

# Developing Mathematical Geosciences related applications with MATLAB



Assist. Prof Güneş ERTUNÇ  
Hacettepe University  
[gertunc@hacettepe.edu.tr](mailto:gertunc@hacettepe.edu.tr)

† Image courtesy of “Museum of Obsolete Media”

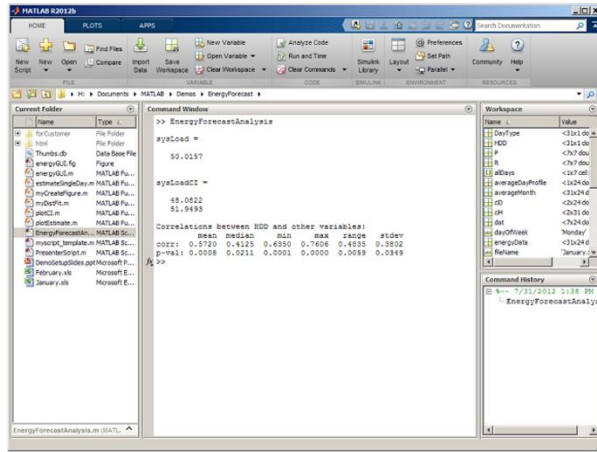
[https://blogs.mathworks.com/loren/2012/09/12/the-matlab-r2012b-desktop-part-1-introduction-to-the-toolstrip/?doing\\_wp\\_cron=1698124420.0565381050109863281250](https://blogs.mathworks.com/loren/2012/09/12/the-matlab-r2012b-desktop-part-1-introduction-to-the-toolstrip/?doing_wp_cron=1698124420.0565381050109863281250)

<https://blogs.mathworks.com/simulink/2023/03/20/whats-new-in-simulink-r2023b/>

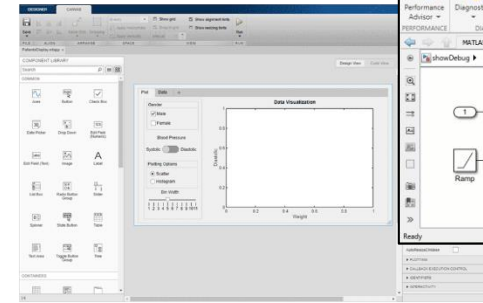
<https://www.mathworks.com/products/matlab/app-designer.html>



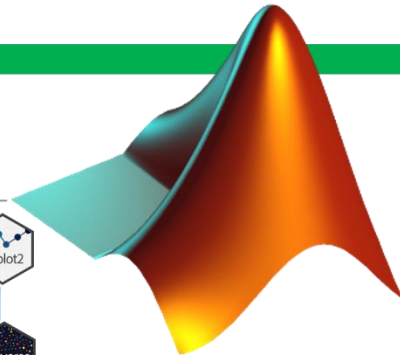
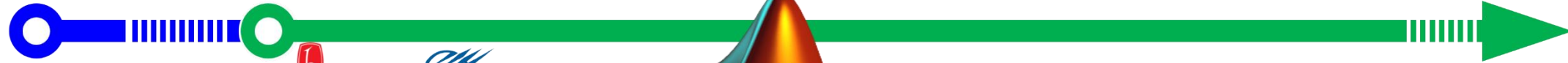
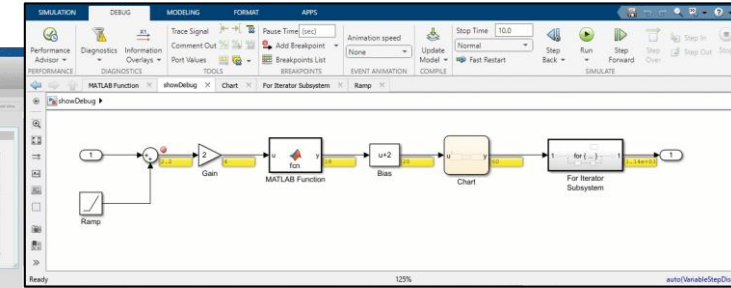
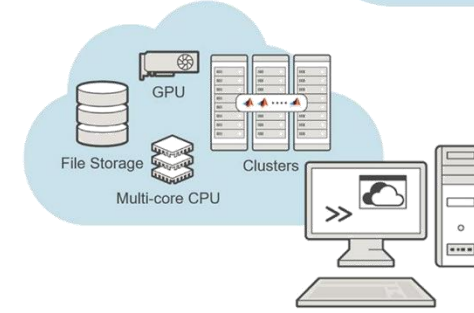
*terminus a quo*  
early 90's



2000 – 2020 era



2024 – beyond



```

Command Window

>> ver

-----
MATLAB Version: 9.8.0.1873465 (R2020a) Update 8
MATLAB License Number: 4[REDACTED]4
Operating System: Microsoft Windows 11 Pro Version 10.0 (Build 22621)
Java Version: Java 1.8.0_202-b08 with Oracle Corporation Java HotSpot(TM) 64-Bit Server VM mixed mode
-----

MATLAB                               Version 9.8           (R2020a)
MATLAB Compiler                       Version 8.0           (R2020a)
Statistics and Machine Learning Toolbox Version 11.7          (R2020a)
fx >> |

```

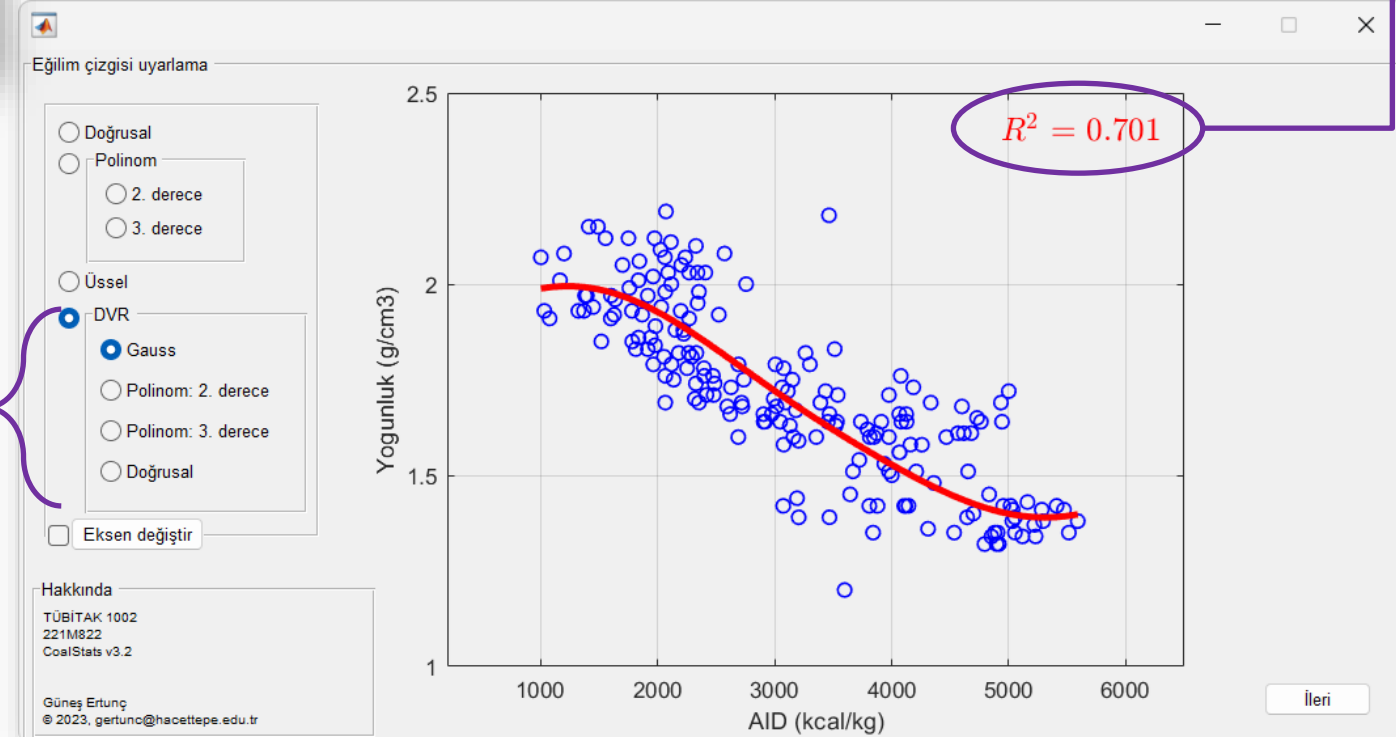
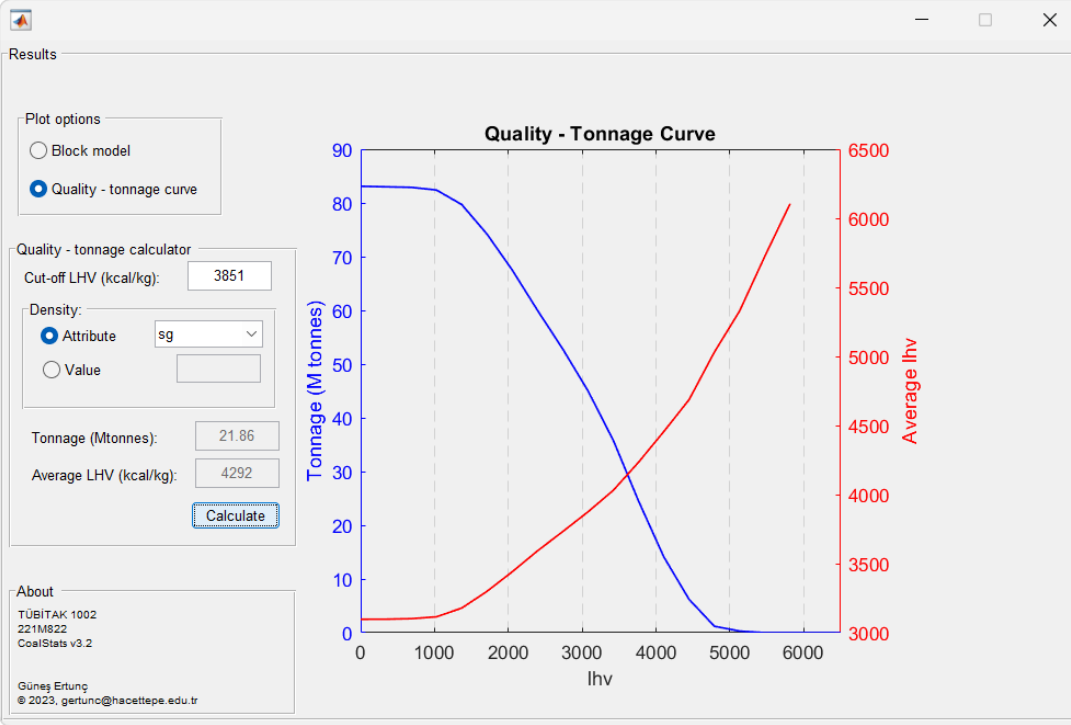
§

§ MATLAB, Compiler, and Statistics and Machine Learning Toolbox Release 2020a, The MathWorks, Inc., Natick, Massachusetts, United States.

# highly customizable

```
customleg = line(nan, nan, 'LineStyle', 'none', 'Marker', 'none', 'Color', 'none');
l=legend(customleg, strcat('$R^{2}$ =', " ", string(r_sqr)), 'interpreter', 'latex');
l.TextColor='r';
l.FontSize=15;
legend boxoff
```

Published with MATLAB® R2020a



MathWorks® Products Solutions Academia Support Community Events

## Help Center

CONTENTS

« Documentation Home

« AI, Data Science, and Statistics

« Statistics and Machine Learning Toolbox

« Regression

« Support Vector Machine Regression

**fitsvm**

Fit a support vector machine regression model

**Syntax**

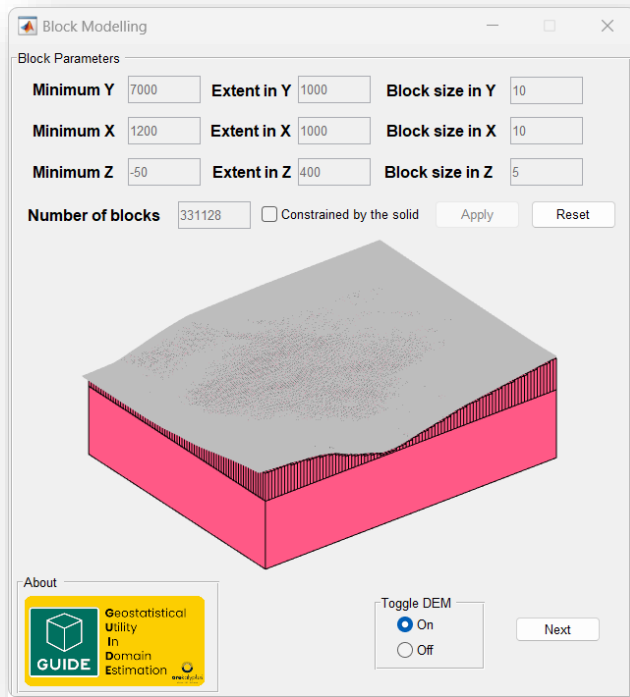
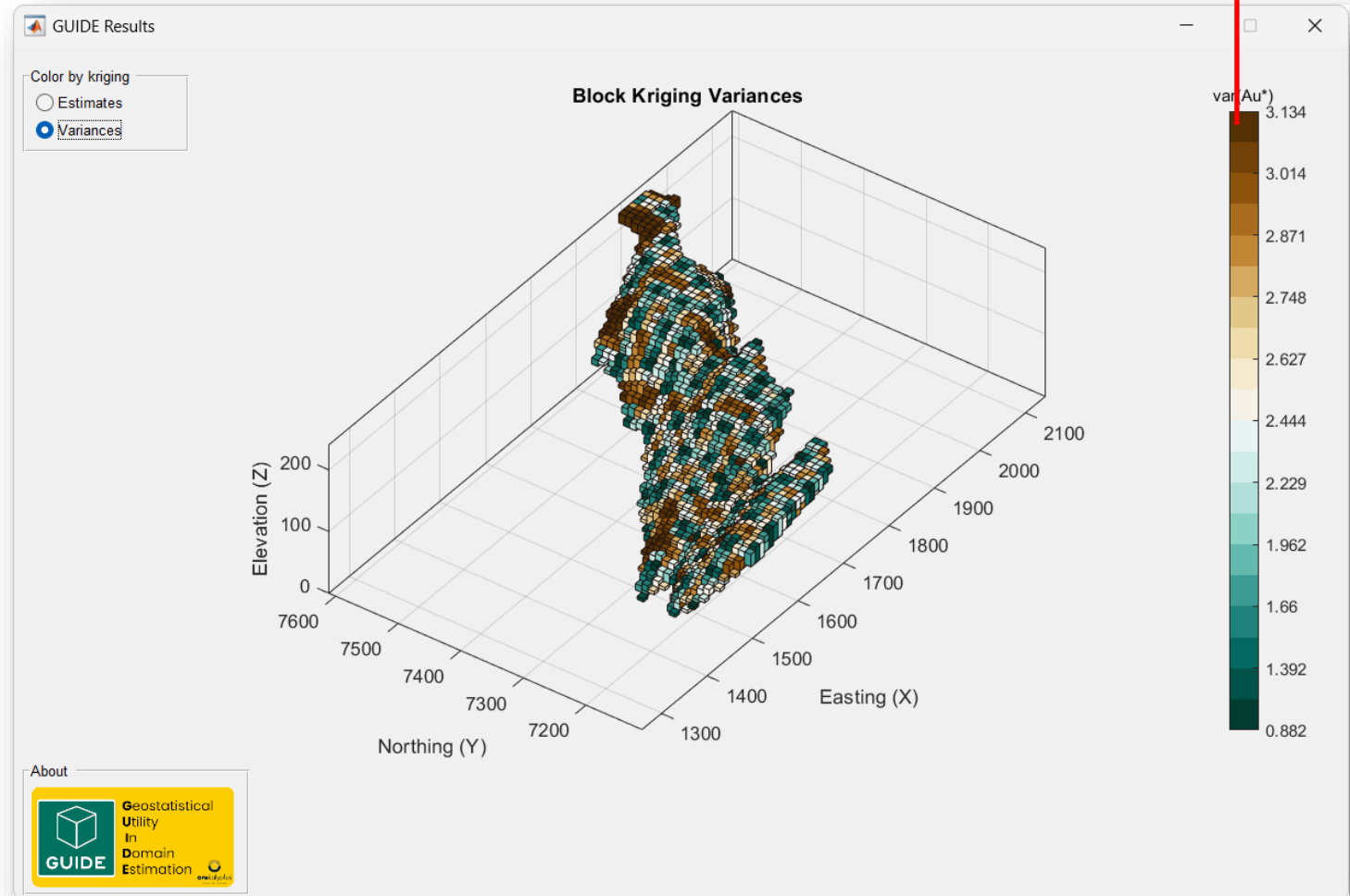
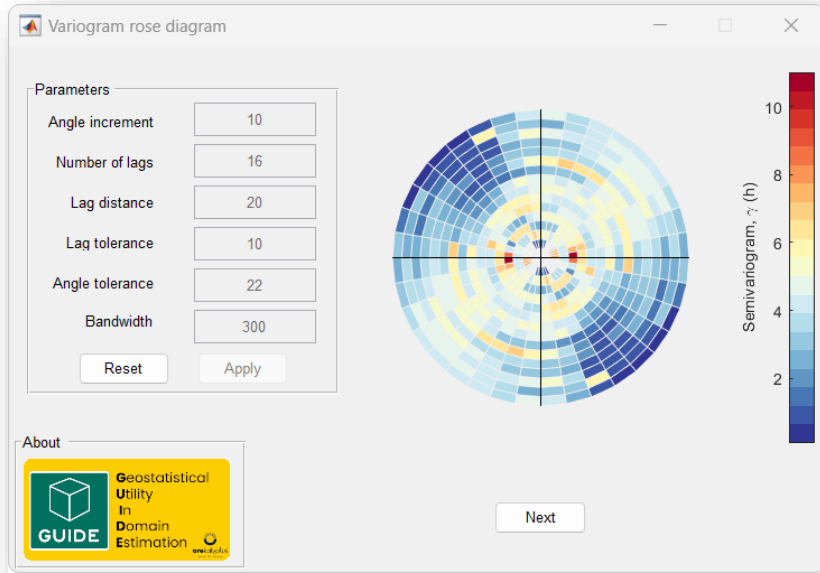
```
Mdl = fitsvm(Tbl,ResponseVarName)
Mdl = fitsvm(Tbl,formula)
Mdl = fitsvm(Tbl,Y)
```

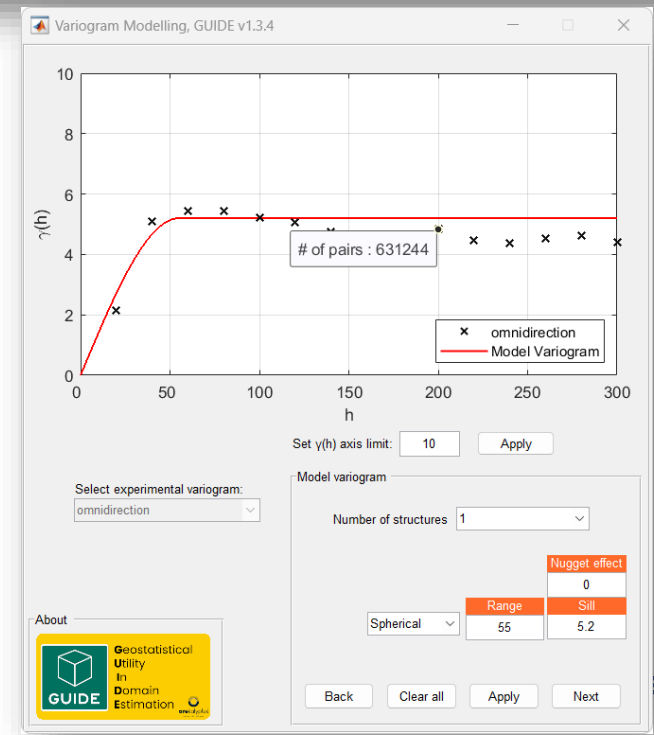
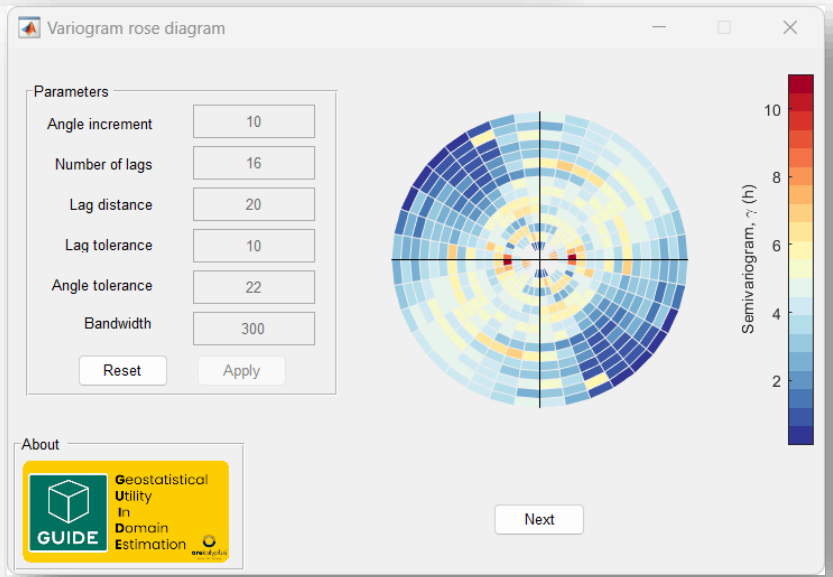
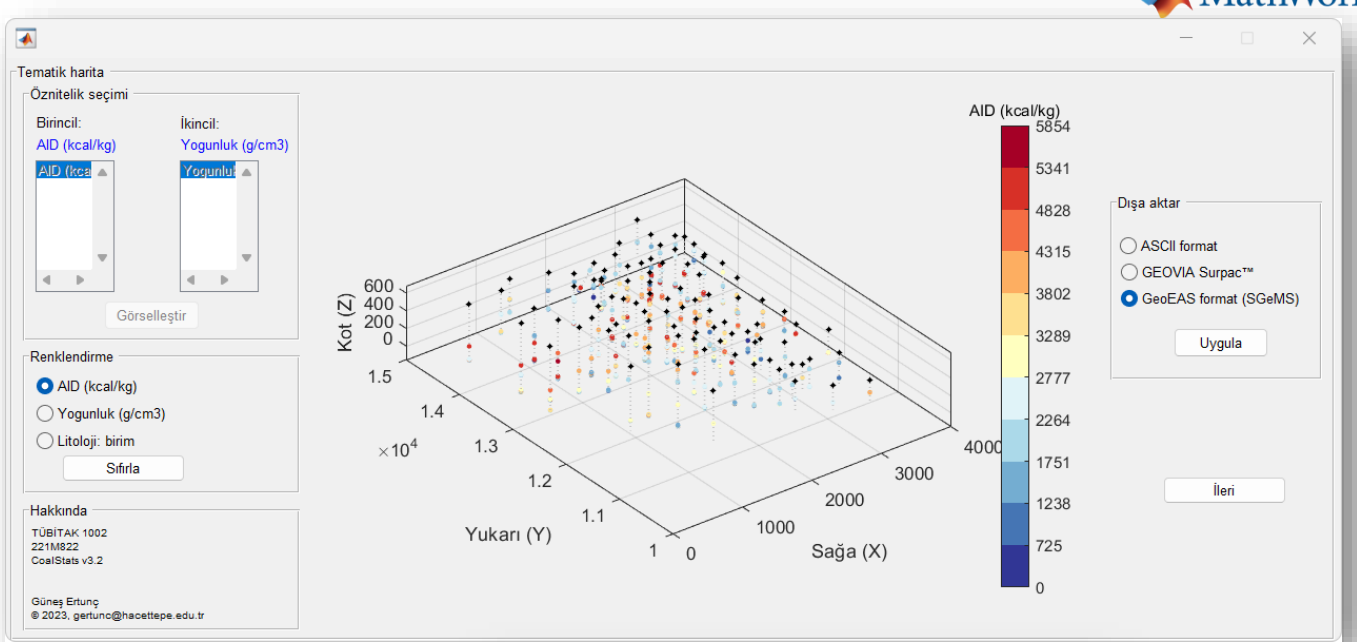
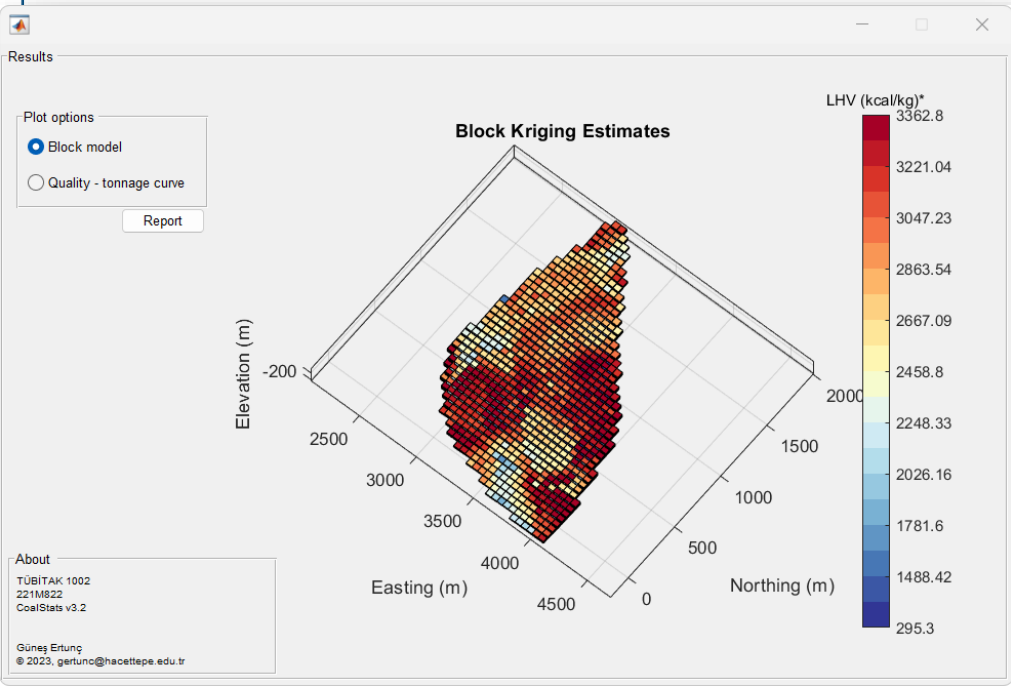
ON THIS PAGE

# highly customizable

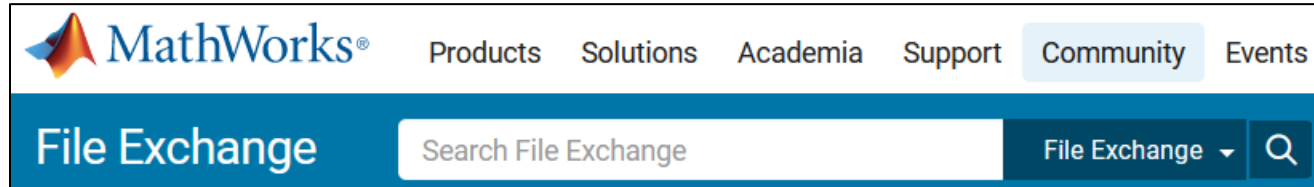
Adapted from RColorBrewer package.  
colorblind palettes RdYIBu and BrBG

```
library("RColorBrewer")
```





# Future plans



## Get and Share Code

Explore free, open-source MATLAB and Simulink code.  
Publish your code to help others.

[Publish your code](#)

# Thank you

## Q&A – 5min

Assist. Prof Güneş ERTUNÇ  
Hacettepe University  
[gertunc@hacettepe.edu.tr](mailto:gertunc@hacettepe.edu.tr)



**HACETTEPE  
UNIVERSITY**