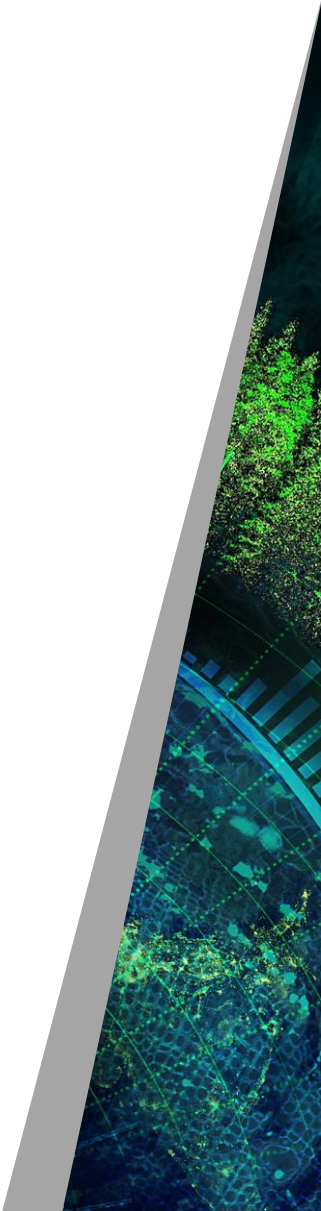


# **Prediction of AGB using RFR, SVR, FF-NN**

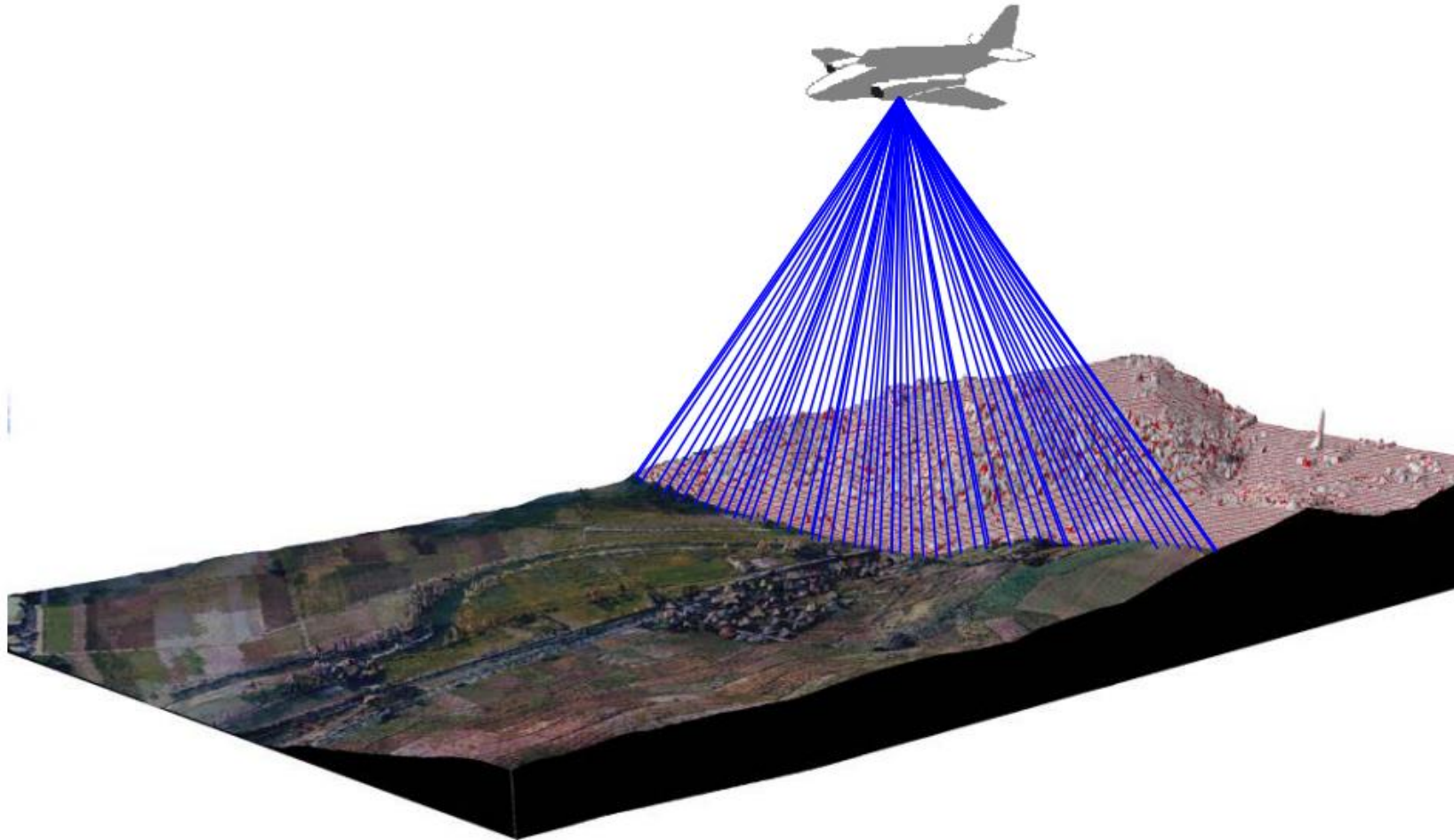
**Ritwika Mukhopadhyay**

17-06-2022

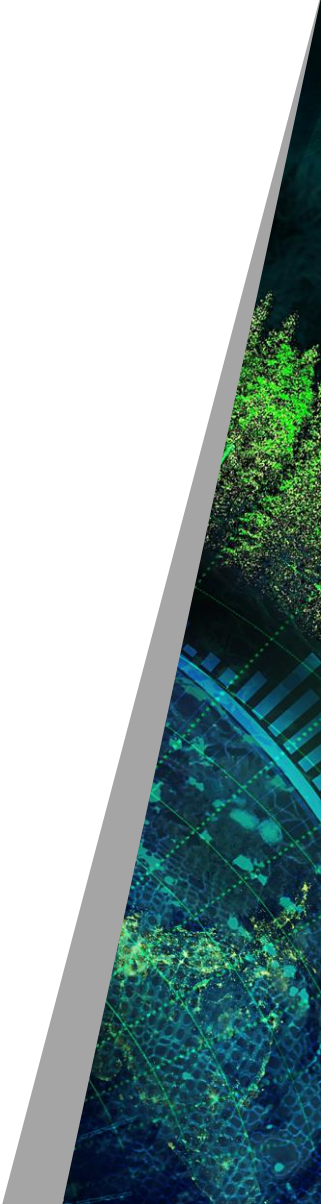


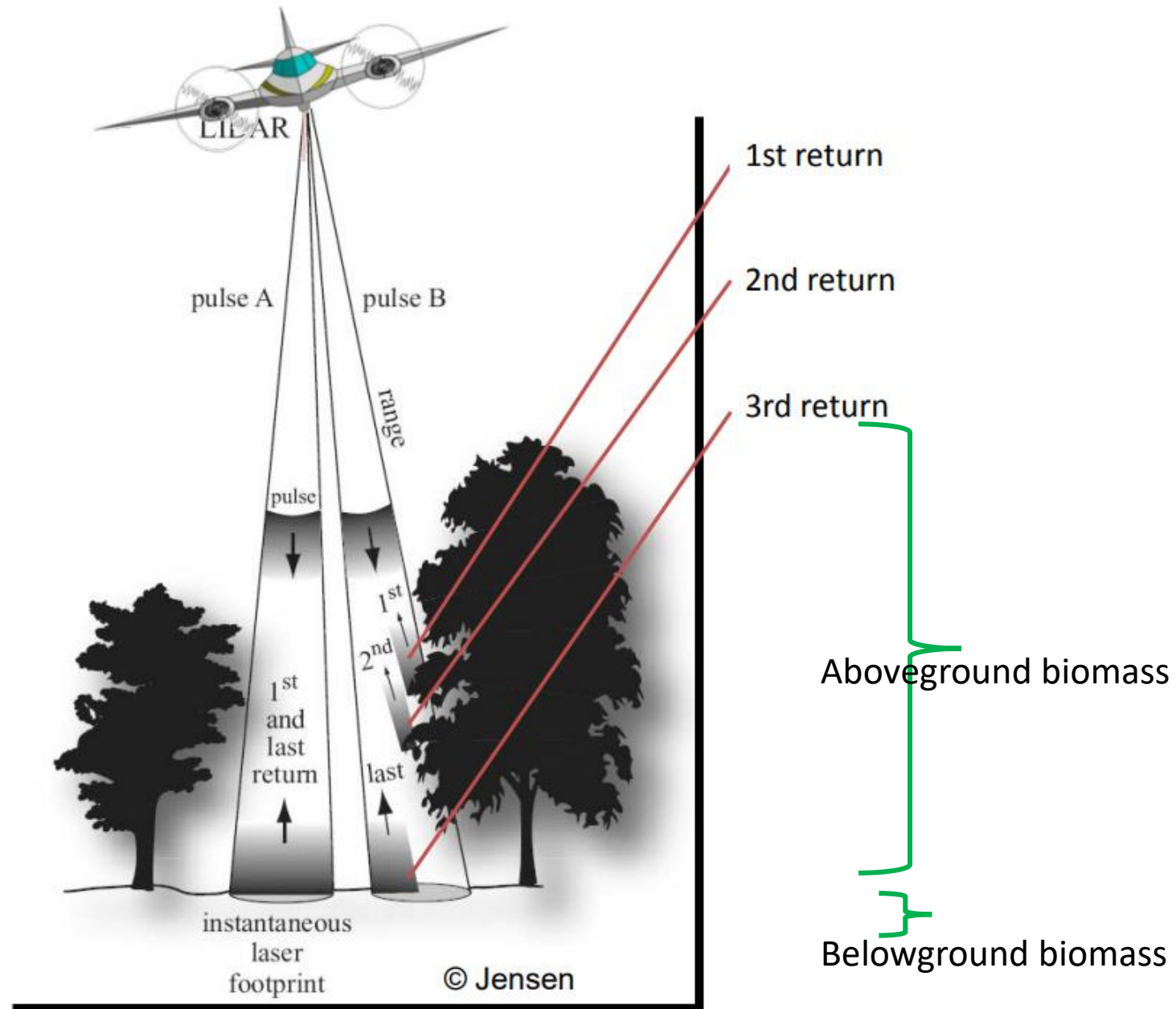
# Airborne laser scanning

The scanning over an area creates a 3d point cloud



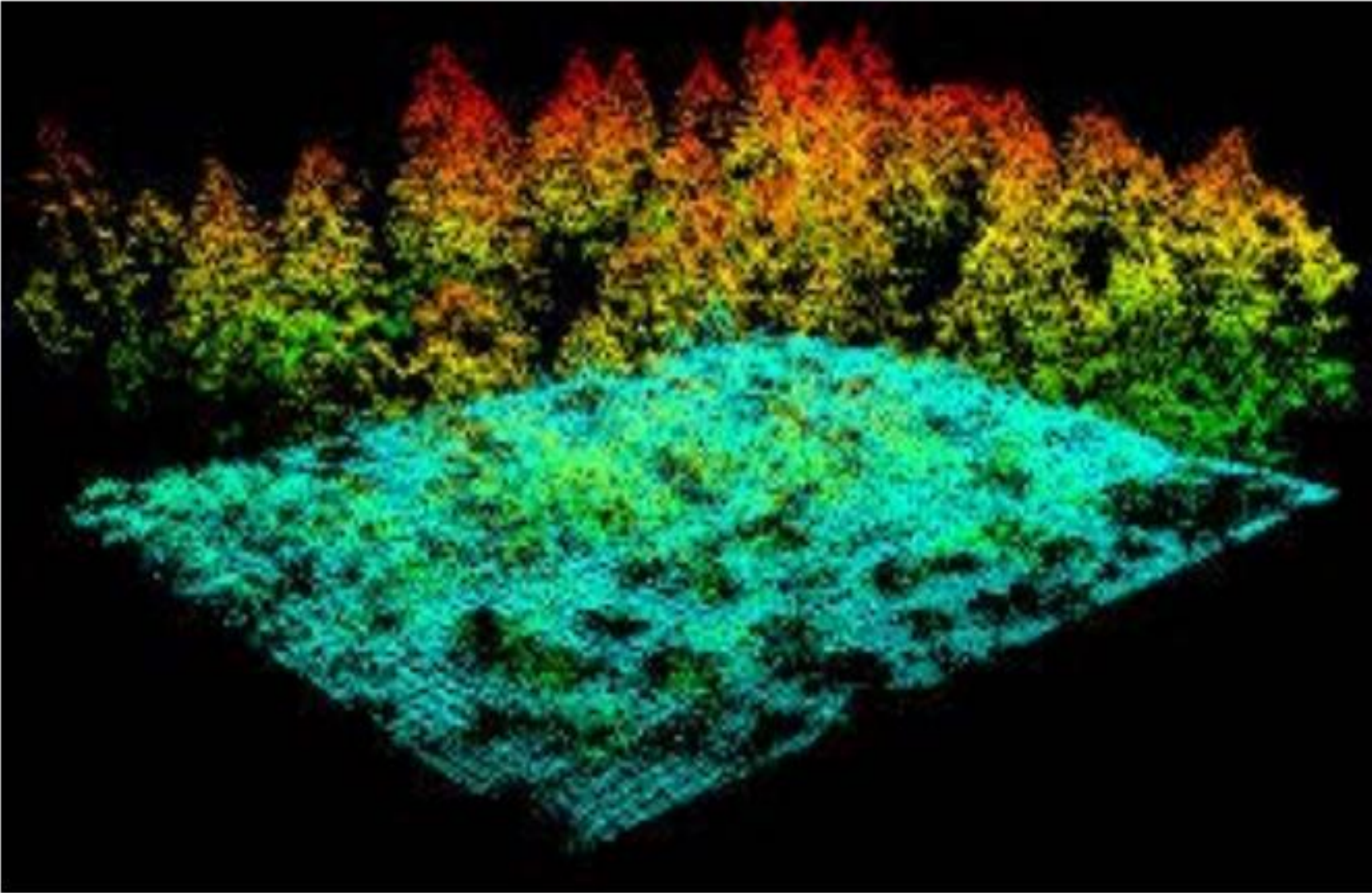
(Remote Sensing course, SLU)



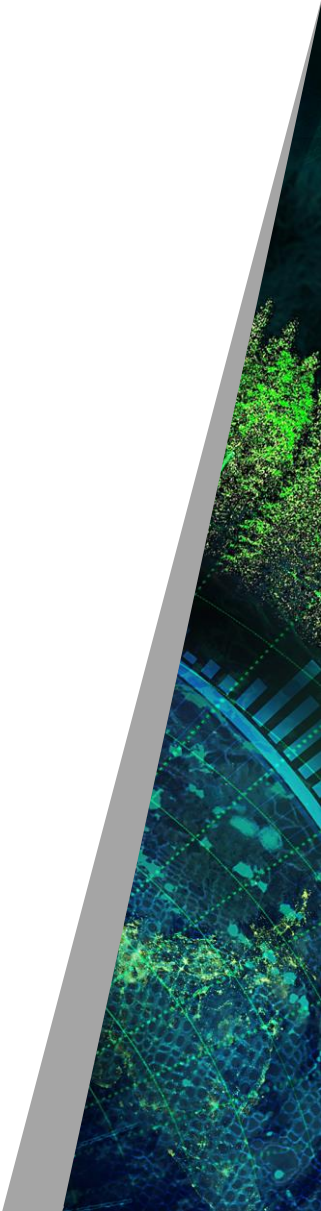


(Remote Sensing course, SLU)

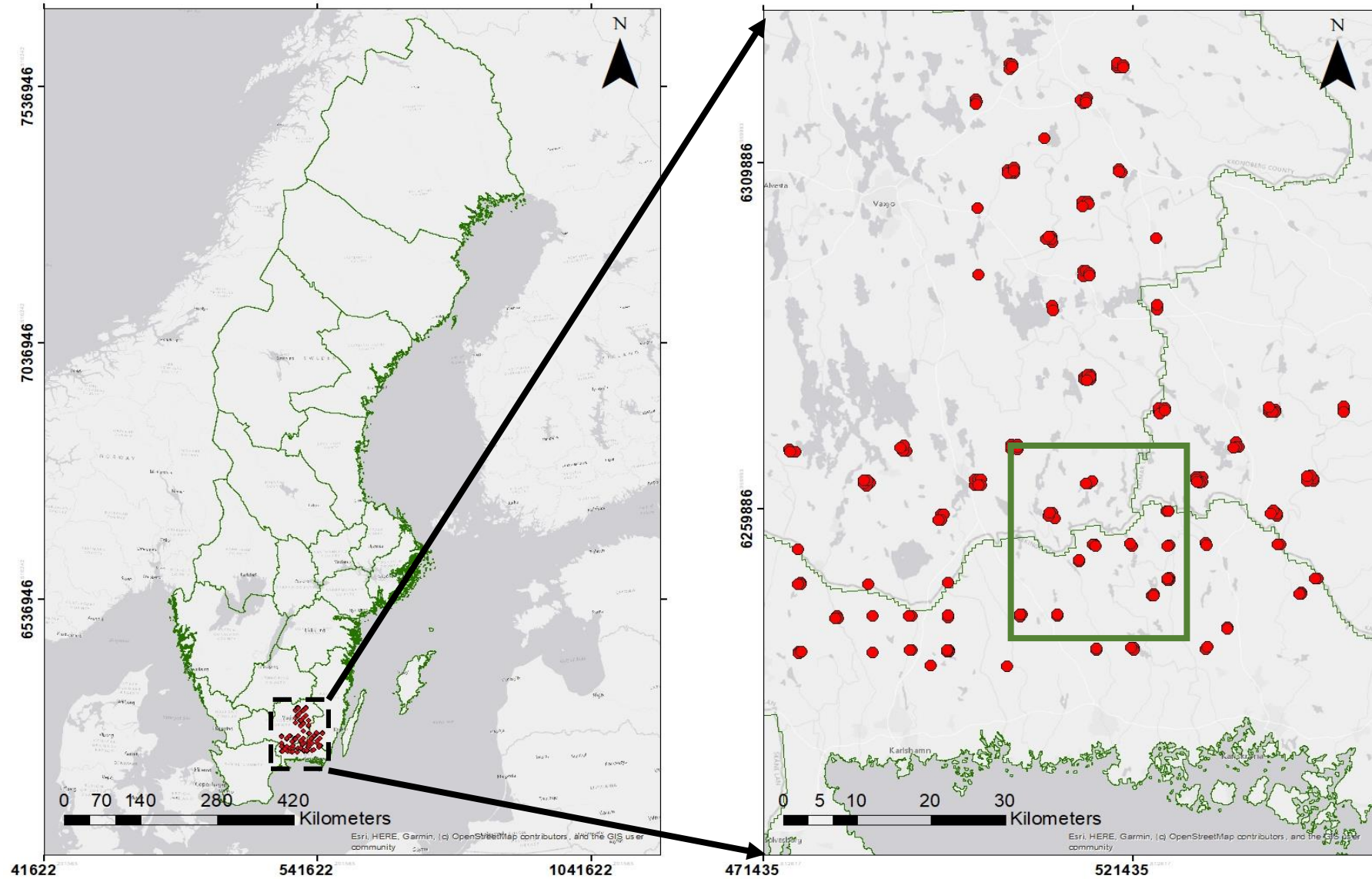




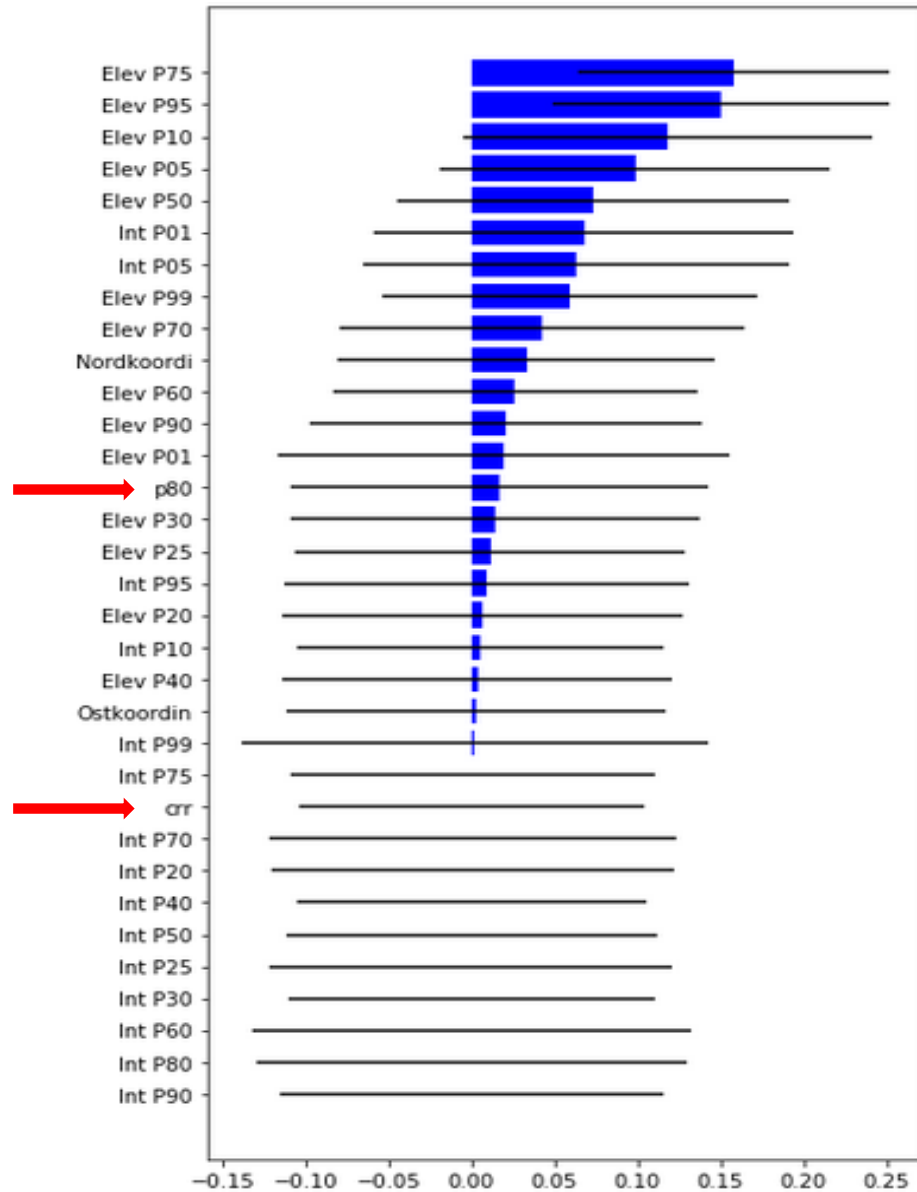
(Remote Sensing course, SLU)



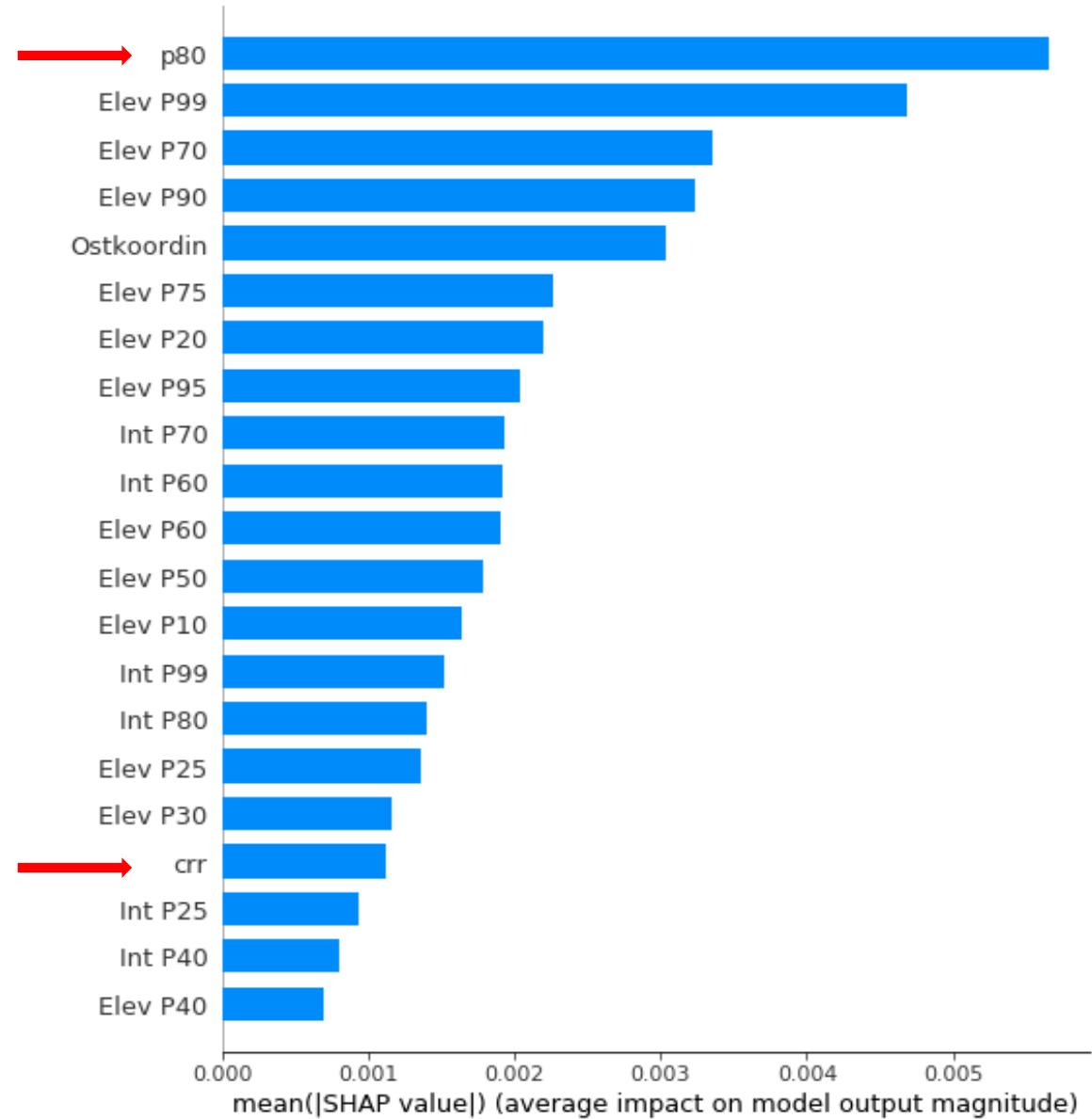
## Study Area



## RFR



## FF-NN





```
glm(TotalAGB ~ crr + crrP80, family = Gamma(link = "sqrt"))
```

Coefficients:

	Estimate	Pr(> t )
(Intercept)	8.93286	< 2e-16 ***
crr	-14.33267	6.63e-11 ***
crrP80	1.12565	< 2e-16 ***

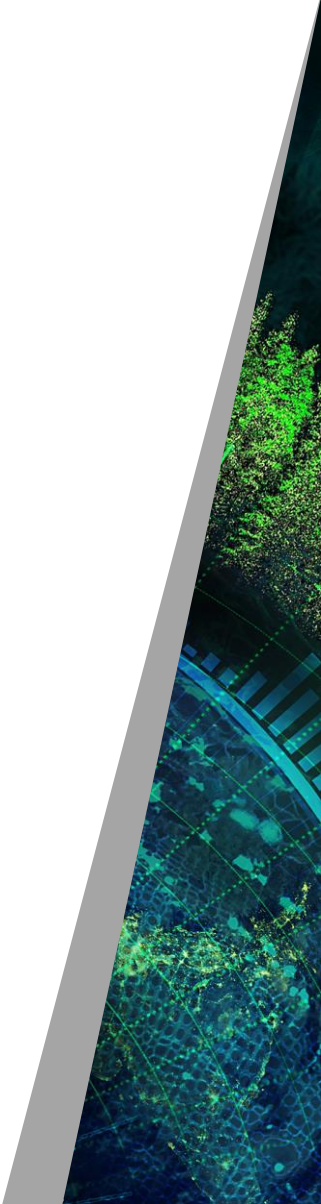
---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

```
RMSE <- 63.48
```

```
R^2 <- 0.45
```

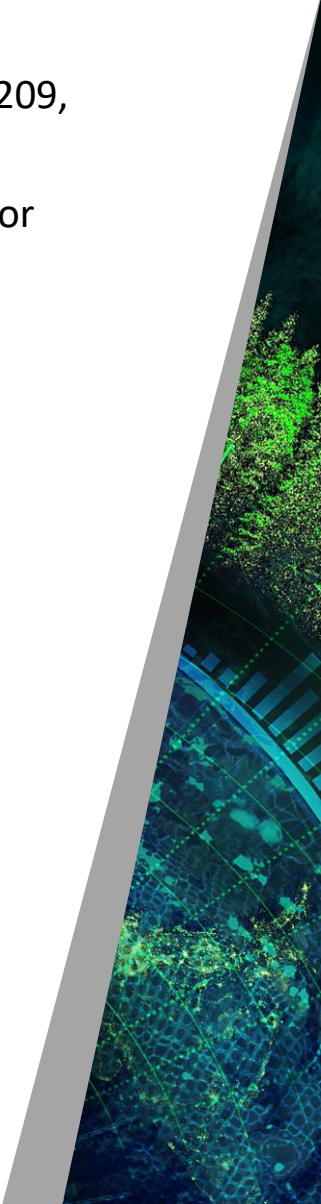
Mukhopadhyay et al. (in prep.)



## References:

R. Mukhopadhyay, I. Indirabai, M. Nilsson, M. Egberth, E. Holmström, and M. Ekström, “Modelling of Aboveground Biomass Change Using LiDAR Metrics and NFI Field Data: A Case Study of Southern Sweden,” in *SilviLaser Conference 2021*, pp. 205–209, doi: 10.34726/WIM.1982.

R. Mukhopadhyay, H. J. Persson, E. Lindberg, S. Saarela, M. Ekström, and M. Nilsson, “Estimation of Prediction Uncertainty for Forest Aboveground Biomass using Gamma Regression Analysis: A Case Study in South-Central Sweden” (in prep.).





**Thank you !!**

