

Hanse-Wissenschaftskolleg
Institute for Advanced Study

Study Group

„Intelligent Systems for Vector-Borne Disease“

Delmenhorst, June 21 - 22, 2022

Organizers:


Prof. Dr. Peter Haddawy,
Mahidol-Bremen Medical Informatics Research Unit

Venue:

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Institute for Advanced Study

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Program

Tuesday, June 21, 2022 – Day 1

Mosquito Sensors (MosquitoSong II)

9:30 – 11:00

Welcome, Overview, Introductions

Peter Haddawy, Anna Förster, Soerge Kelm (15 min)

2 talks (30 + 5 each)

- *Saranath Lawpoolsri*
The need for mosquito monitoring
- *Patchara Sriwichai*
Current approaches to mosquito monitoring

11:00 – 11:20

COFFEE BREAK

11:20 – 13:00

3 talks (25 + 5 each)

- *Tim Ziemer*
Mosquito antenna modeling
- *Dinarte Vasconcelos*
Prototype IoT bio-acoustic mosquito sensors
- *Myat Su Yin, Akara Supratak*
Deep learning classification models and pipeline

13:00 – 14:30

LUNCH + PHOTO

14:30 – 16:00

3 talks (25 + 5 each)

- *Michael Weber*
Opto-acoustic approach
- *Anna Förster*
Issues in networking of sensors
- *Dolvara Gunatilaka*
Acoustic sensing platform for noise pollution monitoring

16:00 – 16:20

COFFEE BREAK

16:20 – 18:30

Discussion

- Design options – acoustic, opto-acoustic, algorithms, hardware
- Sensor development
- Data management
- Evaluation plans
- KMU grant proposal

18:30 – 20:00

DINNER

Wednesday, June 22, 2022

9:30 – 11:10

Decision Support: *Welcome, Overview*

Peter Haddawy, Anna Förster (10 min)

3 talks (25 + 5 each)

- *Dumrong Mairiang, Panisadee Avirutnan (Online)*
Dengue prognostic prediction project
- *Myat Su Yin, Peter Haddawy*
DHF and Day Zero predictive models
- *Jennifer Horstmann*
A system for monitoring of dengue fever patients

11:20 – 11:30

COFFEE BREAK

11:30 – 13:00

2 talks (25 + 5 each)

& Discussion of next steps (30 min)

- *Thomas Barkowsky*
Mobile4D: Dengue vector control in public healthcare
- *Kingdley Badu*
Cutaneous leishmaniasis, A neglected Tropical Skin Disease with a diagnostic challenge: Opportunity for AI assisted diagnosis

- 13:00 – 14:30 **LUNCH**
- 14:30 – 16:10 **Modeling and Analysis: Introduction, Peter Haddawy (10 min)
& 3 talks (25 + 5 each)**
- *Chaitawat Sa-ngamuang*
Human mobility and Malaria Transmission
 - *Dominique Bicot*
Modeling the spread dynamics of the West Nile Infection:
Camargue, France, 2000
 - *Pongsakorn Sadakorn*
TanRabad Software Suite
- 16:10 – 16:30 **COFFEE BREAK**
- 16:30 – 18:30 **2 talks (25 + 5 each)
& Discussion of next steps and of study group overall plan (60
min)**
- *Anuwat Wiratsudakul*
Modeling of the spread of Lumpy skin disease, a vector-
borne disease in cattle in Thailand
 - *MaiThi Ngan*
Modeling vaccine requirement for African Swine Fever,
Vietnam
- 18:30 – 20:00 **DINNER**