Dr. Selain Kasereka

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SELAIN KASEREKA ON RESEARCHGATE

SELAIN KASEREKA ON GOOGLESCHOLAR

OBJECTIVES

Conduct advanced scientific research, open to the creation and integration of knowledge that enriches education, technological innovation and social debate.

COMPETENCES

Computer Engineering, Modeling, Simulation, Programming, Data mining, Deep learning, Applied Mathematics, Networking.

WORK EXPERIENCES

LECTURER-RESEARCHER AT THE UNIVERSITY OF KINSHASA

From 2012 up to now

Conducting scientific research and teaching at the Department of Mathematics and Computer Science, Faculty of Sciences

CONSULTANT AT DIAKONIA - EUROPEAN UNION

From 2016 to 2020

Develop web applications and provide training for beneficiaries of EU funding, including civil society organizations. Tools: Database (Oracle, MySQL, PostgreSQL), Programming (Boostrap, PHP, Javascript, CSS, HTML,)

CHIEF TECHNICAL OFFICER RODA CORPORATION

From 2020 up to now

Manage technical aspect of all projects, managing risks, hidden costs and returns on investment. Management of all technical means and resources.

EDUCATION

PHD IN APPLIED SCIENCES

University of South Africa, Pretoria, South Africa

Thesis: Towards hybrid stochastic modeling and simulation of complex systems in multi-scale environments. Supervised by Prof. Dr. EF. Doungmo Goufo and Prof. Dr. Vinh H. Tuong

MASTER IN COMPLEX SYSTEMS: NATURAL AND ARTIFICIAL COGNITION

Université Paris 8, France (2015 - 2016)

Thesis: Integration of rationality in the modelling and simulation of social choices. Supervised by Prof. Marc Bui.

POST-MASTER IN HEARTH AND INNOVATION

Michel Serres Center, HESAM/Sorbonne, Paris, France (2014 - 2015)

Thesis: Implementation of a hearth cabin in Paris

MASTER IN SYSTEME INTELLIGENT ET MULTIMEDIA

Vietnam National University, Hanoi, Vietnam (2012 - 2014)

Thesis: Hybrid modeling of disease spread and parameter estimation. Supervised by Dr. B. Gaudou, Dr. JD Zucker, Dr. Marc Choisy and Prof Vinh H. Tuong

BSC IN COMPUTER ENGINEERING
University of Kinshasa, RDC (2001 - 2008)
Thesis: Application of BGP and IPv6 for AS interconnection. Supervised by Prof Dr. E. Mbuyi Mukendi

VOLUNTARIAT/LEADERSHIP

Funder of WDH Solution, leading web services in DRC. Member of BSDCongo, a free software club. Member and Secrétary of Artificial intelligence, Big data and modeLing simulation research center (ABILab).

TECHNICAL SKILLS

OS: Linux (Redhat, Debian, Ubuntu, Suse, Kali, Unix (FreeBSD), Windows server, Mac OSX.
DB: Mysql, MS-access, PostgreSQL, ORACLE, MongoDB (basic).
Programming: C, C++, R, Java, Stata, PHP, Python, Gaml, NoSQL.
Modelling & Simulation: Mathematics, Agent-Based Model, Gama Platform, Anylogic, NetLogo.
Networking: Cisco Switch and Cisco Routeur configuration using IPv4 and IPv6, Admin Windows 2008, 2012 and 2016, Admin Linux and UNIX/FreeBSD (Open Source), DNS, Nagios, UDP, SNMP, MRTG, (S)FTP, SSH, SMTP, Mail, Web, Samba.
Web site: Design and admin dynamical web sites, SharePoint, Drupal, eShop, WP, Joomla.

LANGUAGES

- English: Professional working proficiency
- French: Full professional proficiency
- Swahili: Native proficiency
- Lingala: Full professional proficiency
- Vietnamese: Elementary proficiency

RECENT PUBLICATIONS

1. **Kasereka, S**., Kyamakya, K., Ho Tuong, V., Goufo, E.-F. D., (**2021)** *A Hybrid Model and simulation of Tuberculosis Outbreak in a population with a high mobility*, submitted in Results in Physics, Manuscript Number: RINP-D-20-01391. IN PRESS.
2. Ndondo, A., **Kasereka**, **S.**, Bisuta, S., Kyamakya, K., Doungmo Goufo, E-F., Ruffin-Benoît M. Ngoie (**2021)** *Analysis, modeling and optimal control of COVID-19 outbreak with three forms of infection in Democratic Republic of the Congo,* submitted in Results in Physics, Manuscript Number: RINP-D-20-01586. IN PRESS.
3. **Kasereka, S**., Goufo, E.-F. D., Ho Tuong, V. (**2020)** *Analysis and simulation of a mathematical model of tuberculosis transmission in Democratic Republic of the Congo*, Advances in Difference Equations, *642 (2020). https://doi.org/10.1186/s13662-020-03091-0*
4. **Kasereka, S**., Goufo, E.-F. D., Ho Tuong, V., Kyamakya K. (**2020**) *A stochastic agent-based model and simulation for controlling the spread of tuberculosis in a mixed population structure*, the 14th International FLINS Conference on Robotics and Artificial Intelligence (FLINS/ISKE2020) to be held in Cologne, Germany, from August 18-21, 2020.
5. Kasoro, N., **Kasereka, S**., Mayoga E., Ho Tuong, V., and Kinganga, J. (**2019**). *PercoMCV: A hybrid approach of community detection in social networks,* Elsevier, Procedia Computer Science 151, 45-52.
6. **Kasereka S.,** Le Strat Y., Léon L. (**2018**) *Estimation of Infection Force of Hepatitis C Virus Among Drug Users in France*. **Book Chapte**r In: Kyamakya K., Mathis W., Stoop R., Chedjou J., Li Z. (eds) Recent Advances in Nonlinear Dynamics and Synchronization. Studies in Systems, Decision and Control, vol 109. Springer, Cham.
7. **Kasereka, S.,** Kasoro, N., Kyamakya, K., Goufo, E.-F. D., Chokki, A. P., and Yengo, M. V. (**2018**). *Agent-based modelling and simulation for evacuation of people from a building in case of fire*. Elsevier, Procedia Computer Science, 130:10–17.
8. Leon, L., **Kasereka, S.,** Barin, F., Larsen, C., Weill-Barillet, L., Pascal, X., Chevaliez, S., Pillonel, J., Jauffret-Roustide, M., and Le Strat, Y. (**2017**). *Age-and time-dependent prevalence and incidence of hepatitis c virus infection in drug users in France, 2004–2011: model-based estimation from two national cross-sectional serosurveys*. Epidemiology & Infection, 145(5):895–907.
9. **Kasereka, S.,** Kasoro, N., and Chokki, A. P. (**2014**). *A hybrid model for modeling the spread of epid*emics: Theory and simulation. In ISKO-Maghreb: Concepts and Tools for

knowledge Management (ISKO-Maghreb), 2014 4th International Symposium, pages 1–7, IEEE.

REFERENCES

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Domains / Areas:

- Artificial Intelligence
- Multi-agents systems
- Machine/Deep learning
- Dynamic systems
- Modeling – Simulation
- Applied Mathematics
- Networking
- Language theories

As a researcher, I want

To use computer science and mathematical tools to solve real world problems emerging all field of sciences, technology and engineering.