TREC Video Retrieval Evaluation TRECVID 2019

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What is TRECVID ?

- Workshop series (2001 – present) → http://trecvid.nist.gov

- Started as a track in the TREC (Text REtrieval Conference) evaluation benchmark.

- Became an independent evaluation benchmark since 2003.

- Focus: **content-based** video analysis, retrieval, detection, etc

- Provides data, tasks, and uniform, appropriate scoring procedures

- Aims for realistic system tasks and test collections:
  - unfiltered data
  - focus on relatively high-level functionality (e.g. interactive search)
  - measurement against human abilities

- Forum for the
  - exchange of research ideas and for
  - the discussion of research methodology – what works, what doesn't , and why

TRECVID Datasets overview
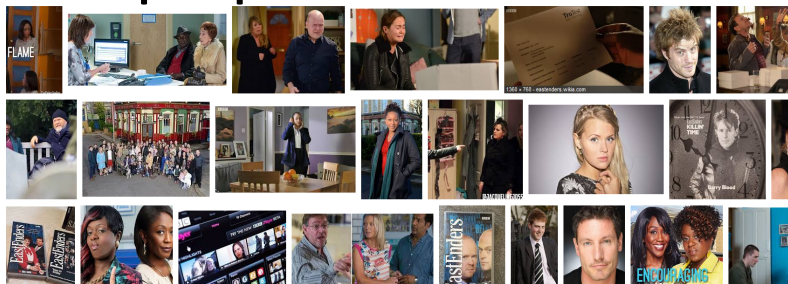
US TV news (`03/`04)

International TV news (`05/`06)

Dutch TV infotainment (`07/`08/`09)

Web video (since 2010)

HAVIC

Soap opera (since 2013)

Security cameras
(since 2008)
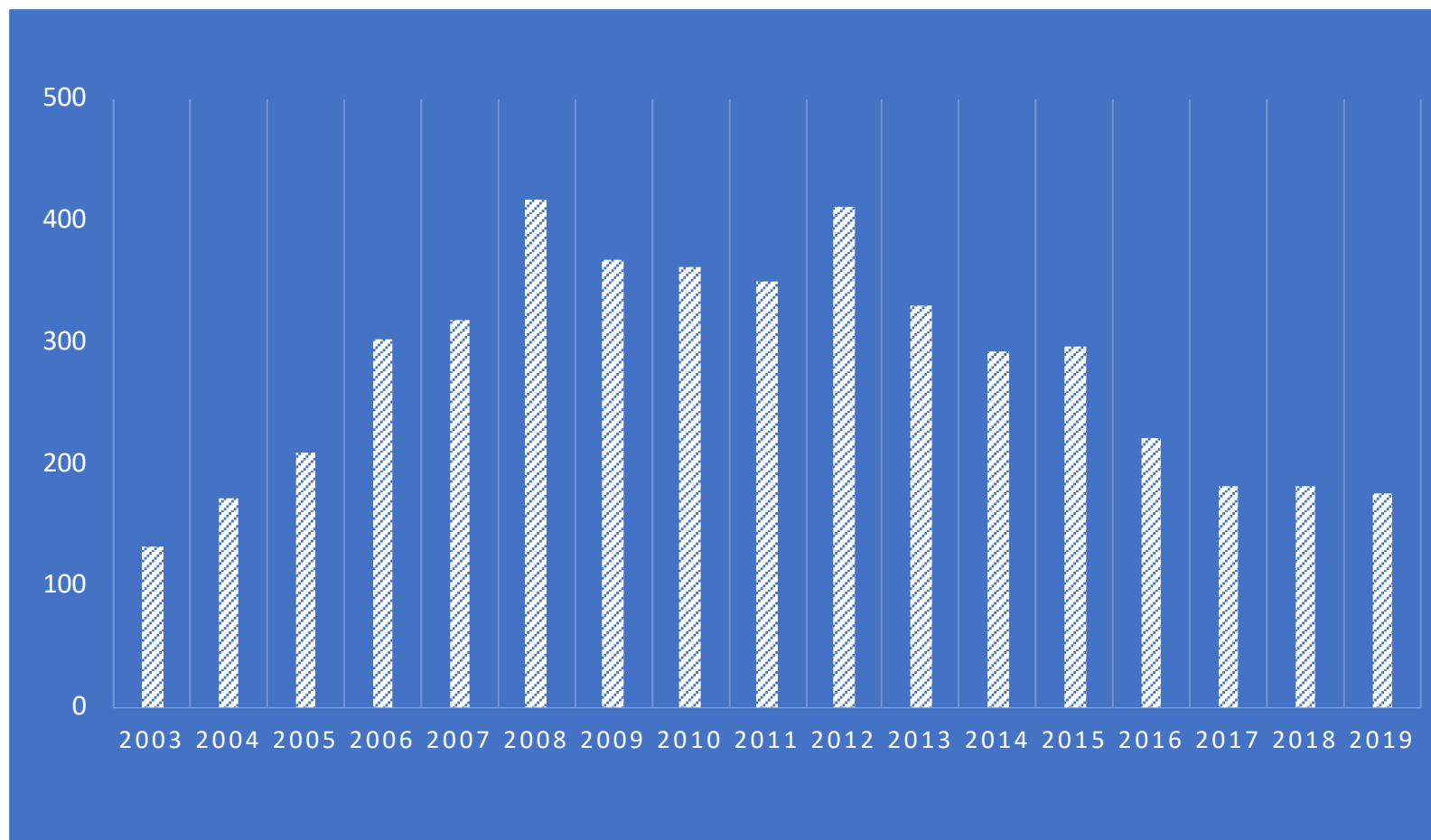
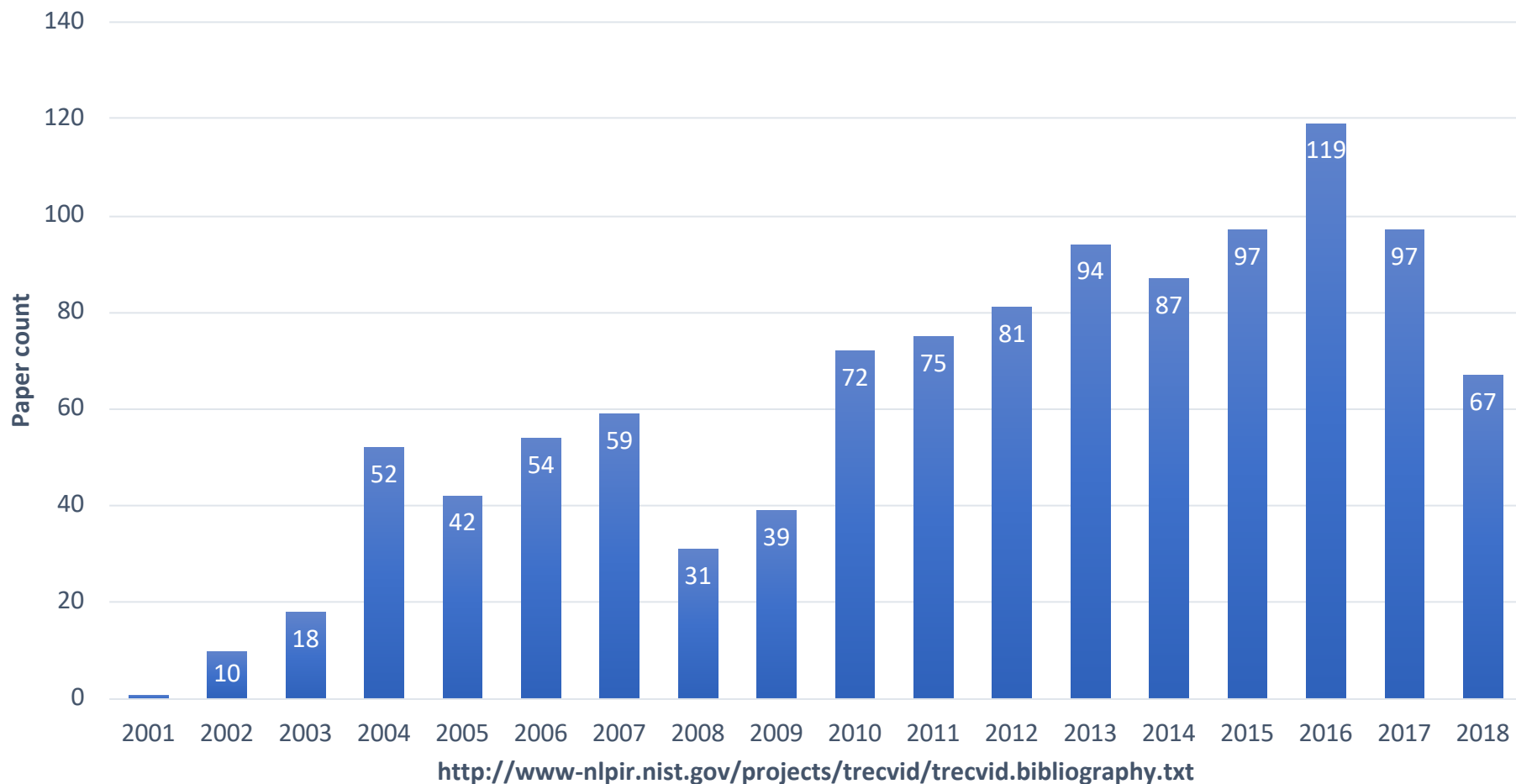Social media
(since 2016)

Video Sharing
(since 2019)

Notebook unique author count by years

TRECVID Bibliography

Partial bibliography of peer-reviewed journal and conference papers (mostly from ACM Digital Library and IEEE Explorer) based on TRECVID resources
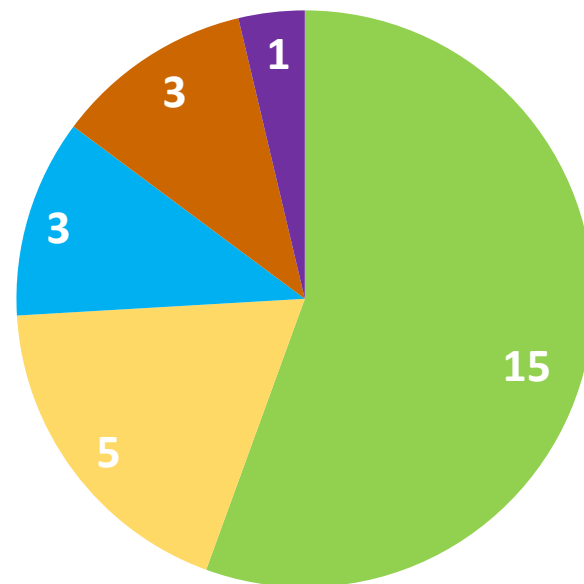

http://www-nlpir.nist.gov/projects/trecvid/trecvid.bibliography.txt

TRECVID 2019 Tasks and Data Overview

Ad-hoc Video Search	Instance Search	Video to Text Description	Activities in Extended Videos
Vimeo Creative Commons Collection* (V3C1 subset)	*BBC Eastenders*	*Twitter Vines + Flicker Videos*	*VIRAT*
1000 h test video data divided into ~1 M shots, title, keywords, description	*464 h divided into 471,527 shots, transcripts*	*1044 Vine test videos URLs 1010 Flicker videos*	*10 h video surveillance dataset*
~2000 hours dev video, metadata	*1 episode dev video and any external web resources*	*~5700 Vine dev URLs & corresponding descriptions*	*Detection and Localization of activities and objects*
30 ad-hoc textual queries evaluated	*30 ad-hoc image/video Person + Action queries evaluated*	*Match video with the description & Generate automatic video description*	*18 activities evaluated*
20 progress queries (fixed 2019-2021)	*20 progress queries (fixed 2019-2021)*		
*New dataset			

TV2019 Finishers

Groups Finished	Task code	Task name
7	ActEV	Activities in Extended Video
10	AVS	Ad-hoc Video Search
6	INS	Instance search
10	VTT	Video to Text Description

Unique finishing teams

- ■ Asia
- ■ Europe
- ■ North America
- ■ Australia
- ■ South America

TRECVID 2019

TV2019 Finishers : 27 teams out of 39

Team	INS	VTT	ActEv	AVS	Region	Full Name
EURECOM	---	VTT	-----	AVS	Eur	EURECOM
FDU	---	VTT	-----	---	Asia	Fudan University
KU_ISPL	---	VTT	-----	---	Asia	Korea University
MUDSML	---	***	ActEv	***	Aus	Monash University
PicSOM	---	VTT	-----	---	Eur	Aalto University
PKU_ICST	INS	***	-----	---	Asia	Peking University
SIRET	---	---	-----	AVS	Eur	Charles University
UTS_ISA	---	VTT	-----	---	Aus	Centre for Artificial Intelligence, University of Technology Sydney
Insight_DCU	---	VTT	-----	---	Eur	Insight Dublin City University
WasedaMeiseiSoftbank	---	***	-----	AVS	Asia	Waseda University; Meisei University; SoftBank Corporation
BUPT_MCPRL	INS	---	ActEv	---	Asia	Beijing University of Posts and Telecommunications
KsLab	---	VTT	-----	---	Asia	Nagaoka University of Technology
RUC_AIM3	---	VTT	-----	---	Asia	Renmin University of China
RUCMM	---	VTT	-----	AVS	Asia	Renmin University of China; Zhejiang Gongshang University
VIREO	---	---	ActEv	AVS	Asia	City University of Hong Kong
WHU_NERCMS	INS	---	-----	---	Asia	National Engineering Research Center for Multimedia Software
UCF	---	---	ActEv	---	Nam	University of Central Florida
FraunhoferIOSB	---	---	ActEv	---	Eur	Fraunhofer IOSB and Karlsruhe Institute of Technology (KIT)
MKLab	---	---	ActEv	---	Asia	Information Technologies Institute, Centre for Research and Technology Hella

--- : Didn't plan to participate
*** : Planned to submit but didn't

TV2019 Finishers : 27 teams out of 39

Team						Institution
FIU_UM	---	---	-----	AVS	NAm	Florida International University; University of Miami
ATL	---	***	-----	AVS	Asia	Alibaba group, ZheJiang University
Inf	INS	***	*****	AVS	NAm+Asia+Aus	Monash University; Renmin University; Shandong University
IMFD_IMPRESEE	---	VTT	-----	AVS	NAm+SAm	Millennium Institute Foundational Research on Data (IMFD); Chile Impresee Inc ORAND S.A. Chile
kindai_kobe	---	---	*****	AVS	Asia	Department of Informatics, Kindai University; Graduate School of System, Informatics, Kobe University
NTTandCQUPT	---	---	ActEv	---	Asia	NTT Media Intelligence Laboratories; Chongqing University of Posts and Telecommunications
NII_Hitachi_UIT	INS	***	ActEv	***	Asia	National Institute of Informatics, Japan; Hitachi, Ltd University of Information Technology, VNU-HCM
HSMW_TUC	INS	---	*****	---	Eur	University of Applied Sciences Mittweida; Chemnitz University of Technology
JRS	***	---	-----	***	Eur	JOANNEUM RESEARCH
MediaMill	---	***	*****	***	Eur	University of Amsterdam
IOACAS	***	---	-----	---	Asia	University of Chinese Academy of Sciences
D_A777	***	---	-----	***	Asia	Malla Reddy College of Engineering Technology, Department of Electronics and communication Engineering

--- : Didn't plan to participate
*** : Planned to submit but didn't

TV2019 Finishers : 27 teams out of 39

Team	Status	Region	Institution
Arete	--- *** ***** ---	NAm	Scientific Computing Data Analytics Image Processing and Computer Vision
GDGCV	--- *** ----- ---	Asia	G D Goenka University
MAGUS_ITAI.Wing	--- *** ----- ---	Asia	Nanjing University ITAI
TokyoTech_AIST	--- --- ***** ***	Asia	Tokyo Institute of Technology, National Institute of Advanced Industrial Science and Technology
TeamCRN	*** --- ***** ***	NAm+Asia	Microsoft Research Singapore; Management University, University of Washington
USF	--- --- ***** ---	NAm	University of South Florida, USF
MIAOTEAM	*** --- ----- ***	Aus	University of Technology Sydney
MET	--- --- ----- ***	Asia	Sun Yet-sen University

--- : Didn't plan to participate
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Support

The running of TRECVID 2019 has been funded directly by:

- National Institute of Standards and Technology (NIST)

- Intelligence Advanced Research Projects Activity (IARPA)

- Defense Advanced Research Projects Agency (DARPA)

TRECVID is only possible because of the additional efforts of many individuals and groups around the world.

Additional resources and contributions

- Luca Rossetto and Heiko Schuldt (University of Basel)
  - Provided the V3C dataset, master shot reference and metadata

- Georges Quénot
  - provided the master shot reference for the IACC.3 video

- The LIMSI Spoken Language Processing Group and Vocapia Research provided ASR for the IACC.2-3 videos and HAVIC data

- Koichi Shinoda of the TokyoTechCanon team agreed to host a copy of the IACC.2 data

- Noel O'Connor and Kevin McGuinness at Dublin City University along with Robin Aly at the University of Twente worked with NIST and Andy O'Dwyer plus Rob Cooper at the BBC to make the BBC EastEnders video available for use in TRECVID

- Alan Smeaton and Yvette Graham (DCU, Ir) for supporting the video-to-text Direct Assessment annotations

Agenda: Day 1

- Arranged by task

- Time for discussion of approaches & evaluation

- Tuesday

  - Intros, thanks, etc.

  - Ad hoc Video Search (AVS) task

  - Lunch

  - Instance Search (INS) task

  - Poster Session

  - Workshop dinner

Agenda: Day 2

- Wednesday

  - Activities in Extended Video (ActEv) task

  - Lunch

  - Video to Text (VTT) task

  - TRECVID planning

  - Workshop close

Miscellany

- If you have registered for the workshop dinner and will not be using your ticket, please turn it in at the registration desk during the break this morning or at lunch so someone else who wants to attend can use it.

- Breakfast, morning and afternoon coffee breaks: **Green foyer (Next to the registration desk)**

- Wifi: NIST-Guest

- The online workshop proceeding can be found at :
  http://www-nlpir.nist.gov/projects/tv2019/tv19.workshop.notebook/

- Also offline version is available on the USB flash drive