured format, it is simply impractical to achieve this across the board. For instance, clinical notes recorded in most of the modern electronic medical systems are still largely unstructured data that originated from physicians’ dictations. This created a great hindrance for any downstream retrieval and analysis effort. An informatics solution called Natural Language Processing has been used in many of these applications, serving as a bridge from the unstructured data to the structured data. Machine learning and data mining are another example of the informatics approaches that are heavily used in the said disciplines. The identification of biomarkers that are correlated with patients’ prognosis, the elucidation of regulatory pathways that are responsible for carcinogenesis, the discovery of unusual respondents based upon clinical notes, all of which involve the application of advanced machine learning technologies. As well, to support the storage, transfer and retrieval of the large amount of data that are generated, cloud based techniques are going to play a critical role in the advancement of biomedical science. This track aims at providing a platform to bring together experts and professionals in these fields to present, discuss the latest findings in health informatics, biomedicine and bioinformatics.

The conference has received 30 submissions covering various projects in the said fields. After a rigorous peer review process, 6 papers were accepted. We would like to express our sincere gratitude to the numerous reviewers whose voluntary work was the foundation of the success of this conference. We would also hope to give special thanks to our conference organizers who coordinated the event. Hope you will enjoy HIBIBI 2014 in Beijing and we look forward to seeing you next year in Europe for HIBIBI 2015.

Gada Naji, Jaia Zeng, Mehmet kaya, Shang Gao
HIBIBI 2014 Chairs