Radiomics for Neonatal Cerebral Diseases with MR Images

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Abstract: Neonatal brain shape might be deformed by cerebral diseases. That means brain shape analysis will assist physicians to diagnose the cerebral diseases. This talk will introduce radiomics (=radiology + informatics), which provides physicians not only information extracted from medical images of the evaluating patient but also additional information based on big data analysis. Radiomics should be based on image analysis of individual patient data, and data analysis of a large amount of patients. The first topic will be brain region segmentation from MR images to quantify the brain shape, and the second talk is spatiotemporal statistical shape model (stSSM) which statistically analyzes the temporal change of the developing brain shape.

Biography : Prof. Syoji Kobashi received BE in 1995, ME in 1997, and Doctor of Engineering in 2000, all from Himeji institute of Technology. He was an assistant professor at Himeji Institute of Technology (2000-2004), an associate professor at University of Hyogo (2005-2016), currently an professor at University of Hyogo (2016-), a manager of Advanced Medical Engineering Research Center, University of Hyogo (2016-), and an assistant dean of Gradyate School of Engineering, University of Hyogo (2018-). And, he was a guest associate professor at Osaka University, WPI immunology frontier research center (2010-2016), and was a visiting scholar at Department of Radiology, University of Pennsylvania (2011-2012). His research

interests include medical image understanding and artificial intelligence. He received 16 international awards, including Lifetime Achievement Award (WAC, 2016), Franklin V. Taylor Memorial Award (IEEE-SMCS, 2009), and IEEE-EMBS Japan Young Investigators Competition (EMBS Japan Chapter, 2003). He has been serving on the publication chair of IEEE SMC2018, the chair of IFMIP since 2012, General Co-chair of ICIEV since 2016, and others. Moreover, he is an editor-at-large of Intelligent Automation & Soft Computing journal, an associate editor of 4 journals, and a guest editor of some special issues. And, he is organizing many special sessions in international conferences including IEEE SMC and IEEE EMBC. He is the **senior member of IEEE.**