



COSMO-  
CLM

Climate Limited-area  
Modelling Community

# **CLM Assembly 2018**

**Christian Steger**

**CLM Assembly  
September 18, 2018  
Karlsruhe, Germany**



# Welcome to the CLM Assembly 2018

**Karlsruhe, September 18 - 21, 2018**



## We welcome all new members!!!

Please talk to Barbara/me or some other more experienced members

? how to best integrate into the community ?

- from which working group you benefit most and
- to which working group you can contribute best

Especially: new members are asked to make suggestions on the content of the “COSMO-CLM beginners manual”

**What would you need and where would you look for it?**

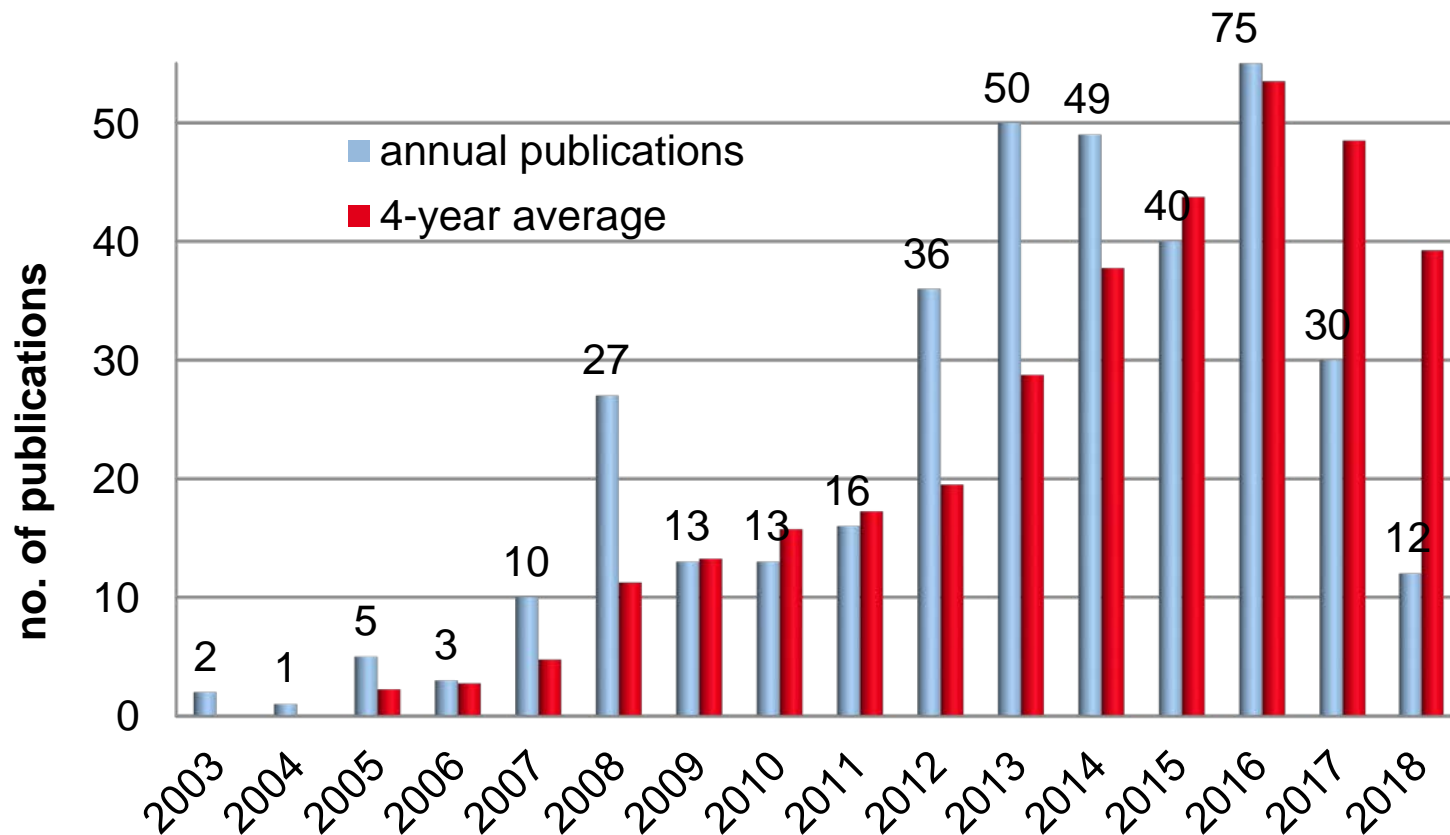
 email to [clm.coordination@dwd.de](mailto:clm.coordination@dwd.de)

**Daniel Lüthi**  
**12.09.1962 – 20.01.2018**





# CLM-Community development of publications





# CLM-Community Newsletter

To improve the communication  
within the growing community:  
**CLM-Community Newsletter**

- 11<sup>th</sup> issue published in August

Send your comments, contributions,  
etc. to  
[clm.coordination@dwd.de](mailto:clm.coordination@dwd.de)

**Feedback**  
is always very welcome!

August 2018

Climate Limited-area  
Modelling Community

**Newsletter**  
No. 11

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Welcome to the 11<sup>th</sup> newsletter of the CLM-Community!

One of the major challenges for the CLM-Community in the next months to years is the transition from COSMO-CLM towards a new regional climate model. The ICON model is now well established in the NWP section of DWD and it will replace COSMO completely for weather forecasts within the next 2 to 3 years. The CLM-Community has to prepare for that and make sure that a state of the art modeling system allowing climate research and providing climate projections in at least the quality of COSMO-CLM is available in the medium term. Therefore, the project group PG\_ICON started in 2013 to investigate the necessary steps. A lot of progress has been made since then in developing a limited area version of ICON suitable for long-term climate integrations, see e.g. the research note of Trang Van Pham in this newsletter. As soon as an appropriate model version is available, test simulations will be conducted. The results will be compared to the results of the latest COSMO-CLM version. We are very curious about the outcome of this analysis. Everybody is invited to join this effort!

Furthermore, this issue contains a research note by Linda Schlemmer about a new groundwater and runoff formulation, reports on the latest IPCC meetings and on the status of the Special Report on Climate Change and Land, a note on CORDEX-CORE activities and an interview with Natalie Laube from KIT. Enjoy reading and we hope to see you all at the CLM Assembly in Karlsruhe!

Yours sincerely,  
Barbara Früh,  
Susanne Brienen and  
Christian Steger

ICON grid with grid refinement over Europe.  
Figure by F. Prill (DWD)

**See YOU at the**  
**CLM Assembly**  
**2018**  
**18.09 – 21.09.2018**  
**Karlsruhe, Germany**

**Registration deadline**  
**24.08.18**

**Invited speaker:**  
**Thomas Stocker**  
<http://clm2018.imk.kit.edu>

**Announcement:**  
**ICCARUS 2019**  
**18. 03– 22. 09.2019**  
**Offenbach, Germany**





# CLM-Community Webpage

To improve the communication  
within the growing community:  
**CLM-Community WEBPAGE**

Send your comments,  
contributions, etc. to  
[clm.coordination@dwd.de](mailto:clm.coordination@dwd.de)

**Feedback**  
is always very welcome!



## CLM Web Server

- **hacker attack** to CLM web server
- need to set up a new server
- **consequences:**
  - CLM-Community homepage will be divided in two parts:
    - a public part &
    - a secure part for the tools (web pep, namelist tool, registration, ...);  
secure part will only be available for CLM-Community members
  - **everyone who wants to access the tools must apply for CLM-Community membership**
  - everyone has to change password once the webpage is available again





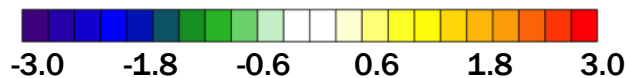
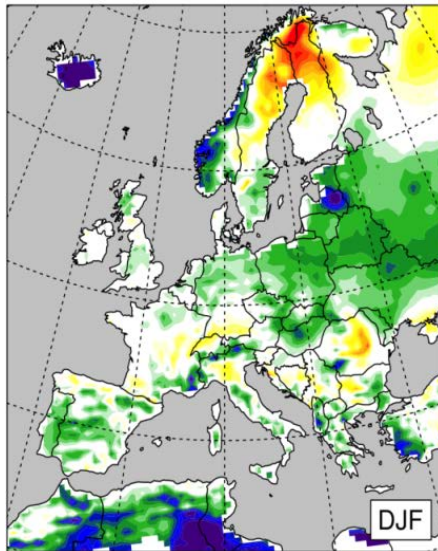
# A Groundwater and Runoff Formulation for Weather and Climate Models



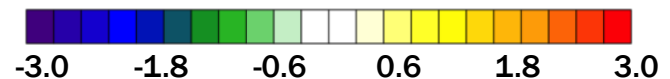
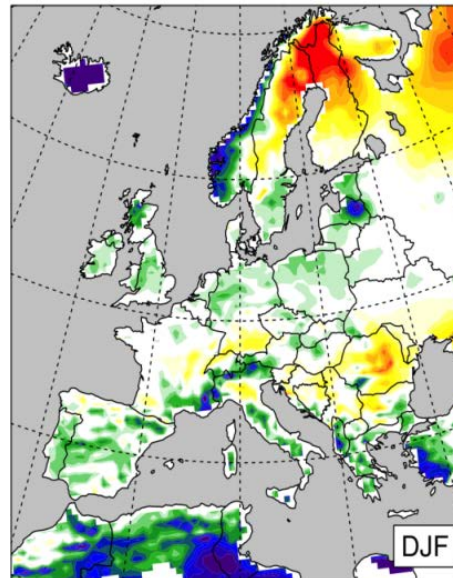
Schlemmer L., C. Schär, D. Lüthi and L. Strebel, 2018, *J. Adv. Model. Earth Syst.*

Temperature biases in CCLM  
simulations with  $\Delta x=50$  km  
(ERA driven 1981-1990)

CTRL: T2m bias [K]



REVISED: T2m bias [K]



**DJF** cold-bias slightly reduced, positive bias over North-Eastern Europe increased





# ICON development for regional climate studies

CMIP6-DICAD

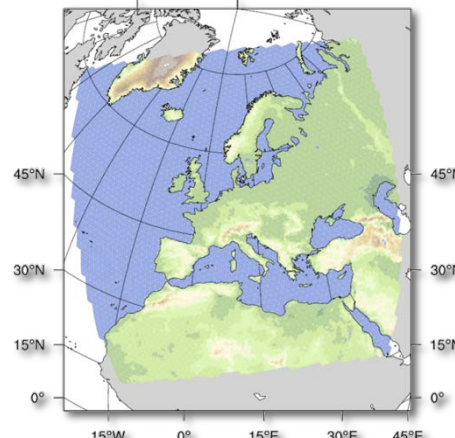
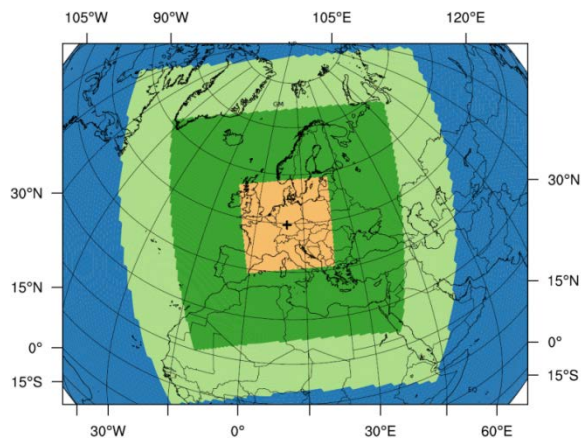
ICON-ESM  
ECHAM physics  
(MPI)

ICON-LAM  
NWP physics  
(DWD)

ProWaS

ICON-EUclim  
with nesting  
option

ICON-CLM  
regional climate  
model





## Development CCLM2CMOR: community effort

- coordinated international projects like CMIP and CORDEX request data in standardized form
- Standardization is necessary for world wide distribution via ESGF and integration in long term archives like WDCC
- **Community effort to develop a flexible tool for the standardization process (contributions from BTU, KIT, DWD, ETH, support from DKRZ)**
- Source code administrator: Marie-Estelle Demory (ETH)
- Available on GitHub (<https://github.com/C2SM-RCM/CCLM2CMOR>)
- **Program has already been used to standardize data for publication in ESGF**



# CLM Assembly 2018

**Karlsruhe, September 18-21, 2018**

**CLM-Community for beginners!**

**23 scientific presentations in the plenary**

**Poster session with 22 poster**

**9 hours of Working & project group meetings**

**Community Meeting**

**Climate lecture by Thomas Stocker (Wednesday)**

**Icebreaker (Today)**

**Conference Dinner (Thursday)**





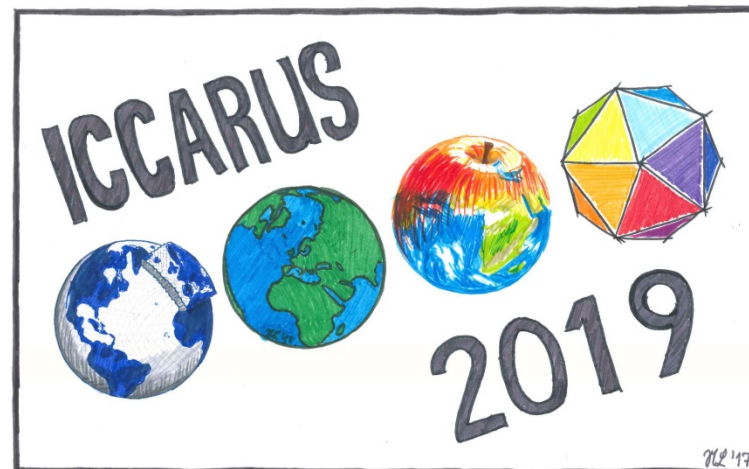
## Next Meetings ....

**18 - 22 March 2019**

ICCACUS 2019

**08 - 12 April 2019**

ICON-LAM/COSMO-CLM training course



**17 - 20 September 2019**

**CMCC - Centro Euro-Mediterraneo sui  
Cambiamenti Climatici**

**CIRA - Italian Aerospace Research  
Center**

**Cava de' Tirreni, Italy**



**... all that remains is to wish all of you**

☺ ***a fascinating assembly,***

☺ ***many fruitful discussions, and***

☺ ***new exciting collaborations,***

☺ ***and, of course, a lot of FUN !!!!***

