CVPR 2021 Tutorial on

Fine-Grained Visual Analysis with Deep Learning

Xiu-Shen Wei[1], Serge Belongie[2], Piotr Koniusz[3], Lei Wang[4],
Yi-Zhe Song[5], Jiashi Feng[6], Jian Yang[1], Dian Shao[7]

[1] *Nanjing University of Science and Technology, China*
[2] *Cornell University, USA*
[3] *Australian National University, Australia*
[4] *University of Wollongong, Australia*
[5] *University of Surrey, UK*
[6] *National University of Singapore, Singapore*
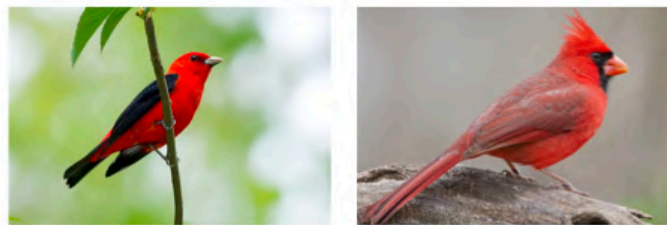[7] *The Chinese University of Hong Kong, HK*

June 20, 2021 (UTC+8), Virtual Event

Overview

Fine-grained analysis lies in the continuum …

Different categories	*Different bird Species*	*Different views of the same object*
Basic-level category analysis	Fine-grained analysis	Instance-level analysis
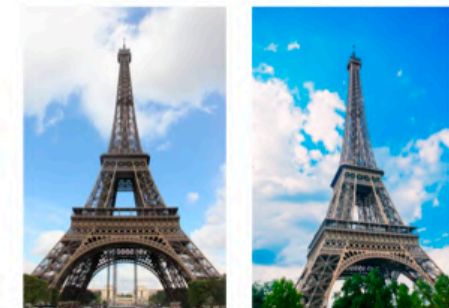
Overview

Challenges of fine-grained problems

Small **inter-class** variance
Large **intra-class** variance

Organizers & Speakers
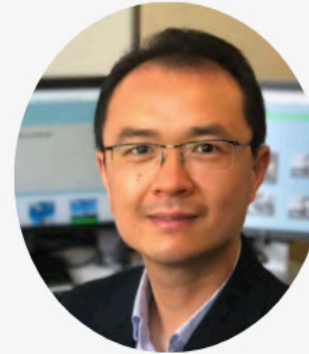
Xiu-Shen Wei

Nanjing University of Science and Technology

Serge Belongie

Cornell University

Piotr Koniusz

Australian National University

Lei Wang

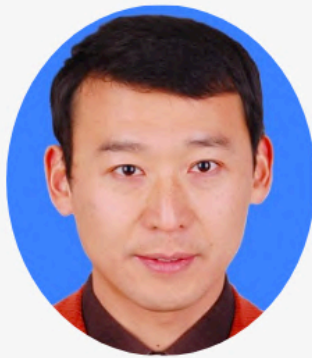*University of Wollongong*

Yi-Zhe Song

University of Surrey

Jiashi Feng

National University of Singapore

Jian Yang

Nanjing University of Science and Technology

Dian Shao

The Chinese University of Hong Kong

Schedules

A half-day event

China	Londen	Europe	India (New Delhi)	Australia	Japan/Korea	N. America (West)	N. America (East)
Time			**Session**			**Speakers**	
(Day +1)10:00am-(Day +1)10:10am			**Opening Remarks**			Xiu-Shen Wei and Jian Yang	
(Day +1)10:10am-(Day +1)10:50am			**Part I: Introduction of FGVA (40min)**			Serge Belongie	
(Day +1)10:50am-(Day +1)11:25am			**Part II: Fine-Grained Image Recognition (1) (35min)**			Xiu-Shen Wei	
(Day +1)11:25am-(Day +1)12:15pm			**Part III: Fine-Grained Image Recognition (2) (50min)**			Pitor Koniusz and Lei Wang	
			Break				
(Day +1)5:00pm-(Day +1)5:35pm			**Part IV: Fine-Grained Image Retrieval (35min)**			Yi-Zhe Song	
(Day +1)5:35pm-(Day +1)6:10pm			**Part V: Long-Tailed Visual Recognition (35min)**			Jiashi Feng and Bingyi Kang	
(Day +1)6:10pm-(Day +1)6:45pm			**Part VI: Fine-Grained Video Understanding (35min)**			Dian Shao	