Publishing Papers in Computer Graphics and Computer Vision

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Where to look for resources ≈ Where to publish

- Conferences
  - In computer science, many conference papers are **peer reviewed**.
  - They are often as competitive as or even more competitive than journals.
  - Access to state-of-the-art techniques.
- Journals
  - Archival and (more) self-contained.
  - Journal articles often provide great topic overviews.
- Books
  - Offer a comprehensive introduction to the field.

Computer Graphics Conferences

- SIGGRAPH (*International Conference and Exhibition on Computer Graphics and Interactive Techniques*)
  - Often, LA (USA).
  - Annual.
- SIGGRAPH Asia
  - Asia.
  - Annual
- Eurographics (*Annual Conference of the European Association for Computer Graphics*)
  - Europe.
  - Annual.
- Eurographics/ACM Symposium on Geometry Processing
  - Annual.
- Pacific Graphics
  - Annual.
- Computer Graphics & Animation.

Computer Vision Conferences

- CVPR (*IEEE Conference on Computer Vision and Pattern Recognition*)
  - Since 1988.
  - Annual.
  - USA.
- ICCV (*IEEE International Conference on Computer Vision*)
  - Since 1987.
  - Biannual.
- ECCV (*European Conference on Computer Vision*)
  - Since 1990.
  - Biannual.
  - Europe.
- Every year, CVPR+ICCV or CVPR+ECCV.

Computer Vision Conferences (cont'd)

- BMVC (*British Machine Vision Conference*).
- MICCAI (*Medical Image Computing and Computer Assisted Intervention*).
- ICCP (*IEEE International Conference on Computational Photography*).
- 3DV (*International Conference on 3D Vision*).
- ACCV (*Asian Conference on Computer Vision*).
- FG (*IEEE Conference on Automatic Face and Gesture Recognition*).
- WACV (*IEEE Winter Conference on Applications of Computer Vision*).
- ICDAR, MVA, ICPR, ICIP, ICVS …

Related Machine Learning Conferences

- NIPS (*Neural Information Processing Systems*).
- ICML (*International Conference on Machine Learning*).
- COLT (*Conference on Learning Theory*).
- AISTATS (*International Conference on Artificial Intelligence and Statistics*).
- UAI (*Conference on Uncertainty in Artificial Intelligence*).

Computer Graphics Journals

- TOG (*ACM Transactions on Graphics*)
  - Since 1982.
  - Top-ranked CS journal.
  - Publishes SIGGRAPH (Asia) proceedings as special issues.
  - Quarterly.
- TVCG (*IEEE Transactions on Visualization and Computer Graphics*)
  - Since 1995.
  - Quarterly.
- CGF (*Computer Graphics Forum*)
  - Since 1982.
  - Publishes Eurographics proceedings as special issues.
  - Quarterly.

Computer Vision Journals

- TPAMI (*IEEE Transactions on Pattern Analysis and Machine Intelligence*)
  - Since 1979.
  - Top-ranked CS journal.

- IJCV (*International Journal of Computer Vision*)
  - Since 1988.

Computer Vision Journals (cont'd)

- TIP (*IEEE Transactions on Image Processing*).
- TMI (*IEEE Transactions on Medical Imaging*).
- CVIU (*Computer Vision and Image Understanding*).
- ICV (*Image and Vision Computing*).
- MVA (*Machine Vision and Applications*).
- TM (*IEEE Transactions on Multimedia*).
- IEEE Transactions on Circuits and Systems for Video Technology.

Machine Learning Journals

- JMLR (*Journal of Machine Learning Research*).
- ML (*Machine Lear*ning).
- TPAMI.
- *Neural Computation*.
- IEEE TIT (*IEEE Trans. Information Theory*).
- *Foundations and Trends in Machine Learning*.

Time lines (SIGGRAPHs)

- SIGGRAPH
  - Submission: ~ January
  - Review released: ~ March
  - Rebuttal: ~ 4 days after review release.
  - (Semi-)Final decision: ~ March
  - Conference: ~July
- SIGGRAPH Asia
  - Submission: ~ May
  - Review released: ~ July
  - Rebuttal: ~ 4 days after review release.
  - (Semi-)Final decision: ~ July
  - Conference: ~December
- Decision
  - Accept (minor revision) / Refer to TOG (major revision) / Reject.

Time lines (CVPR/ICCV/ECCV)

- CVPR
  - Submission: ~ November
  - Review released: ~ February
  - Rebuttal: ~ 10 days after review release.
  - Final decision: ~ March
  - Conference: ~June
- ICCV ~ ECCV
  - Submission: ~ April
  - Review released: ~ June
  - Rebuttal: ~ 10 days after review release.
  - Final decision: ~ August
  - Conference: ~December
- ICCV and ECCV deadlines are after the CVPR final decision.
- Decision
  - Oral/Poser/Reject.

Review Process (SIGGRAPH)

- Submission before deadline.
- Technical Papers Chair assign papers to two senior reviewers (*primary* and *secondary* reviewers).
- Paper distributed to three (or more) tertiary reviewers
  - Primary selects two (or more); secondary select one (or more).
- Reviewers prepare peer review reports (double blind for tertiary).
- Authors respond to reviews (rebuttal).
- Reviewers participate in discussion of the paper
  - Recommendation: accept, refer to TOG, reject.
  - Fourth (or more) review if recommendation cannot be reached: not visible to authors before the final decision.
- Committee meeting.

Acceptance Rates

- SIGGRAPH: 20~30%:
- CVPR/ICCV/ECCV: 20~30%.
- ACCV: 20~30%.
- BMVC: 30~35%.
- MICCAI: ~30%.
- FG: 30~35%.
- NIPS: 20~30%.
- ICML: 20~30%.
- Low acceptance rate $\rightarrow$ high quality?

Conference	Submitted	Accepted
SIGGRAPH 2016	467	119
SIGGRAPH 2015	462	118
SIGGRAPH 2014	505	127
SIGGRAPH 2013	480	115

[http://kesen.realtimerendering.com/]

Review form (SIGGRAPH)

- Description
  - Brief description of the paper and contribution.
- Clarity of exposition
- Quality of references
  - List any references needed.
- Reproducibility
- Rating
  - (1) definitely reject; (2) probably reject; (3) possibly accept; (4) probably accept; (5) definitely accept.
- Reviewer expertise
  - (1) Beginner; (2) Knowledgeable; (3) Expert.
- Explanation of rating
  - Strengths and weaknesses, contributions, potential impact.
- Private comments

Starting literature review

- Put yourself as reviewer
  - What is the problem / why is it challenging / does it advance the science in the field?
  - What others have done to solve the problem?
  - Any existing / available tools?
  - Who are active in this field?
- Discuss ideas with fellow students.
- Ask your supervisor for advice.
- Do play around with existing tools.
  - Download codes and perform experiments.
  - Build codes by yourself.
- Contact authors for codes & datasets.

Resources on the Web

- ACM Transactions on Graphics (SIGGRAPH and SIGGRAPH Asia proceedings)
  - http://tog.acm.org/
- Computer Graphic Forum (Eurographics, Geometry Processing, etc. proceedings)
  - https://www.eg.org/index.php/publications/computer-graphics-forum
- IEEE Xplore: CVPR, ICCV proceedings / IEEE Transactions (TPAMI, TIP, TVCG).
- ECCV proceedings, published by Springer.
- The Computer Vision Foundation (CVF)
  - http://www.cv-foundation.org/
  - Co-sponsors CVPR and ICCV .
  - CVPR and ICCV proceedings since 2013.
- British Machine Vision Association
  - http://www.bmva.org/bmvc/
  - All BMVC proceedings.
- ArXiv
  - http://arxiv.org/
  - Open access to e-prints in Physics, Mathematics, Computer Science, Quantitative Biology, Quantitative Finance and Statistics.

Resources on the Web

- Google Scholar
  - http://scholar.google.com/
- Microsoft Academic Search
  - http://academic.research.microsoft.com/
- Machine learning open source software
  - http://mloss.org/software/
- OpenGL
  - https://www.opengl.org/
- OpenCV
  - http://opencv.org/
- CVonline
  - http://homepages.inf.ed.ac.uk/rbf/CVonline/
- Computer Vision Central
  - http://cvisioncentral.com/vision-resources/
- Videolectures
  - http://videolectures.net/Top/Computer_Science/Computer_Vision/
- Authors' websites!

Reference

- Many slides from UC Merced Prof. Ming-Hsuan Yang's slides "Recent Advances in Computer Vision".