

# Lessons learned from UseR! 2019

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# Why this talk

- UseR is an exceptional occasion
  - to meet with R users of all levels of expertise
  - to discover topics and tools we might ignore
  - To see what's going on in the R-universe
- The quantity of materials available is overwhelming
- Goal:
  - Gentle introduction to UseR and to this year's materials

See also <https://ryo-n7.github.io/2019-07-21-user2019-reflections/>

# What is UseR!

useR! — International R User Conference



**useR! 2020** will be held in St. Louis, Missouri from July 7 to July 10 at the Marriott St. Louis Grand. Follow '[@useR2020stl](#)' for further news.

This is the main meeting of the R user and developer community, its program consisting of both invited and user-contributed presentations:

- The invited keynote lectures cover a broad spectrum of topics ranging from technical and R-related computing issues to general statistical topics of current interest.
- The user-contributed presentations are submitted as abstracts prior to the conference and may be related to (virtually) any R-related topic. The presentations are typically organized in sessions of regular talks, lightning talks, and poster presentations.
- The RFCC actively invites potential local organisers to submit proposals regarding future useR! conferences. Groups thinking about hosting a useR! conference are welcome to contact the RFCC by email at [R-conferences@r-project.org](mailto:R-conferences@r-project.org).

# Recent UseR! meetings

- Usually, no proceedings are published for useR! conferences.
- [useR! 2019](#), Toulouse, France.
- [useR! 2018](#), Brisbane, Australia. ([local copy](#)).
- [useR! 2017](#), Brussels, Belgium. ([local copy](#)).
- [useR! 2016](#), Stanford, CA, USA. ([local copy](#)).
- [useR! 2015](#), Aalborg, Denmark. ([local copy](#)).
- [useR! 2014](#), Los Angeles, CA, USA. ([local copy](#)).
- [useR! 2013](#), Albacete, Spain ([local copy](#)).
- [useR! 2012](#), Nashville, TN, USA ([local copy](#)).
- [useR! 2011](#), Coventry, UK ([local copy](#)).
- [useR! 2010](#), Gaithersburg, MD, USA. ([local copy](#)).
- [useR! 2009](#), Rennes, France ([local copy](#)).
- [useR! 2008](#), Dortmund, Germany ([local copy](#)).
- [useR! 2007](#), Ames, IA, USA ([local copy](#)).
- [useR! 2006](#), Vienna, Austria ([local copy](#)).
- [useR! 2004](#), Vienna, Austria ([local copy](#)).

# Types of activities

- Developer's day
- Tutorials
- Keynotes
- Talks
  - Lightning talks
- Posters

# UserR! materials are free

- Slides are available from the conference website
  - [http://www.user2019.fr/talk\\_schedule/](http://www.user2019.fr/talk_schedule/)
- Keynotes are recorded and available from R consortium Youtube channel
  - [https://www.youtube.com/channel/UC\\_R5smHVXRYGhZYDJsXnXTwg](https://www.youtube.com/channel/UC_R5smHVXRYGhZYDJsXnXTwg)
- Tutorials are available from this github repo
  - <https://github.com/sowla/useR2019-materials>

# Pre-conference Tutorials

- Short half-day session about "hot stuff"
  - Don't see them as "intended for you to to learn",
  - But useful to "get you introduced into the topic"
  - Some tutorials repeated along several years (life cycle)
    - *Rise → Grow → Become Standard / Fade away*
- Our out-of-the bag choice
  - Package Development <https://rstd.io/pkg-dev> 😊
  - [Docker for Data Science: R, ShinyProxy and more](#) 😞😞
  - [Introduction to generalized non linear models](#) 😊

# Conference tracks

- Keynotes (invited talks)
- Applications
- Bioinformatics
- Data Handling
- Education
- Models
- Movements & Transport
- Multivariate Analysis
- Reproducibility
- Shiny
- Social science marketing & business
- Biostats & Epidemiology
- Community & Conferences
- Data mining
- Forecasting
- Numerical methods



# Conference tracks

- Programming
- Open Science, education & community
- Operation & Data products
- Spatial & Time series
- Text Mining
- **Workflows & development**
- Big/high-dim data
- Contribution & collaboration
- Methods & collaboration
- Performance
- Shiny & Web
- And don't forget POSTERS

# Selected talks (day 1)

- R for better science in less time
- Golem: Framework for building Robust ... Shiny Apps
- Shiny app deployment and integration into a custom website gallery
- Enhancements to data tidying (Hadley wickham)
- The "Rmd first": when projects start with documentation
- A missing value tour in R (Julie Josse, FactoMineR)

# Selected talks (day 2)

- Shiny's Holy Grail: Interactivity with reproducibility
- Transitioning between various RMarkdown packages for workflow optimization
- An Approach to Project Workflow for Professional Biostatistical Services
- iSEE: interactive and reproducible exploration and visualization of genomics data
- POMA: Shiny tool for targeted metabolomic data statistical analysis and visualization
- How Bioconductor advances science while contributing to the R language and community

# Selected talks (day 3)

- Packaging Shiny applications
- Shiny app deployment and integration into a custom website gallery
  - Hot use of docker, Kubernetes, ...
- Summary of developments in R's data.table package
- Using advanced R packages for the visualisation of clinical data in a cancer hospital setting
- rGSAn: a R package dedicated to the gene set analysis using semantic similarity measures

# Some conclusions

- tidyverse very popular but becoming **the** Standard?
- Shiny is even more popular
  - Many ways to make it better, more robust, more extensible, but easier?
- Reproducibility and workflows
  - No discussion about how important they are
  - Only about how to do better, wider
- Some topics are becoming common
  - Docker, Text mining