

# RADIOMICS NEWS

*the latest radiomics news, views and announcements*



## Welcome to the Radiomics Newsletter!

Dear SPP-colleagues,

We are pleased to present you the winter edition of our bi-annual Newsletter, summarizing some of the highlights within the SPP Radiomics programme and it's diverse activities over the last several months. With this issue, we also want to end 2020 and announce important information for the year 2021. Feel free to get in touch with us for any questions, suggestions and comments!

Stay safe, your coordination team

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## Annual Meeting 2020

Since the start in December 2019, the Priority Program (SPP2177) coordinated by Prof. Dr. Fabian Bamberg, organized its second program meeting on October 13, 2020, first time as a web meeting given to the restriction due to the corona pandemic.



More than 50 participants gathered to share their first results and the current status of their projects. Beside short online presentations of the ongoing projects, new members of the community could be introduced. Furthermore, framework activities and measures of the first year as well as outlines of future activities were presented by the coordination team. The meeting closed with an interesting talk on the medical information initiative and a fruitful discussion that showed the high potential of collaborative efforts to advance the individual projects but also the entire field in biomedical imaging research. Next program meeting is planned for summer 2021.

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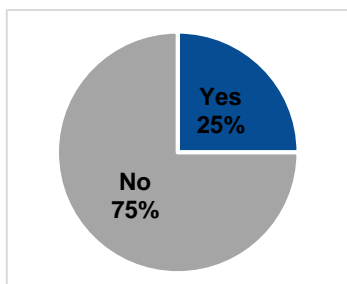
## Gender Equality – Calls 2020

The SPP 2177 is taking the opportunity to support young families and try to improve the conditions of female / male researchers. For the year 2020 the SPP 2177 was able to promote following activities:

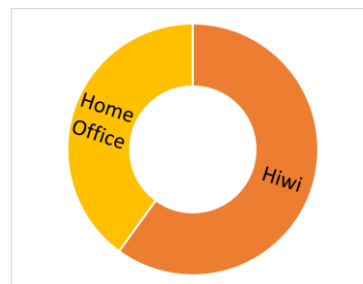
- **STUDENT-ASSISTANT (HIWI) SUPPORT**
- **HOME OFFICE WORKING PLACES**



The following pictures illustrate all gender equality measures within the Calls 2020.



Is a project member taking advantage of gender equality measures at your site?



Participation in the SPP radiomics call 2020 (hiwi position/home office places).

A total of **five** applicants received funding – congratulations!

The next chance to apply for equality funds will be in May 2021. Further information to our upcoming calls coming up soon

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## Most outstanding evaluation results

The evaluation of the annual report served as an overview of the current status of the individual projects. Therefore, we are pleased to present you the most outstanding evaluation outcome of the first annual report.

Thereby the results of this report demonstrated that all projects started quite well and had already achieved some of their project aims. Above all, the annual report quote the network's growth since December 2019, as illustrated below in Figure 1.

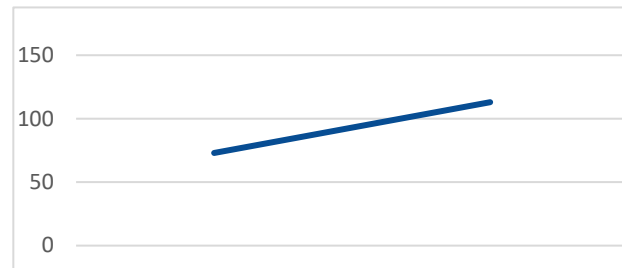


Figure 1: Current size of the SPP2177 consortium.

Furthermore, an initial success in terms of content is already evident in all projects, this is also reflected in their first publications. Figure 2 shows the number of publications within the particular projects. In order to give you an overview of the variety of publications, we have summarized all titles in Figure 3.

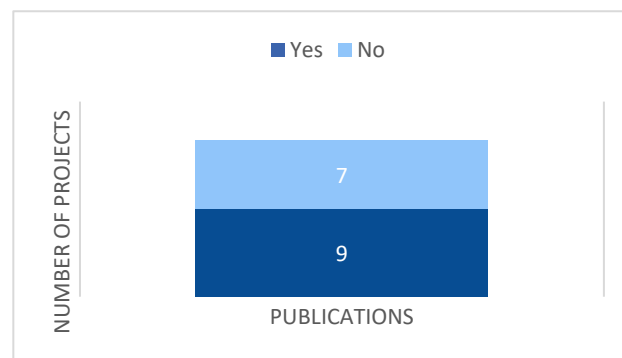


Figure 2: Number of projects with and without publications.

The program committee and project office look forward to the next two years of top-level research and to an exciting time together.

Automated Detection and Segmentation of Thoracic Lymph Nodes from CT Using 3D Foveal Fully Convolutional Neural Networks	Lymph node metastases in prostate cancer: comparison of PSMA-PET/CT and spectral detector CT derived iodine uptake	Automated Mapping of Thoracic Lymph Nodes Using Foveal Fully Convolutional Networks
Multiparametric Modelling of Survival in Pancreatic Ductal Adenocarcinoma Using Clinical, Histomorphological, Genetic and Image-Derived Parameters	Image-Based Molecular Phenotyping of Pancreatic Ductal Adenocarcinoma.	Age-Net: An MRI-Based Iterative Framework for Biological Age Estimation: IEEE Transactions on Medical Imaging, 2021
MRI-Based Biological Age Estimation Via Bayesian Neural Networks: IEEE ICASSP, 2021	FET PET radiomics for differentiating pseudoprogression from early tumor progression.	Hybrid FET PET/MRI radiomics for prediction of the MGMT promoter methylation in patients with gliomas
Evaluation of FET PET radiomics feature repeatability in patients with brain tumors.	Radiomics in radiation oncology - basics, methods and limitations.	Applications of radiomics and machine learning for radiotherapy of malignant brain tumors.
PET/MRI Radiomics in Patients With Brain Metastases.	Feature-based PET/MRI radiomics in patients with brain tumors.	Noninvasive Characterization of Tumor Angiogenesis and Oxygenation in Bevacizumab-treated Recurrent Glioblastoma by Using Dynamic Susceptibility MRI: Secondary Analysis of the European Organization for Research and Treatment of Cancer 26101 Trial.
Radiomics in neuro-oncology: Basics, workflow and applications.	Non-invasive prediction of the MGMT promoter methylation using combined FET PET/MRI radiomics. (ePoster presentation at the 25th Anniversary Virtual Meeting of the Society for Neuro-Oncology (SNO), November 19-21, 2020)	Validation of diffusion MRI phenotypes for predicting response to bevacizumab in recurrent glioblastoma: post-hoc analysis of the EORTC-26101 trial.
		Deep-Learning Generated Synthetic Double Inversion Recovery Images Improve Multiple Sclerosis Lesion Detection.

Figure 3: Titles of all Publications in SPP2177 so far.

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# IMPORTANT ANNOUNCEMENT

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## Upcoming Events 2021

07.-09.  
MARCH

### **BVM Workshop 2021**

Regensburg Medical Image Computing  
OTH Regensburg  
[www.bvm-workshop.org](http://www.bvm-workshop.org)

JUNE

### **MID-TERM MEETING**

Further information coming up soon!

## Calls 2021

Shortly you will receive via E-Mail further information to our upcoming calls:

- Home Office Working Places
- Student-Assistent (HIWI) Support
- Early Stage Researchers

## Notes for publications

Please pay attention to include your funding as follows: *„funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) - project number\*/SPP 2177“. \*You will find the project number on your letter of approval of the DFG.*

*We wish you and your  
families Merry Christmas  
and a successful start in 2021!*

