Somsakun Maneerat

MASSY France
E-mail: maneerat.somsakun@gmail.com
Tel +33 7 55 25 58 07

https://www.linkedin.com/in/somsakun-maneerat
http://maneeratsomsakun.wix.com/profile

PhD – Bring together Data & AI

"Multicultural, curious, adaptable, and passionate about Data & Scientific research, I have supported data transformation projects for several entities of my organizations with AI & Big Data technologies"

EDUCATION

2022 : AI Certification
Télécom Paris, France

2017: Big Data & Analytics Certification
Fitec, Nanterre, France

2016: PhD in AI – Multi-Agent systems
University of Rouen, France

2011: Master of Geographic Information System and Spatial planning
University of Rennes 2, France

2008: B.Sc. in Computer science
University of Avignon (IUP GMI), France

2007: University Diploma in Information Technology, specialized in software engineering
Technology School (IUT de Vannes), France

KEY SKILLS

- Machine & Deep Learning
- Reinforcement Learning
- Knowledge/rules-based modeling
- Multi-Agent based Model &Simulation
- Data management
- Geographic Information System (GIS)
- Qualitative and quantitative analysis
- Databases (SQL and NoSql)
- Big Data technologies
- Field surveys and interviews
- Scientific writing and communication

LANGUAGES

French: bilingual
English: fluent (TOEIC 2015: 910, two years staying in English spoken country)
Spanish: notion
Thai: native speaker

MISCELLANEOUS

Photography and travelling
(https://500px.com/toulouka)

PROFESSIONAL EXPERIENCE

Senior AI / Data Science Researcher

Since 2018: - EDF R&D, Paris Saclay Lab

➢ **Machine /Deep Learning & Statistic modeling:**
- Anomaly detection of thermal sensors in energy storages
- Automated data analysis and natural language generation
- Recommendation model to identify similar territories
- AI drift controller (NLP use case)

#Python, Sklearn, PyTorch, TensorFlow, MLFlow, Git, AutoML

➢ **Multi-Agent based modeling:**
- Simulation of human and elec. vehicle charging behaviors
- Optimization of electricity production scheduling

➢ **Reinforcement learning**:
- Automated data cleaning pipeline for image detection and sentimental analysis - *#DDQN, QLearning*

➢ **Symbolic AI:**
- Reasoning system with ontology & knowledge graph *#RDF, OWL, SparQL, GraphDB*

➢ **Design storage and processing** of massive data's batch and steam - *#PySpark, Hive, Nifi, Kafka, Hadoop*

➢ **Leadership and Collaboration**:
- Mentorship of juniors, interns and contractors
- Fostering collaboration with academies

2012 – 2016: Spatially explicit agent-based simulation model of Dengue vector dynamics in urban area
- Pasteur Institute Paris, Rouen University & CSH New Delhi

Big Data & Business Intelligence engineer

2017: Data visualization – *Solution BI, Paris*
2016: Data management – *IRT SystemX, Palaiseau*

GIS & Spatial Data Analyst

2011: Risk assessment of road networks – *Irstea, Grenoble*
2010: ICT usage Mapping – *The OPSIS Observator, Brest*

Software Engineer

2009: SavGIS software – *French IRD, Bangkok, Thailand*
2008: 3D shape differentiation modeling – *S3, Bangkok, Thailand*
2007: Interactive mapping website – *CESBIO, Toulouse, France*

Publications

Maneerat S. et al., 2023. Anticipating Aggregated Demand from Charging EV in Collective Car Park with a Multi-Agent System, *proceedings of CIRED 2023*

Maneerat, S., Daudé, E., 2016. A spatial agent-based simulation model of the dengue vector Aedes aegypti to explore its population dynamics in urban areas. *Ecological Modelling*, **333**, 66–78. doi:10.1016/j.ecolmodel.2016.04.012.

Maneerat, S., Daudé, E., 2016. Étude par simulation multi-agents des effets des discontinuités intra-urbaines sur la dispersion des moustiques Aedes aegypti, vecteurs de la dengue, de la fièvre jaune, du chikungunya et du virus Zika. *Cybergeo : European Journal of Geography [En ligne], GeOpenMod - Modèles et logiciels*, **document 819**, mis en ligne le 24 mai 2017. URL : http://cybergeo.revues.org/28078 ; doi:10.4000/cybergeo.28078 (Fr) ;
Version anglaise : https://cybergeo.revues.org/28499; doi:10.4000/cybergeo.28499

Tacnet, J., Mermet, E., **Maneerat, S., 2012.** Analysis of the importance of road networks exposed to natural hazards. In: Gensel, J., Josselin, D., Vandenbroucke, D. (eds). *Proceedings of the AGILE'2012 International Conference on Geographic Information Science.* Avignon, France. ISBN: 978-90-816960-0-5.

Conferences

Effect of urban heat island on the spatio-temporal distribution of *Aedes aegypti*, vector of dengue and Zika viruses: an agent-based simulation approach, *17th International Medical Geography Symposium (IMGS)*,

How spatial simulation models can improve interdisciplinary researches in health geography? MO3, an agent-based model of the dengue complex pathogenic system, *17th International Medical Geography Symposium (IMGS)*, coll. Daudé É., Cébeillac A., Huraux T., Misslin R., Vaguet A., 3 – 7 juillet 2017, Anger, France.

An agent-based model of *Aedes aegypti* to understand the spatio-temporal heterogeneity of mosquito populations, *Sixth Workshop Dynamical Systems Applied to Biology and Natural Sciences (DSABNS)*, coll. Daudé É., 4 – 6 février 2015, Lisbonne, Portugal.

Géosimulation des dynamiques de population vectorielles : un modèle multiagent du vecteur de la dengue en milieu urbain tropical et sub-tropical, *Les* d*ouzième Rencontres ThéoQuant – nouvelles approches en Géographie Théorique & Quantitative,* en collaboration avec Eric Daudé, 20 - 22 mai 2015, Besançon, France.

Dengue as a complex system: case studies in Delhi, Bangkok and "artifical cities", *séminaire au Centre for Social Science and Humanities,* coll. Daudé É., Cebeillac A., Misslin R., 11 décembre 2014, New Delhi, Inde.

How geosimulation can provide new insights for dengue surveillance and control?, *The Third International Conference on Dengue and Dengue Haemorrhagic Fever 2013 - Global Dengue: Challenges and Promises,* coll. Daudé É., 21-23 octobre 2013, Bangkok, Thaïlande.

From observations to simulations, and return: perspectives for dengue researches, *18th European Colloqium on Theoretical & Quantitative Geography,* coll. Daudé É., Lefebvre B., Telle O., Vaguet A., Vaguet Y., Cebeillac A., Misslin R., 5-9 septembre 2013, Dourdan, France.

Geosimulation of dengue vector dynamics in urban areas, *5th International Conference on healthGIS,* en collaboration avec Daudé É., 21 - 23 août 2013, Bangkok, Thaïlande.

Analysis of the importance of road networks exposed to natural hazards, *the AGILE'2012 International Conference on Geographic Information Science,* en collaboration avec Tacnet J.M. et Mermet E., 24 – 27 avril 2012, Avignon, France. **(1st rang of poster presentation)**