

# Hassan Ismail Fawaz, MSc

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📄 <https://scholar.google.com/citations?user=oUrGNaoAAAAJ>

## Employment History

- 2017 – 2020     **PhD candidate.** IRIMAS, Université Haute Alsace, France.
- 2018 – 2019     **Lecturer.** ENSISA, Université Haute Alsace, France.
- 2017 – 2017     **Internship.** Data Services & Valorisation for Business, Orange Labs, France.
- 2016 – 2017     **Internship.** TICKET Lab, Université Antonine, Lebanon.
- 2016 – 2016     **Freelance.** Website development - [www.mradmcc.com](http://www.mradmcc.com).
- 2015 – 2015     **Internship.** Web application development, Dar El Handasah, Lebanon.

## Education

- 2017 – 2020     **Ph.D. Machine Learning, Université Haute Alsace, France**  
*Temporal data analysis with surgical data science application.*
- 2016 – 2017     **M.Sc. Computer Science, Université de Bourgogne, France**  
*Second Class Honours. Databases & Artificial Intelligence.*
- 2011 – 2017     **M.Sc. Software Engineering, Université Antonine, Lebanon**  
*Fourth Class Honours. Software & Telecommunications Engineering.*

## Research Publications

### Journal Articles (accepted)

- 1     **Ismail Fawaz, H., Forestier, G., Weber, J., Idoumghar, L., & Muller, P.-A. (2019a).** [Deep learning for time series classification: a review](#). *Data Mining and Knowledge Discovery*. Code is available on <https://github.com/hfawaz/dl-4-tsc/>.
- 2     Forestier, G., Petitjean, F., Senin, P., Despinoy, F., Huauilmé, A., **Ismail Fawaz, H., ... Jannin, P. (2018).** [Surgical motion analysis using discriminative interpretable patterns](#). *Artificial Intelligence in Medicine*, 91, 3–11.

### Conference Proceedings

- 1     **Ismail Fawaz, H., Forestier, G., Weber, J., Petitjean, F., Idoumghar, L., & Muller, P.-A. (2019).** [Automatic alignment of surgical videos using kinematic data](#). In *Artificial Intelligence in Medicine*. Acceptance rate is 21%. Code is available on <https://github.com/hfawaz/aime19>.
- 2     **Ismail Fawaz, H., Forestier, G., Weber, J., Idoumghar, L., & Muller, P.-A. (2019b).** [Deep Neural Network Ensembles for Time Series Classification](#). In *IEEE International Joint Conference on Neural Networks*. Code is available on <https://github.com/hfawaz/ijcnn19ensemble>.
- 3     **Ismail Fawaz, H., Forestier, G., Weber, J., Idoumghar, L., & Muller, P.-A. (2019c).** [Adversarial Attacks on Deep Neural Networks for Time Series Classification](#). In *IEEE International Joint Conference on Neural Networks*. Code is available on <https://github.com/hfawaz/ijcnn19attacks>.

- 4 **Ismail Fawaz, H., Forestier, G., Weber, J., Idoumghar, L., & Muller, P.-A. (2018a).** [Evaluating surgical skills from kinematic data using convolutional neural networks](#). In *Medical Image Computing and Computer Assisted Intervention*. (Oral selection rate 4%). Code is available on <https://github.com/hfawaz/miccai18>.
- 5 **Ismail Fawaz, H., Forestier, G., Weber, J., Idoumghar, L., & Muller, P.-A. (2018c).** [Transfer learning for time series classification](#). In *IEEE International Conference On Big Data*. Selection rate 18.9%. Code is available on <https://github.com/hfawaz/bigdata18>.

## Workshops

- 1 **Ismail Fawaz, H., Forestier, G., Weber, J., Idoumghar, L., & Muller, P.-A. (2018b).** [Data augmentation using synthetic data for time series classification with deep residual networks](#). Code is available on <https://github.com/hfawaz/aaltd18>.

## Skills

Languages	■ English (TOEIC-955), French (B2), German (B1) & Arabic.
Development	■ Python, Java & Slurm Workload Manager.
Databases	■ MySQL, Neo4J, Protégé & Elasticsearch.
Web Dev	■ HTML, CSS, JavaScript, Apache Web Server & Tomcat Web Server.
Misc.	■ Academic research, teaching, $\text{\LaTeX}$ typesetting & publishing.

## Miscellaneous Experience

### Grants

- 2018 ■ **Mésocentre of Strasbourg.** [1.6 million GPU computing hours](#).
- 2017 ■ **NVIDIA Corporation GPU Grant.** [Quadro P6000](#).
- **Coursera Financial Aid.** [Deep learning speciality](#).

### Visiting researcher

- 2018 ■ **Wayne State University.** [Dr. Abhilash Pandya](#).

### Certifications

- 2018 ■ **Volunteering.** [IEEE International conference on Big Data](#).
- **Participation.** [International Summer School on Deep Learning](#).
- 2017 ■ **Participation.** Cisco CCNA 1, 2, 3 & 4.
- 2016 ■ **Participation.** Lebanese Collegiate Programming Contest.
- **Participation.** Advanced Programming & Algorithms Boot Camp.
- 2015 ■ **Participation.** Lebanese Collegiate Programming Contest.




### Awards

- 2018 ■ **IEEE International Conference on Big Data.** [Student Travel Award](#).
- 2016 ■ **First place.** Université Antonine Programming Competition.
- 2015 ■ **Second place.** Université Antonine Programming Competition.



## Miscellaneous Experience (continued)

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### Talks & presentations

- 2019     **TsDays**. Apprentissage par transfert pour la classification de séries temporelles.
- 2018     **French society of computer science**. What to do with your PhD ?
  -  **GDR-MADICS**. Interpretable evaluation of surgical skills.

### Teaching

- 2019     **Web programming**. Engineering students in Computer Science - 24 hours.
- 2018     **Deep Learning**. M.Sc. students in Computer Science - 20 hours.






### Conference committee

- 2019     **ORASIS**. [Journées francophones des jeunes chercheurs en vision par ordinateur](#).
  -  **AE**. [Biennial International Conference on Artificial Evolution](#).

### Workshop committee

- 2019     **AALTD**. [ECML/PKDD Workshop on Advanced Analytics & Learning on Temporal Data](#).
  -  **OR**. [MICCAI Workshop on OR 2.0 Context-Aware Operating Theaters](#).

### Reviewer

- 2019     **IEEE TKDE**. [IEEE Transactions of Knowledge and Data Engineering](#).
  -  **IEEE JBHI**. [Journal of Biomedical and Health Informatics](#).
  -  **MICCAI**. [Medical Image Computing and Computer Assisted Intervention](#).
  -  **IEEE/CAA JAS**. [Journal of Automatica Sinica](#).
  -  **AIRE**. [Artificial Intelligence Review](#).