

학내공지

2021-1 대학콜로퀴움 6회차 강의: 4월 29일(목) 16:00 / GIST 전기전자컴퓨터공학부 Prof. Brian J. d'Auriol / Visually-Human Salient Artificial Intelligence [콜로퀴움] [NEW](#)

작성자 | 강유리 조희수 32

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<2021학년도 1학기 GIST대학 콜로퀴움 6회차 강의>

- 일시: 2021. 4. 29.(목) 16:00-17:15
- 연사: GIST 전기전자컴퓨터공학부 Prof. Brian J. d'Auriol
- 주제: Visually-Human Salient Artificial Intelligence: The Role of Visualization Individualism in Artificial Intelligence Research and Development
- Host: 전기전자컴퓨터공학부 부학부장 이민재
- Zoom 강의장 링크: 이메일로 안내

- Date: 2021. 4. 29.(Thu.) 16:00-17:15
- Lecturer: Prof. Brian J. d'Auriol, School of Electrical Engineering and Computer Science, GIST
- Title: Visually-Human Salient Artificial Intelligence: The Role of Visualization Individualism in Artificial Intelligence Research and Development
- Host: Prof. Minjae Lee, School of Electrical Engineering and Computer Science, GIST

Visually-Human Salient Artificial Intelligence: The Role of Visualization Individualism in Artificial Intelligence Research and Development

Brian J. d'Auriol, Ph.D., Associate Professor, GIST, Korea

Our human visual sense forms the most powerful human external sense which, for the vast majority, is the primary way in which we assimilate information for understanding and knowledge. Human visualization is part of what makes human-kind special from other species; and is part of what differentiates human intelligence from present and future artificially intelligent systems. Effective visualizations and visual engagements are crucial across all human endeavors; the benefits of which are well-known. However, typical visual presentations tend to be designed for mass viewership, a one-size-fits-all approach. Yet, there is ample evidence that confirms human visual processing has many uniquely individual aspects. This talk countenances *Visualization Individualism*, proposed by d'Auriol, as a paradigm shift for future visualization designs wherein human visualization individuality is modeled and blended mass viewership along with personalized visualizations are designed. Beyond the obviousness of practical applications in visual engagements, the more serious issue arises: *How can artificially intelligent systems co-habit and co-exist with humans given the divergences of visual capacities?* The second part of this talk elaborates on such differences and countenances that artificially intelligent systems need to be made aware of human species defining capacities: which specific in this work, refers to the incorporation of visualization individualism models into the fundamental designs of artificial intelligent systems. This part of the talk concentrates on presenting conceptual and logical arguments in support of R&D into visually-human salient artificial intelligence. And while theoretical formulations based on d'Auriol's Engineering Insightful Serviceable Model (2016, 2021) are presented, such theory in and of itself is not emphasized in this talk.

Selected References

1. d'Auriol (2020), Open Our Visualization Eyes, Individualization: On Albrecht Dürer's 1515 Wood Cut Celestial Charts, *Information Visualization*, April, 19(2):137-162.
2. d'Auriol (2017), High Band-width Flexible Interconnections in the All Optical Linear Array with a Reconfigurable Pipelined Bus System (OLARPBS) Optical Conduit Parallel Computing Model, *J*

Supercomput, Feb., 3(2):900-922.

3. d'Auriol (2016), Engineering Insightful Visualizations, J Visual Lang Comput, Dec., 37:12-28.

About the Speaker

Brian J. d'Auriol received the BSc(CS) and Ph.D. degrees from the University of New Brunswick (Canada) in 1988 and 1995, respectively. He is currently affiliated with Gwangju Institute of Science and Technology; and has held various research and professorial appointments and positions in computer sciences and engineering at: SUNY Korea, Kyung Hee University, Korea; Ohio Supercomputer Center, The University of Texas at El Paso, The University of Akron, and Wright State University, USA; University of Manitoba, and University of New Brunswick, Canada. Dr. d'Auriol has organized and been the General Chair of the Annual International Conference on Communications in Computing, CIC2000-CIC2008 in the USA and the 11th Annual International Symposium on High Performance Computing Systems (HPCS'97), Canada's premier symposium at the time in the field of high performance computing. He has been involved in varying capacities with many other international venues. Dr. d'Auriol has published over 90 peer-reviewed papers in various international journals, conferences and other professional venues along with many other writings. His research is described as visual enabled computing and is the first to have proposed Visualization Individualism as a paradigm shift in the field of visualization. He has designed and published an exascale and beyond bandwidth optical conduit-based parallel computing model to address feasibility issues of Visualization Individualism. His current work involves modeling human response characteristics to visual stimuli in diverse application areas such as artificial intelligence, emerging information societies, and computer security. He is a member of the ACM and IEEE (Computer Society).

