

TENTATIVE SCHEDULE for
Brain-Lesion workshop (BrainLes) & RSNA-ASNR-MICCAI Brain Tumor
Segmentation (BraTS) Challenge

(27 September 2021 - in conjunction with MICCAI 2021)

9:00-11:00 UTC BrainLes Session 1 - (Moderators: Alessandro Crimi, Ender Konukoglu)

- 9:00-9:15 :: Introduction to the BrainLes workshop
Alessandro Crimi, Ph.D.
Sano Center for Computational Medicine, AGH/Jagiellonian University, Poland
- 9:15-10:00 :: **KEYNOTE**
Opportunities and Challenges for Deep Learning in Brain Lesions: Examples from Brain Tumors, Stroke, and ALD
Jayashree Kalpathy-Cramer, Ph.D.
Harvard Medical School, USA
- 10:00-10:10 :: Evaluating glioma growth predictions as a forward ranking problem
Karin van Garderen, et al.
- 10:10-10:15 :: Q-&-A
- 10:15-10:27 :: MSViT: Multi Scale Vision Transformer for Biomedical Image Segmentation
Abhinav Sagar, et al.
- 10:27-10:32 :: Q-&-A
- 10:32-10:40 :: Modeling multi-annotator uncertainty as multi-class segmentation problem
Martin Žukovec, et al. (Presenter: Lara Dular)
- 10:40-10:45 :: Q-&-A
- 10:45-10:55 :: Optimization of Deep Learning based Brain Extraction in MRI for Low Resource Environments
Siddhesh P Thakur., et al.
- 10:55-11:00 :: Q-&-A

11:00-11:10 UTC COFFEE BREAK

11:10-13:00 UTC BrainLes Session 2 - (Moderators: Spyridon Bakas, Alessandro Crimi)

- 11:10-11:12 :: Welcome to the BrainLes Session 2
Spyridon Bakas, Ph.D.
Center for Biomedical Image Computing & Analytics (CBICA), University of Pennsylvania, PA, USA
- 11:12-11:43 :: **KEYNOTE**
Geometric and Topological Approaches for the Analysis of Biomedical Omics and Imaging Data
Pablo Gonzalez-Camara, Ph.D.
Perelman School of Medicine, University of Pennsylvania, USA
- 11:43-11:50 :: Q-&-A
- 11:50-12:00 :: Adaptive unsupervised learning with enhanced feature representation for intra-tumor partitioning and survival prediction for glioblastoma
Yifan Li, et al.
- 12:00-12:05 :: Q-&-A
- 12:05-12:14 :: Unsupervised Multimodal Supervoxel Merging towards Brain Tumor Segmentation
Guillaume Pelluet, et al.
- 12:14-12:19 :: Q-&-A
- 12:19-12:26 :: Challenging Current Semi-Supervised Anomaly Segmentation Methods for Brain MRI
Felix Meissen, et al.
- 12:26-12:31 :: Q-&-A
- 12:31-12:41 :: CA-Net: Collaborative Attention Network for Multi-modal Diagnosis of Gliomas
Baocai Yin., et al.
- 12:41-12:46 :: Q-&-A
- 12:46-12:55 :: Small Lesion Segmentation in Brain MRIs with Subpixel Embedding
Alex Wong., et al.

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12:55-13:00 :: Q-&A

13:00-13:10 :: Predicting isocitrate dehydrogenase mutation status in glioma using structural brain networks and graph neural networks
Yiran Wei., et al.

13:10-13:15 :: Q-&A

13:15-14:00 UTC BREAK

13:15-14:00 UTC BraTS Challenge (BrainLes Session 3) -
(Moderators: Spyridon Bakas, Ujjwal Baid)

14:00-14:15 :: Introduction to the RSNA-ASNR-MICCAI BraTS Challenge 2021
Spyridon Bakas, Ph.D.
Center for Biomedical Image Computing & Analytics (CBICA), University of Pennsylvania, PA, USA

14:15-14:35 :: The RSNA-ASNR-MICCAI BraTS challenge: The clinical perspective
Evan Calabrese, M.D., Ph.D.
University of California San Francisco

14:35-15:05 :: **KEYNOTE**
On accuracy, robustness and explainability of neuro-oncology AI solutions
Mauricio Reyes, Ph.D.
University of Bern, Switzerland

15:05-15:15 :: Q-&A

Top-performing participants so far... (according to the Validation Phase)

15:15-15:18 :: 3D EfficientNet for Brain-Lesion classification
Quoc-Huy Trinh, et al.

15:18-15:20 :: Q-&A

15:20-15:27 :: Optimized U-Net for Brain Tumor Segmentation
Michal Futrega, et al.

15:27-15:30 :: Q-&A

15:30-15:38 :: Swin UNETR: Shifted Window Transformers for 3D Semantic Segmentation of Brain Tumors
Ali Hatamizadeh, et al.

15:38-15:40 :: Q-&A

15:40-15:47 :: Segmenting brain tumors in multi-modal MRI scans using a 3D SegNet architecture
Nabil Jabareen, et al.

15:47-15:49 :: Q-&A

15:49-15:53 :: HNF-Netv2 for Brain Tumor Segmentation using multi-modal MR Imaging
Haozhe Jia, et al.

15:53-15:55 :: Q-&A

15:55-16:02 :: Coupling nnU-Nets with Expert Knowledge for Accurate Brain Tumor Segmentation from MRI
Krzysztof Kotowski, et al.

16:02-16:04 :: Q-&A

16:05-16:15 UTC COFFEE BREAK

16:15-18:00 UTC BraTS Challenge (BrainLes Session 4) -
(Moderators: Bjoern Menze, Ujjwal Baid)

16:15-16:17 :: Welcome to the BraTS part 2 (BrainLes Session 4)
Bjoern Menze, Ph.D.
University of Zurich

16:17-16:42 :: Sponsor talks
Intel
RSNA
NeoSoma

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SAGE Bionetworks

Kaggle

- 16:42-16:49 :: Extending nn-UNet for brain tumor segmentation
Huan Minh Luu, et al.
- 16:49-16:51 :: Q-&-A
- 16:51-16:59 :: Redundancy Reduction in Semantic Segmentation of 3D Brain Tumor MRIs
Md Mahfuzur Rahman Siddiquee, et al. (Presenter: Andriy Myronenko)
- 16:59-17:01 :: Q-&-A
- 17:01-17:07 :: HarDNet-BTS: A Harmonic Shortcut Network for Brain Tumor Segmentation
Hung-Yu Wu, et al.
- 17:07-17:09 :: Q-&-A
- 17:09-17:17 :: Ensemble CNN Networks for GBM Tumors Segmentation using Multi-parametric MRI
Ramy Ashraf Zeineldin, et al.
- 17:17-17:19 :: Q-&-A
- 17:19-17:27 :: nnU-Net with Region-based Training and Loss Ensembles for Brain Tumor Segmentation
Jun Ma, et al.
- 17:27-17:29 :: Q-&-A
- 17:30-17:50 :: Announcing the RSNA-ASNR-MICCAI BraTS Validation Results
Bjoern Menze, Ph.D.
University of Zurich
- 17:50-18:00 :: Closing remarks - Adjourn
The RSNA-ASNR-MICCAI Organizing Committee