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Submission (19) has been created.

1 message

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25 March 2021 at 12:48

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Hello,

The following submission has been created.

Track Name: Main Conference track

Paper ID: 19

Paper Title: Deep Learning Based Determination of the Blood Input Function for Dynamic PET

Abstract:

The aim of dynamic positron emission tomography (PET) is to reconstruct the radiotracer density in every voxel of the measured volume. The Time--Activity Curves (TACs) of the voxels are searched in a fixed algebraic form according to a predefined kinetic model. A common input of kinetic models is the blood input function, which describes the amount of radiotracer in the blood that can diffuse into tissues at a certain point of time after tracer injection. The blood input function can be measured by taking blood samples, or a safer and less invasive solution is to estimate it in parallel with the kinetic parameters during the iterative reconstruction process. However, since kinetic parameter calculation requires the blood input function even at the start of the reconstruction, a good initial approximation of the input function is needed. In this paper, a deep CNN-LSTM-DNN network is proposed to provide a good initial value for the non-linear blood input parameters from which the iterative reconstruction process can start.

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Secondary Subject Areas: Not Entered

Submission Files: [kepafbloodinput.pdf](#) (4 Mb, Thu, 25 Mar 2021 11:47:21 GMT)**Submission Questions Response:**

1. Az elmúlt 2 évben nemzetközi fórumokon megjelent a cikk? / Was the paper published earlier at an internationally acknowledged forum in the last 2 years?

nem / no

2. Amennyiben az előbbi kérdésre igennel válaszolt kérjük a nemzetközi fórum pontos megjelölését. / If you answered yes to the previous questions, please indicate the international forum.

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