

# RUI DAI

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**Domain of Interest :** Video Understanding, Action Recognition & Detection

## EDUCATION

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- <b>Inria</b>	Nice, France
Department of Informatics	<i>Oct. 2018 - Sep. 2022</i>
Ph.D. Candidate in <i>Computer Vision and Machine Learning</i>	
- <b>Université de Toulouse - ENSEEIHT</b>	Toulouse, France
Grand Ecole, Department of Electronique	<i>Sep. 2016 - Sep. 2018</i>
Master degree and Engineer degree in <i>Signal and Image processing</i>	
- <b>Beihang University</b>	Beijing, China
Department of Computer Science	<i>Aug. 2012 - Jul. 2016</i>
Bachlor degree in <i>Information and Computational Science</i>	

## STRENGTHS

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<b>Program Languages</b>	Python, C++, MATLAB, R, STATA
<b>Software &amp; Tools</b>	Pytorch, TensorFlow, Keras, LaTeX, Bash, Git, MySQL
<b>Languages</b>	English : Fluent, French : Fluent, Chinese : Native

## RESEARCH EXPERIENCE

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- <b>STARS team, Inria</b>	Nice, France
<i>Ph.D. Candidate, supervised by Francois Bremond</i>	<i>Oct. 2018 - Present</i>
· Funded by Toyota Motor Europe and Université Cote d'Azur	
· Personal Monitoring Committee : <i>Karteek Alahri</i> (Inria), <i>Pierre Kornprobst</i> (Inria)	
- <b>VISAGES team, Inria</b>	Rennes, France
<i>Research Intern, supervised by Christian Barillot</i>	<i>Mar. 2018 - Sep. 2018</i>
- <b>Thales Alenia Space</b>	Toulouse, France
<i>Research Project</i>	<i>Jan. 2018 - Mar. 2018</i>
- <b>BIGR team, Erasmus Medical Center</b>	Rotterdam, Netherlands
<i>Research Intern, supervised by Stefan Klein</i>	<i>Jun. 2017 - Aug. 2017</i>

## TEACHING

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- Lecture and TA of the MSc. Data Science and Artificial Intelligence at Interdisciplinary Institutes of Artificial Intelligence (3IA), France.

## ACADEMIC EVENTS

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Summer School : SMILES2020, EEML2021, CIFAR-DLRL2021, OxML2021

## ACADEMIC SERVICES

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- Reviewer : Medical Image Analysis (MedIA), CVPR, ICCV, WACV, IPAS

## EUROPEAN PATENT

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- WO2021069945A1 : Method for recognizing activities using separate spatial and temporal attention weights.
- EP20306343.3 : Method and system for detecting an action in a video clip. (submitted)

## PUBLISHED PAPERS

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[1] **R. Dai**, S. Das, and F. Bremond. Learning a compact RGB representation with cross-modal knowledge distillation for action detection. In Proceedings of *the 18th International Conference on Computer Vision, ICCV 2021*, Virtual, October 11-17, 2921.

[2] **R. Dai**, S. Das, L. Minciullo, L. Garattoni, G. Francesca and F. Bremond. PDAN : Pyramid Dilated Attention Network for Action Detection. In Proceedings of *the IEEE Winter Conference on Applications of Computer Vision, WACV 2021*, Virtual, January 5-9, 2021.

[3] D. Yang, **R. Dai**, Y. Wang, R. Mallick, L. Minciullo, G. Francesca and F. Bremond. Selective Spatio-Temporal Aggregation Based Pose Refinement System : Towards Understanding Human Activities in Real-World Videos. In Proceedings of *the IEEE Winter Conference on Applications of Computer Vision, WACV 2021*, Virtual, January 5-9, 2021.

[4] S. Das, S. Sharma, **R. Dai**, F. Bremond and M. Thonnat. VPN : Learning Video-Pose Embedding for Activities of Daily Living. In Proceedings of *the 16th European Conference on Computer Vision, ECCV 2020*, arXiv :2007.03056, online, UK, 23-28 August 2020.

[5] **R. Dai**, L. Minciullo, L. Garattoni, G. Francesca and F. Bremond. Self-Attention Temporal Convolutional Network for Long-Term Daily Living Activity Detection. In Proceedings of *the 14th IEEE International Conference on Advanced Video and Signal-Based Surveillance, AVSS 2019*, in Taipei, Taiwan, 18-21 September 2019. (Oral)

[6] S. Das, **R. Dai**, M. Koperski, L. Minciullo, L. Garattoni, F. Bremond and G. Francesca. Smarthome : Real World Activities of Daily Living. In Proceedings of *the 17th International Conference on Computer Vision, ICCV 2019*, in Seoul, Korea, October 27 to November 2, 2019.

## PAPERS UNDER REVISION

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[1] **R. Dai**, S. Das, S. Sharma, L. Minciullo, L. Garattoni, F. Bremond, and G. Francesca. Toyota Smarthome Untrimmed : Real-World Untrimmed Videos for Activity Detection. (submitted to TPAMI)

[2] S. Das, **R. Dai**, D. Yang and F. Bremond. VPN++ : Rethinking Video-Pose embeddings for understanding Activities of Daily Living. (submitted to TPAMI)

[3] **R. Dai**, S. Das, and F. Bremond. Class Temporal Relational Network for Action Detection. (submitted to BMVC2021)