ビジュアルコンピューティングセミナー2018-06

下記の要領で，今年度第 6 回のセミナーを開催しますのでご参集ください．

日 時 ：平成 31年 3 月 20 日（水）13:30-15:00

場 所：慶應義塾大学 矢上キャンパス 14 棟（創想館）2 階
14-201 室（セミナールーム1）
（https://www.st.keio.ac.jp/about/access.html）

題 目：Immersive Analytics of Big Data

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要 旨：Scientists, engineers and physicians are confronted with an immeasurable amount of data. Immersive visualization environments can provide them with a novel way of interacting and reasoning with large datasets, a form of big data immersive analytics. These environments allow a user to utilize the entirety of his/her visual bandwidth and field of regard, effectively engulfing the user in the data while enabling interaction and analysis, either computationally (e.g., machine learning) or visually (e.g., visual analytics). We present two stationary environments in addition to mobile head mounted displays. The first is a custom-built 5-wall stereo Cave environment, called the Immersive Cabin. Combined with a range of interaction and navigation tools, the Cabin can support numerous interactive applications of immersive analytics of big data. Current visualization displays, such as the Cabin, however, have not kept up with the explosive growth in data size and resolution, which is approaching our visual acuity. To ameliorate this challenge, we have developed a life-like, realistic immersive environment for big data, appropriately called the Reality Deck. It is a one-of-a kind pioneering 1.5-billion-pixel immersive display facility – a unique assembly of 416 high-res display panels, an 80-GPU cluster, 7 miles of cables, IR tracking cameras, sound system, and human-computer interaction techniques. We further depict methods related to these immersive environments, such as a conformal deformation rendering method for the visualization of datasets on partially-immersive platforms, and the infinite canvas method for displaying "infinitely long" data. Demonstrated applications of immersive analytics of big data include biomedicine (especially cancer detection),

architectural design, urban planning, molecular modeling, reconnaissance and security, visual simulation, weather and climate, and entertainment.

講師略歴：Arie Kaufman is a Distinguished Professor of the Computer Science Department, Director of the Center of Visual Computing (CVC), Chief Scientist of the Center of Excellence in Wireless and Information Technology (CEWIT), and Site Director of the NSF Industry University Cooperative Research Center (IUCRC) for Visual and Decision Informatics (CVDI) at Stony Brook University. He served as Chairman of the Computer Science Department 1999-2017. He has conducted research for 40 years in visualization, computer graphics, virtual-reality, medical imaging and their applications, has published more than 300 refereed papers, books, and chapters, has delivered more than 20 invited keynote/plenary talks, has been awarded/filed more than 100 world-wide patents (most of which have been licensed), and has been a principal/co-principal investigator on more than 100 research grants. He is a Fellow of the National Academy of Inventors (NAI), Fellow of IEEE, Fellow of ACM, member of the European Academy of Sciences, the recipient of the IEEE Visualization Career Award (2005), and inductee of the LI Technology Hall of Fame (2013), as well as numerous other awards. He was the founding Editor-in-Chief of the IEEE Transaction on Visualization and Computer Graphics (TVCG), 1995-1998. He was also the co-founder/papers co-chair of IEEE Visualization Conferences; Volume Graphics Workshops, Eurographics/SIGGRAPH Graphics Hardware Workshops, and ACM Volume Visualization Symposia. He was the director and chair of IEEE CS Technical Committee on Visualization and Graphics. He received PhD in Computer Science from the Ben-Gurion University, Israel.

For more information, please visit:　http://www.cs.stonybrook.edu/~ari

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