# Personal introduction and short report of previous and future projects

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# **General and Systematic Zoology**

Research interests:
reproductive biology
evolutionary biology
functional morphology ...





# > sex pheromone





### > sex pheromone



Angewandte Chemie

Pheromones (1)

DOI: 10.1002/anie.200906311

#### The Sex Pheromone of the Wasp Spider Argiope bruennichi\*\*

Satya P. Chinta, Stephan Goller, Julia Lux, Sebastian Funke, Gabriele Uhl,\* and Stefan Schulz\*



# > sex pheromone



# > virgin females



Pheromones (1)

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# > sex pheromone



virgin females

> attracts males

Angewandte Chemie

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#### Pheromones (1)

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# Scanning electron microscopy





# Scanning electron microscopy







# Scanning electron microscopy







# Transmission electron microscopy





# Transmission electron microscopy



Ganske, Müller & Uhl (in prep.)

# Transmission electron microscopy



Ganske, Müller & Uhl (in prep.)















# SSR (1<sup>st</sup> leg, metatarsus, male)



# SSR (1<sup>st</sup> leg, metatarsus, male)











#### Tip-pore sensilla



#### Tip-pore sensilla

> only candidate to receive pheromone









- Tip-pore sensilla
- > only candidate to receive pheromone
- > distributed on all body appendages







- Tip-pore sensilla
- > only candidate to receive pheromone
- > distributed on all body appendages
- > only one type on different parts of the legs







> only candidate to receive pheromone

**Tip-pore sensilla** 

- > distributed on all body appendages
- > only one type on different parts of the legs
- > dendrites along the shaft close to the tip







- > only candidate to receive pheromone
- > distributed on all body appendages
- > only one type on different parts of the legs
- > dendrites along the shaft close to the tip
- > first evidence for olfaction

**Tip-pore sensilla** 









*Lithobius*: a big genus of a small subphylum (Arthropoda, Myriapoda) - phylogenetics and evolutionary history

 $\succ$  general interest in arthropods



- general interest in arthropods
- work with scientific collections in Natural History Museums and collaborating institutions



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- learning new techniques and data processing for both molecular and morphological aspects



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- general interest in arthropods
- work with scientific collections in Natural History Museums and collaborating institutions
- learning new techniques and data processing for both molecular and morphological aspects
- work in a collaborative environment and be in contact with other researchers (exchange of ideas and experiences)
- consolidate my skills and acquire new ones through various trainings and build up strong research profile

# Thank you for your attention!

Chemosensory sensilla in insects



Altner & Prillinger (1980; modified)

# Tip-pore sensilla in Araneae



# External structure of tip-pore sensilla



# Distribution of tip-pore sensilla

Part I

Part II





# Distribution of tip-pore sensilla



Part II





# Cupiennius salei

 - contact sex pheromone: (S)-1,1'-dimethyl citrate (Cupilure)



Tichy et al. 2001

