Proposal to Host the 2018
International Conference on Frontiers in Handwriting Recognition
(ICFHR 2018)

Rochester, New York, USA
August 6-10, 2018

Conference Chairs

Venu Govindaraju	University at Buffalo, SUNY, USA
R. Manmatha	University of Massachussets at Amherst, USA
Richard Zanibbi	Rochester Institute of Technology, USA

Technical Program Chairs

Luiz S. Oliveira	Federal University of Parana, Brazil
Umapada Pal	Indian Statistical Institute, India
Christian Viard-Gaudin	University of Nantes, France

Competition Program Chairs

Harold Mouchère	University of Nantes, France

(additional Chairs TBD)

Downtown Rochester in the evening (courtesy VisitRochester.org)

Conference Chair Profiles

Venu Govindaraju is a SUNY Distinguished Professor of Computer Science and Engineering, and the founding director of the Center for Unified Biometrics and Sensors. He received his Bachelor's degree with honors from the Indian Institute of Technology (IIT) in 1986, and his Ph.D. from the University at Buffalo in 1992. His research focus is on machine learning and pattern recognition in the domains of Document Image Analysis and Biometrics. His seminal work in handwriting recognition was at the core of the first handwritten address interpretation system used by the US Postal Service. He was also the prime technical lead responsible for technology transfer to the Postal Services in US, Australia, and UK. He has served on the editorial boards of premier journals such as the IEEE Transactions on Pattern Analysis and Machine Intelligence, and is currently Editor-in-Chief for the IEEE Biometrics Council Compendium. Dr. Govindaraju is a Fellow of the ACM, IEEE, IAPR, SPIE, and AAAS (American Association for the Advancement of Science).

R. Manmatha is a research associate professor in the School of Computer Science at the University of Massachusetts, Amherst (currently on leave at A9/Amazon). His research is in the areas of retrieving handwritten documents, printed documents and image/video retrieval. He proposed the idea of word spotting for handwritten documents (using word image matching to search handwritten documents). He and his students built the first automatic demonstration system for retrieving historical handwritten documents (a portion of George Washington's handwritten documents). In addition he has worked on large collections of scanned printed books including algorithms to automatically compute the error rate of optical character recognition and detecting duplicates and translations in large printed collections. He has also worked on the automatic annotation and retrieval of images and videos and action and event detection in videos. He was a co-founder of SnapTell, a mobile image search company (acquired by A9/Amazon) and was a consultant to A9/Amazon and Google. He is an associate editor for IEEE Trans. PAMI and was previously an associate editor for ACM TOIS and Pattern Recognition Letters. He was a program chair for ACM Intl. Conf. for Multimedia Retrieval (ICMR), 2014 and the 14th Intl. Conf. on Frontiers in Handwriting Recognition (ICFHR), 2014 and has been on the program committees of a number of conferences such as ICDAR, ICFHR, DAS, SIGIR, CIKM, CVPR, ECCV and ICCV. He has co-organized a number of workshops including the two HITS workshops on historical handwritten documents at ICDAR.

Richard Zanibbi received his PhD in Computer Science from Queen's University, Canada in 2005. Currently he is an Associate Professor of Computer Science at the Rochester Institute of Technology (USA) where he directs the Document and Pattern Recognition Laboratory. His research interests include pattern recognition, machine learning, information retrieval, and human-computer interaction. Previously he worked as a research assistant in the Queen's University Medical Computing Lab and Xerox Webster Research Center (Rochester, NY), and as an NSERC Postdoctoral Fellow at the Centre for Pattern Recognition and Machine Intelligence (CENPARMI in Montréal).

Dr. Zanibbi has published numerous papers on math notation recognition and retrieval, and was a primary contributor to the Freehand Formula Entry System, an influential pen-based equation editing prototype. He also co-organized the 2013 (ICDAR) and 2014 (ICFHR) CROHME handwritten math recognition competitions. In addition to serving on the program committees for CICM (Conferences on Intelligent Computer Mathematics), ICDAR, IWCIA, GREC, and ICFHR, Dr. Zanibbi was the local arrangements co-chair for GREC 2001 and co-chaired SPIE DRR 2012 and 2013.

Technical Program and Proceedings

As in the past, we plan for ICFHR 2018 to be a single track conference run over four days. Tutorials will be offered the day before the main conference, on Monday Aug. 6th. This will be followed by the main conference, running from Tuesday Aug. 7th through Thursday Aug. 9th. The technical portion of the conference will include oral and poster presentations, two invited talks, competitions, and awards (for Best Paper, Best Student Paper, and Best Poster).

Following recent ICHFR's, the conference proceedings will be published by the IEEE Computer Society in time for the conference. Proceedings will be provided to participants on USB sticks along with a printed booklet containing paper abstracts.

Publicity

We plan to advertise electronically using mailing lists (e.g. from ICDAR and other related conferences), and a web page created for the conference. We expect that RIT will advertise the event on web pages for the Computing College and Institute as well.

We will also create copies of posters advertising the conference for distribution at related conferences, along with calls for papers. We plan to have these ready in time for distribution at ICFHR 2016. **We will apply for IAPR sponsorship** of ICFHR 2018, which would provide additional publicity through the IAPR Newsletters and web pages.

Venues: Rochester, RIT and George Eastman House

Rochester, New York is the third-largest city in New York State. We feel that Rochester's relationship with the history of imaging will be of great interest to participants.

"For decades, Rochester was known as the imaging capital of the world, and its scientists and engineers were awarded more patents per capita than nearly any other city in the United States. Innovation and invention by Rochester's imaging companies paved the way for the world we now live in, from medical testing to space exploration, digital capture and transmission, and more." [1]

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[1] http://www.eastmanhouse.org/events/detail.php?title=innovation_2014-15

In 1892, George Eastman established Eastman Kodak in Rochester. As recently as the 1990's, tens of thousands in the Rochester area worked for Kodak, Xerox and Bausch and Lomb. George Eastman House is a former home of the Kodak founder, and provides a history of the company along with related technologies and developments in the city of Rochester. The museum provides exhibits of historic cameras and prints, a curated film museum, personal effects of George Eastman, and beautiful grounds complete with a large garden. We plan to hold a reception at Eastman House for the Social Event of the conference.

View of the gardens at George Eastman House

Conference Site: RIT

The conference site will be the Rochester Institute of Technology (RIT). Founded in 1829, Rochester Institute of Technology is a privately endowed, coeducational university with eight colleges emphasizing career education and experiential learning. The RIT student body consists of approximately 11,400 full-time and 1,600 part-time undergraduate students, and 2,350 graduate students.

Atrium of the RIT B. Thomas Golisano College of Computing and Information Sciences. The atrium is adjacent to the auditorium in which oral presentations will be held

In addition to its strong engineering, computing and imaging-based programs, RIT boasts one of the world's finest programs in photography, with seven alumni having received eleven Pulitzer Prizes. It also home to the Cary Library, which contains rare books and other archived materials pertinent to typography.[2] The typographer Hermann Zapf along with Chuck Bigelow and Kris Holmes (who created the Lucida font family) have worked as faculty at RIT, and many of Zapf's materials have been archived in the Cary library. The Cary library will be open during the conference for visits by participants.

We plan to hold the conference Banquet in the Vignelli Center for Design Studies,[3] which provides a banquet hall along with additional technological and creative exhibits that will be of interest to participants.

Oral presentations will be given in the auditorium of the B. Thomas Golisano College of Computing and Information Sciences,[4] with poster sessions provided in a large open space just a short walk away. The poster space opens onto an outdoor patio, and will also be used to serve continental breakfasts and lunches. Two daily coffee breaks will also be provided. **WiFi access is available throughout the RIT campus.**

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[2] http://library.rit.edu/cary/about-cary-collection

[3] http://vignellicenter.rit.edu/

[4] http://www.rit.edu/gccis/

Left: *The courtyard at Global Village on the RIT campus. Global village is a modern facility with apartments, shops and restaurants surrounding the courtyard.* ***Right:*** *Radisson Inn on the RIT campus*

Accommodation

The closest accommodations will be available in student housing on the RIT campus (in Global Village[5]) and at the Radisson Inn[6] located on the edge of campus, which provides a shuttle to and from RIT buildings. There are a number of other hotels that participants may choose to stay at.[7] Currently, in the summer months a room in Global Village costs less than $57 (US) per night. At the Radisson Inn, currently standard room rates are around $110-120/night, but we hope to be able to reduce costs by reserving a block of rooms for the conference.

Traveling to Rochester

In Rochester, early August is in the middle of summer, with average daytime high temperatures around 27 degrees Celsius (80 degrees Farenheit). Early mornings and evenings are often cooler, so it is good idea to bring pants, shirts and a light jacket in addition to summer clothes.

Flying to Rochester. The Rochester International Airport has regular connections to LaGuardia and JFK airports in New York City, as well as airports in Chicago, Newark (NJ), Washington Dulles, Boston, Philadelphia, Atlanta, and Toronto. Airlines flying to Rochester include Delta, US Airways, American Airlines, United Arilines, JetBlue, Southwest, and Air Canada.

Nearby Destinations. New York City and Boston are roughly six hours by car, and Niagara falls roughly one-and-a-half hours (please be aware that to see the most famous views of Niagara Falls, one needs to cross the border into Canada). Toronto, Canada is about three and a half hours by car, and Montreal six hours.

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[5] http://www.rit.edu/fa/housing/content/global-village

[6] http://www.radisson.com/rochester-hotel-ny-14623/nyrochrd

[7] http://www.rit.edu/emcs/admissions/visit/info/area-hotels

Social Events and Tourism

As mentioned above, we plan to hold a Banquet at the Vignelli Center for Design Studies on RIT's campus, and a reception and museum tour at George Eastman House. The Cary Library will also be open for visits.

RIT's campus is located outside of downtown in the suburb of Henrietta. To insure that participants are able to enjoy the museums, boutiques, parks and other attractions in downtown Rochester,[8] a shuttle service between the conference site and downtown Rochester will be provided. As one suggestion, the Strong Museum of Play[9] is an interesting destination for young and old alike.

Registration Fees

We have based our estimates for registration fees and revenue on the ICFHR 2016 bid estimates. In order to account for increased costs due to inflation, registration fees have been increased by $25 in all registration categories. This estimate assumes that there are 150 registered participants. The table below shows proposed registration rates along with a rough estimate for the number of registrations of each type. **The total estimated income from registration fees is $80,100 (US dollars). We also expect to raise $5000 from industrial and/or government sponsors, bringing total estimated revenue to $85,100.**

	IAPR Members	Non-Members	Students
Advance	$570 (est. 45)	$620 (est. 45)	$370 (est. 40)
On-site	$620 (est. 8)	$670 (est. 7)	$420 (est. 5)

Budget

Figures provided in the table of expenses below assume that 150 participants attend the conference. We plan to actively pursue financial support from companies and other organizations, but have not included amounts for this in the budget. **After expenses, we estimate a profit of $167.** If sponsor support is very strong and/or costs prove to be lower than expected, we will seek to reduce registration fees for participants.

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[8] http://www.visitrochester.com/

[9] http://www.museumofplay.org/

Item	Cost (US$)
Facilities	9000
Keynote Talks	5000
IAPR Sponsorship Fee/Levy ($20/person)	3000
IEEE Proceedings	14,500
Registration Packages ($25/person)	4000
Credit Card Processing Fees (3% of reg. fees)	2403
Posters + Publicity	1000
Awards	750
Welcome Reception	4500
Conference Food	16000
8 Coffee Breaks (2/day)	
4 Lunches	
4 Continental Breakfasts	
Banquet (Vignelli Center)	12000
Student Help	2800
(5 at $10/hr, 8hrs/day, 7 days)	
Eastman House	
Space	2500
Catering (est.)	4500
Transportation	1440
Shuttle to Downtown	1440
Total Estimated Cost	**$84,833**

Acknowledgements

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