

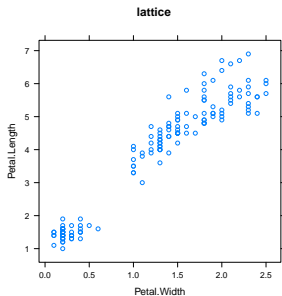
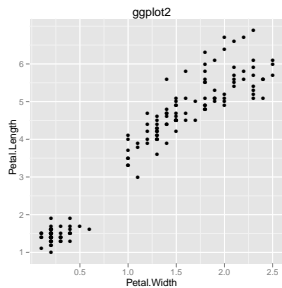
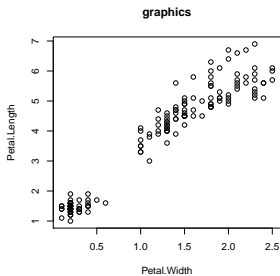
uniPlot - a package to uniform and customize R graphics

Sina Rüeger

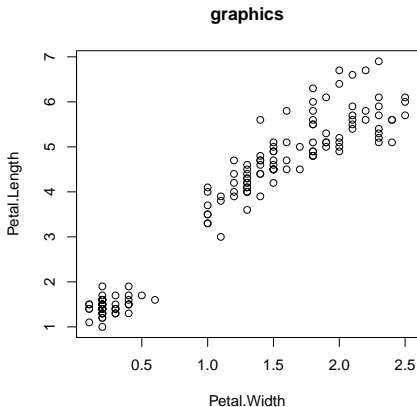
IDP Institute of Data Analysis and Process Design
ZHAW Zurich University of Applied Sciences

useR!
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uniPlot makes the work with graphical displays in R produced for reports less time intensive.

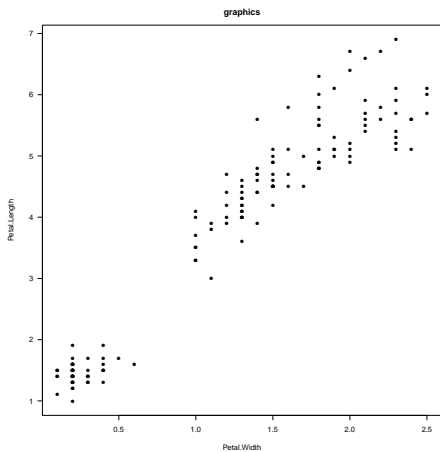


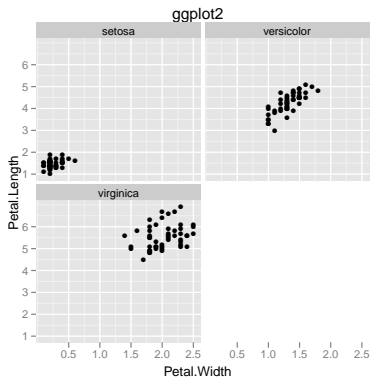
- Used packages for data analysis: **graphics**, **ggplot2** and **lattice**
- Writing a report → formatting of graphical displays necessary



```
> par(pch = 16, las = 1, mar = c(4, 4, 3, 2), cex = 0.5)
```

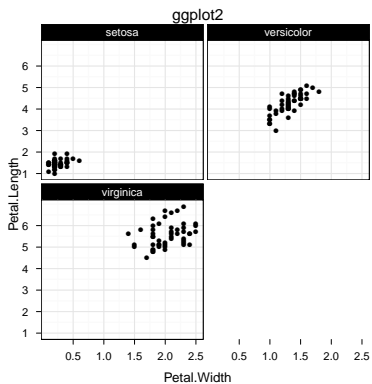
```
> plot(iris$Petal.Width, iris$Petal.Length, main = 'graphics', xlab = 'Petal.Width', ylab =  
'Petal.Length')
```



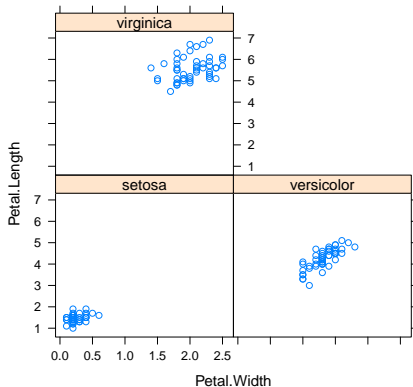


```
> theme_set(theme_bw())
```

```
> qplot(Petal.Width, Petal.Length, data = iris, main = 'ggplot2', xlab = 'Petal.Width', ylab =
'Petal.Length')
+ facet_wrap( Species)
+ opts(axis.title.x = theme_text(vjust = 0), panel.border = theme_rect(colour = 'black'),
strip.background = theme_rect(colour = "black", fill = 'black'), strip.text.x =
theme_text(colour = 'white'))
```

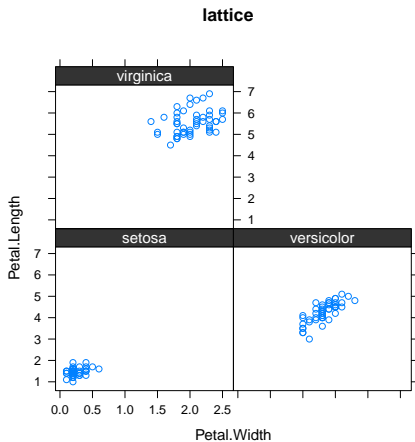


lattice



```
> trellis.par.set(strip.background = list(col = gray(0.2)), add.text = list(col = 'white'))
```

```
> xyplot(Petal.Length ~ Petal.Width | Species, iris, main = 'lattice', xlab = 'Petal.Width', ylab = 'Petal.Length')
```



Solutions

- use only one package
- use function `ggplot2like` package **latticeExtra** for **ggplot2** and **lattice**
- adjust settings of packages **graphics**, **ggplot2** and **lattice**

Idea of uniPlot

- 1 Synchronize options over **graphics**, **ggplot2** and **lattice** by adjusting *one* of them.
- 2 Making these options *persistent* over one R session.
- 3 Reset option.

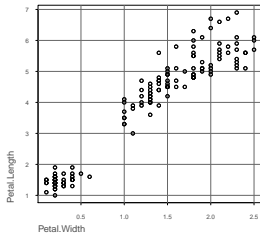
Simple usage!

Application

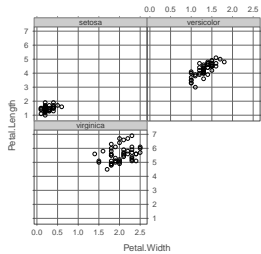
```
uniPlot(  
type = 'uniPlot',  
graphics = NULL,  
ggplot2 = NULL,  
lattice = NULL  
)
```

> uniPlot()

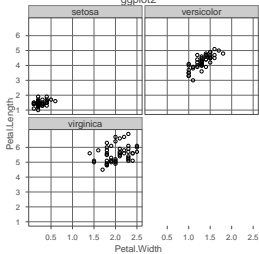
graphics



lattice

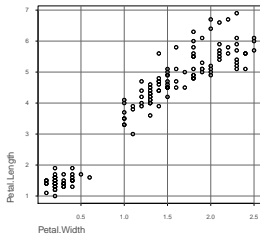


ggplot2

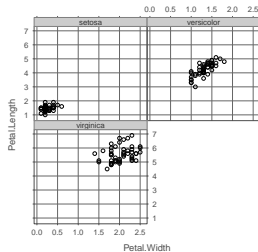


```
> uniPlot(graphics = list(col.main = 'red'))
```

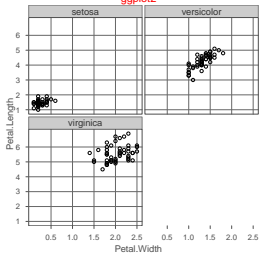
graphics



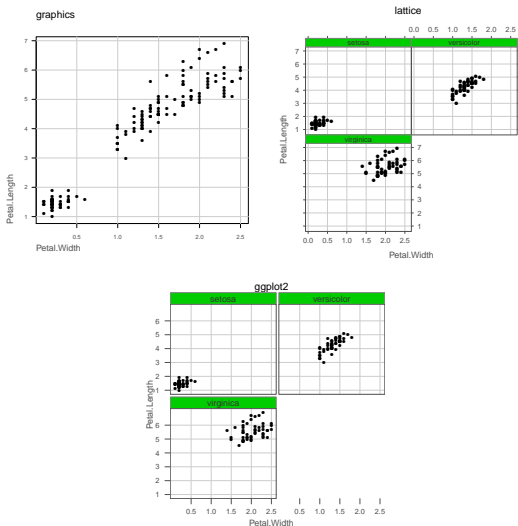
lattice



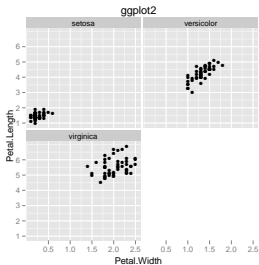
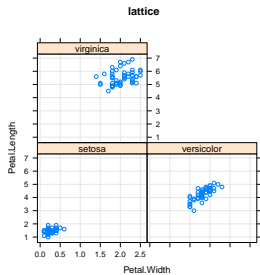
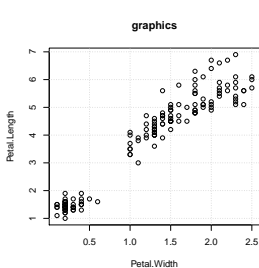
ggplot2



```
> uniPlot(graphics = list(pch = 16, reference.col = gray(0.8), tcl = (-0.5), col.main = 'black'), lattice = list(strip.background.col = "green3"))
```




```
> uniPlot(type = 'before') ## reset options
```



Open Points

- clean up code → gaps in alignment of options, lists in synchronizing
- creating styles / allowing themes
- color palettes
- show settings

Contact

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