

# GIP

# Gesellschaft für Inverse Probleme e.V.

*Inverse Problems Society of the German Speaking Countries*



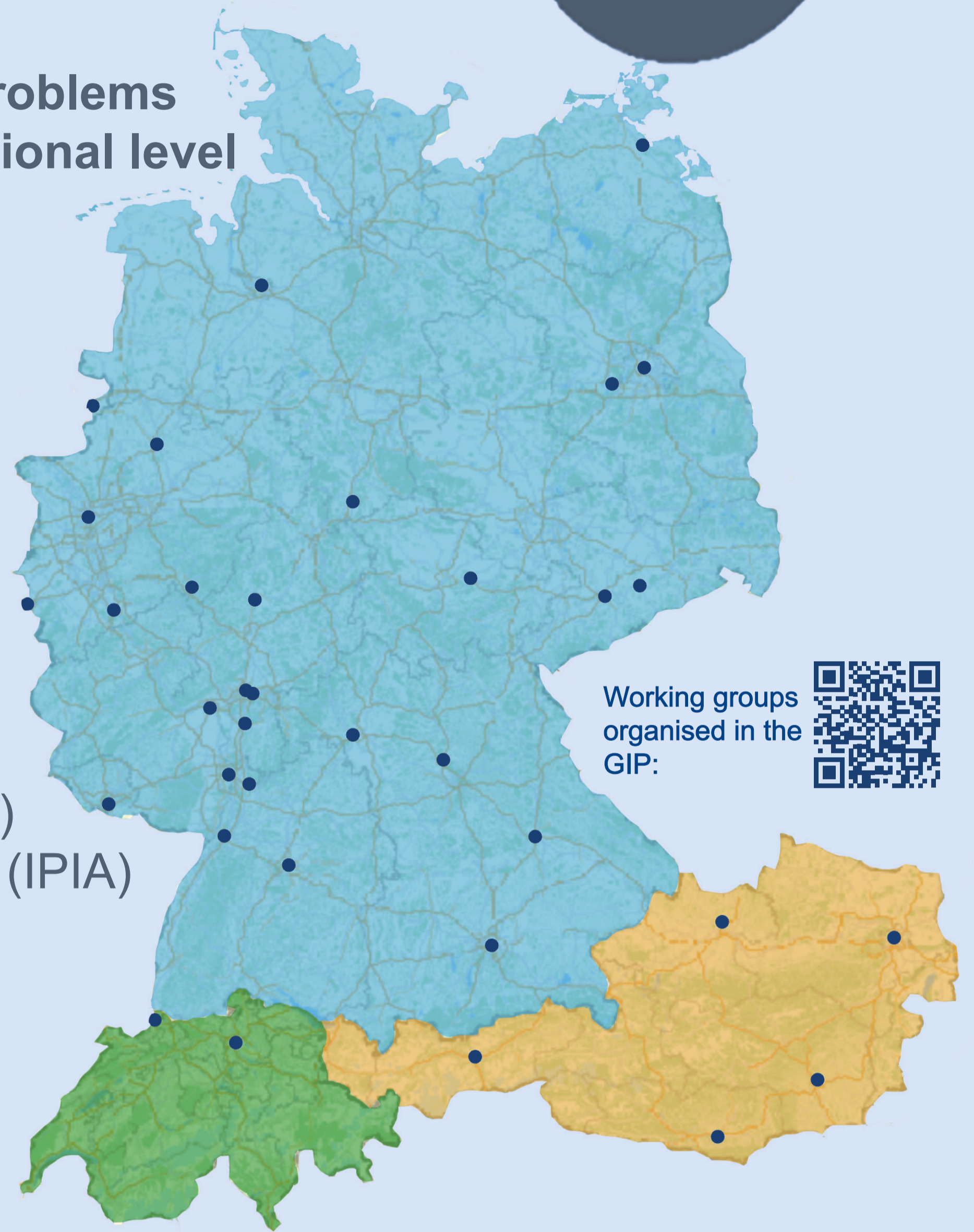
- ▶ Aiming to promote scientific research on inverse problems and to represent the field on a national and international level



## KOOPERATIONEN

### COOPERATIONS

- ▶ recognized as an activity group within the Deutsche Mathematiker-Vereinigung (DMV)
- ▶ Inverse Problems International Association (IPIA)



Working groups organised in the GIP:



**CHEMNITZ SYMPOSIUM ON INVERSE PROBLEMS**  
onTOUR  
30.09. - 02.10.2019  
Frankfurt, Germany

GIP - Gesellschaft für Inverse Probleme e.V.  
Symposium on Inverse Problems  
From experimental data to models and back  
Potsdam DA Days  
September 19-21, 2022  
University of Potsdam  
Campus Griebnitzsee

**CSIP 2023 ON TOUR**  
CHEMNITZ SYMPOSIUM ON INVERSE PROBLEMS  
8.-10.11.2023  
Würzburg  
Annual meeting of the GIP - Gesellschaft für Inverse Probleme e.V.  
Invited Speakers:  
Christina Brandt (Frankfurt)  
Andreas Hauptmann (Duisburg, Essen)  
Tim Jahn (Bonn)  
Aretha Teckentrup (Edinburgh, UK)  
Scientific Committee:  
Alfio Borzi (Würzburg)  
Claudia Schillings (Bielefeld)  
Thomas Schuster (Garmisch-Partenkirchen)  
Frank Werner (Würzburg)  
Organizing Committee:  
Petra Markert-Autsch (Würzburg)  
Frank Werner (Würzburg)  
Deadline for registration: August 31, 2023  
All further information at: <https://go.uniwiue.de/csip2023>

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## JAHRESTAGUNG

### SYMPOSIUM

- ▶ started in 2002 as Chemnitz Symposium on Inverse Problems by Bernd Hofmann
- ▶ takes place annually
- ▶ occasion for young researchers to present their work

Problem is used in a wide context to describe inference on a quantity of interest from measurements of a related quantity  $g^\dagger$ . More precisely, a problem is a sort of cause for the observed effect  $g^\dagger$ . The term *inverse problem* goes back to Joe Keller [7], who stated the following definition: We call two problems *inverses* of one another if the formulation of each involves all or part of the solution of the other. Often, for historical reasons, one of the two problems has been studied extensively for some time, while the other is newer and not so well understood. In such cases, the former problem is called the *direct problem*, while the latter is called the *inverse problem*. Correspondingly, the term *inverse* describes the fact that actually two problems are involved, being intrinsically connected in their formulation. We describe the general setting in mathematical terms: Let the cause  $u^\dagger$  lives in some space  $X$  and the effect  $g^\dagger$  lives in some space  $Y$ . In many practical problems, the forward operator  $F: D(F) \subset X \rightarrow Y$  is a (possibly nonlinear) mapping from  $X$  to  $Y$ . In many practical problems, the forward operator  $F: D(F) \subset X \rightarrow Y$  is a (possibly nonlinear) mapping from  $X$  to  $Y$ .

## PROMOTIONSPREIS

### PHD PRIZE

- ▶ awarded every two years
- ▶ for the best PhD thesis in the field of Inverse Problems
- ▶ Dissertation has to be defended at a university in a German-speaking region



Nominations welcome



MITGLIED WERDEN  
BECOME A MEMBER

