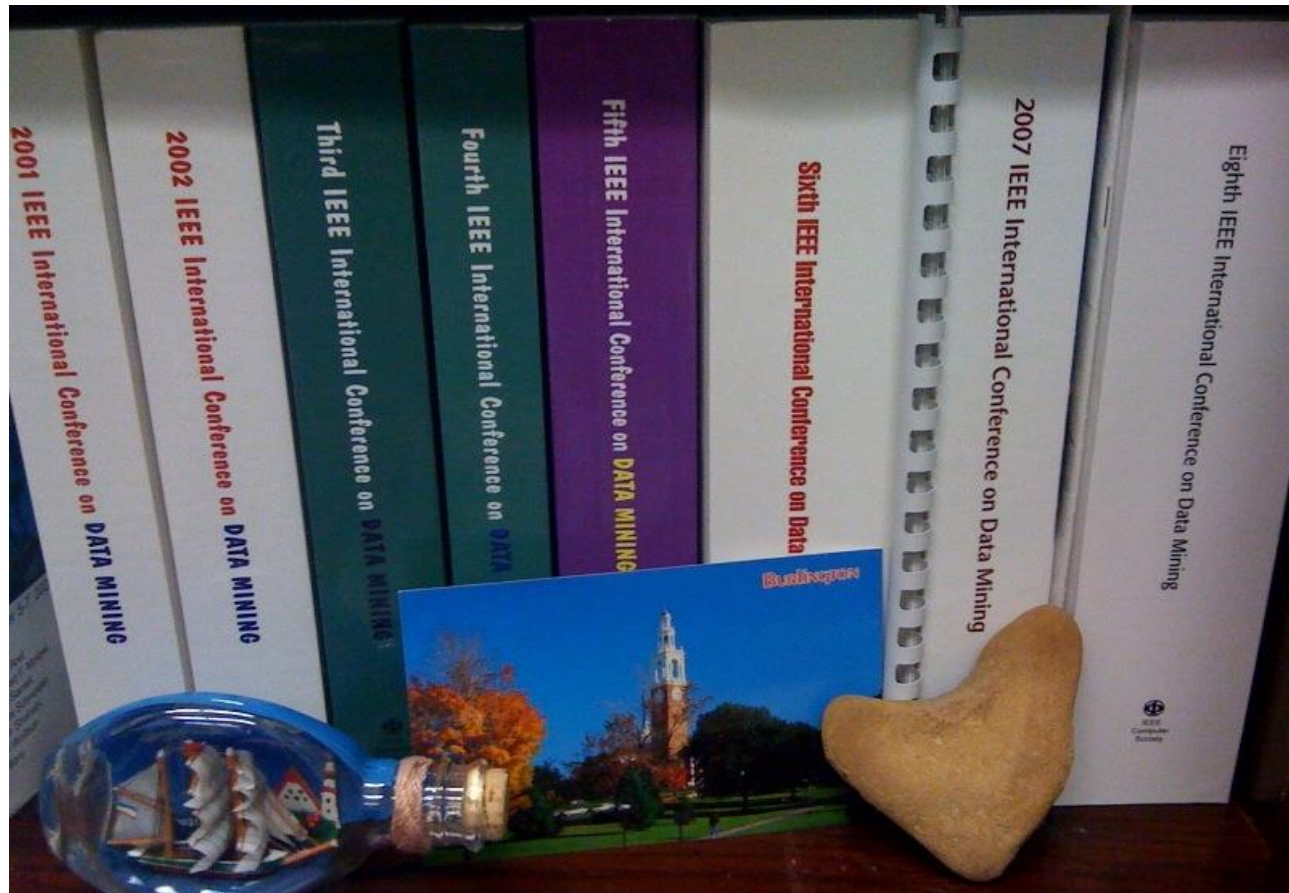# Welcome to
2019 ICDM Community Meeting

2019 ICDM Community Meeting

1. **ICDM '19 Student Travel Awards**
2. **ICDM as "the World's Premier Research Conference in Data Mining"**

   By Xindong Wu
3. **Call for ICDM '21 and '22 proposals**
4. **ICDM '19 Highlights**

   By ICDM '19 PC Chairs
5. **ICDM '20: Attractions and Call for Papers**

   By ICDM '20 Chairs

ICDM 2019 Student Travel Awards

Sponsors

2019 ICDM Student Travel Awardees

ICDM 2019 Student Travel Awards (supported by NSF, Baidu, Mininglamp and TCII)

- Kaveh Kamgar
- Yuzhou Chen
- Dipnil Chakraborty
- Shaghayegh Gharghabi
- Yang Li
- Youwei Liang
- Pinghua Xu
- Jingyu Shao
- Yuxuan Ji
- Rui Liu
- Mark Heimann
- Aria Rezaei
- Liuyi Yao
- Kin Sum Liu
- Prashnna Gyawali
- Zhuliu Li
- Takato Honda
- Bin-Bin Yang
- Junliang Yu
- Zihan Zhou
- Bo Zhao
- Shi-Ting Zhong
- Rosni Lumbantoruan
- Lei Cai
- Yongrui Li
- Sourabh Balgi
- Qi Zhang
- Dominik Mautz
- Ajay Tripathi
- Xing Zhao
- Xin-Qiang Cai
- Lihao Zhang
- Saad Sadiq
- Shengmin Jin
- Krishna Karthik Gadiraju
- Han Wu
- Tara Safavi
- Seungtaek Choi
- Mengnan Du
- Yi Liu
- Pengzhan Guo
- Dandan Lin
- Wenbin Zhang
- Qingzhe Li
- Yuyang Gao
- Chao Chen
- Qi Wang
- Xingzhi Wang
- Shah Muhammad Hamdi
- Jingyue Gao
- Lingyun Yu
- Tianwen Chen
- Shiwei Zhang
- Jieyu Zhang
- Xiaojie Guo
- Dalin Zhang
- Yang You
- Farid Razzak
- Dhivya Eswaran

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Important ICDM Traditions

1. Truly international - "*The World's Premier Research Conference in Data Mining*"

2. Exciting social programs as well as outstanding technical programs

3. **World-renowned invited speakers**!

4. Service innovation - Designed and organized by a collection of people.

Recent Changes in ICDM (1)

- **Starting at ICDM '06,**
  - **Tutorials and workshops: complimentary participation**
    - **Workshops (*with formal proceedings*!) generally on the first day**
    - **Tutorials in parallel with paper sessions**
  - **Awards:**
    - **Data Mining Research Contribution and Service Awards: Highest data mining awards (each with a check of $2500)**
    - **An increased number of Student Travel Awards**
- **Starting at ICDM '07,**
  - ***Double blind reviewing***
- **Starting at ICDM '08,**
  - **Best student paper award**
  - **Demo papers (in workshop proceedings)**
- **Starting at ICDM '09,**
  - **No hardcopy, but CD copies/memory sticks only**

Recent Changes in ICDM (2)

- **Starting at ICDM '10,**
  - **10-year highest impact paper award (with a check of $1K)**
- **Starting at ICDM '11,**
  - **A PhD Forum**
  - ***Triple blind reviewing***
- **Starting at ICDM '14,**
  - **Reproducibility**
- **Starting at ICDM '18,**
  - **Tao Li Award ($2K from Tao Li Foundation)**
  - **KAIS-Journal Best Paper Award ($1K from Springer).**

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Call for ICDM '21 & '22 Proposals

- Generally in December/November
- ICDM '21: Australia/New Zealand
- ICDM '22: America
- Proposals to uvmxwu@gmail.com

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The 19th International Conference on Data Mining (ICDM) 2019

Jianyong Wang, Tsinghua University

Kyuseok Shim, Seoul National University

Program Co-Chairs
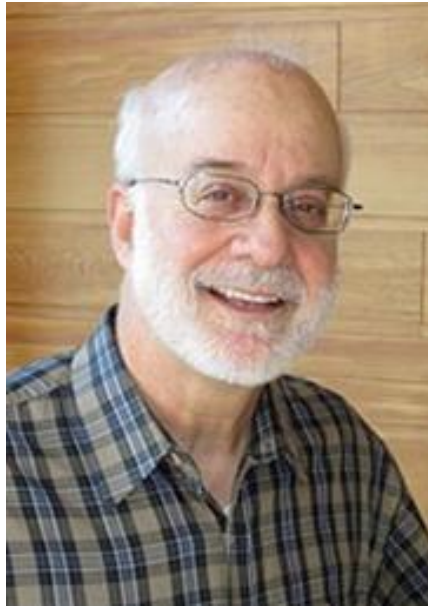
ICDM 2019 Snapshot

- 21 half-day workshops

- 3 Tutorials

- 3 Keynote Talks

- ICDM Demo

- ICDM Ph.D. Forum

- ICDM Panel

- 95 regular papers and 99 short papers organized into 34 sessions

Keynote Speakers

Dr. Jiawei Han
University of Illinois at Urbana-Champaign
USA

Dr. Ronald Fagin
IBM Almaden Research Center
USA

Dr. Joseph Halpern
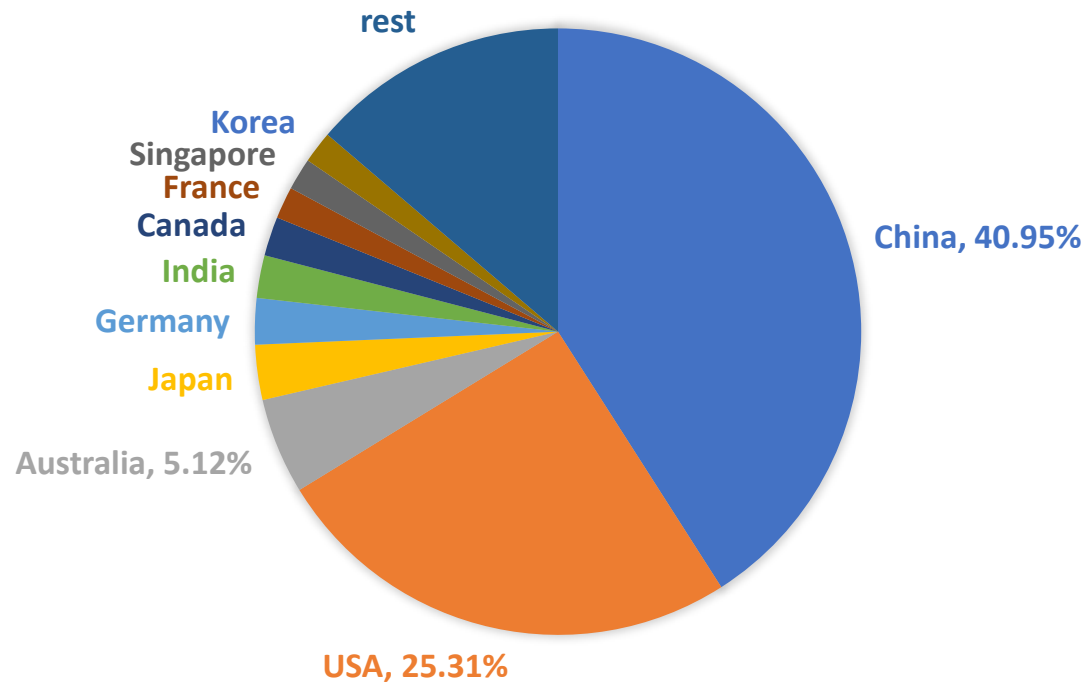Cornell University
USA

Technical Program Statistics

- 1046 manuscript submissions
  - 690 (66%) with student first-author
  - submissions from 56 countries/regions
- Paper review process
  - Triple-blind review
  - 392 PC members from 36 countries /regions
  - 48 Area chairs from 15 countries /regions

Submissions

	2017	2018	2019
	778	948	1046
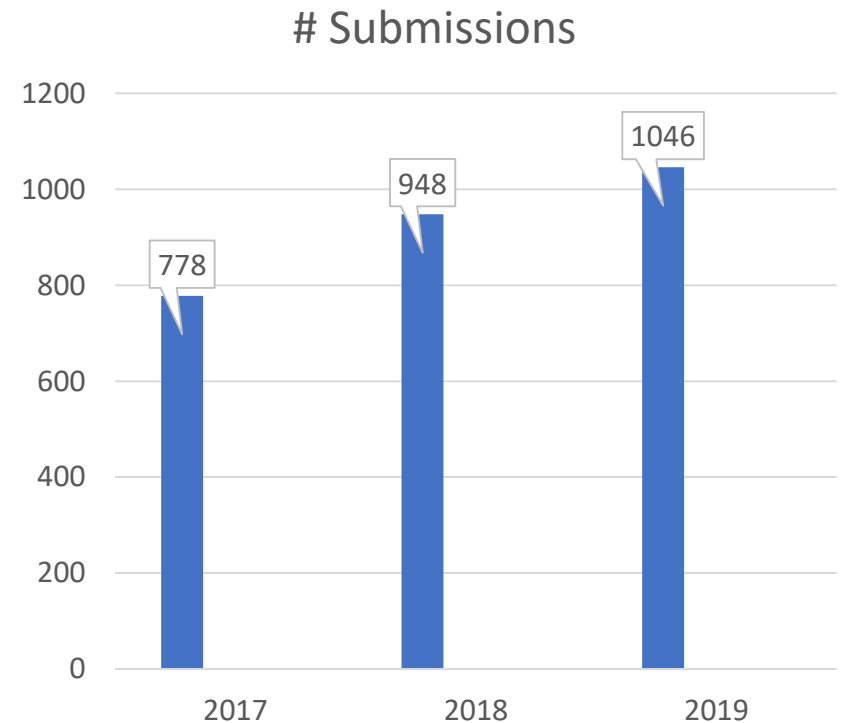
Submitted

FIRST AUTHOR SUBMISSIONS

rest

Korea
Singapore
France
Canada
India
Germany
Japan
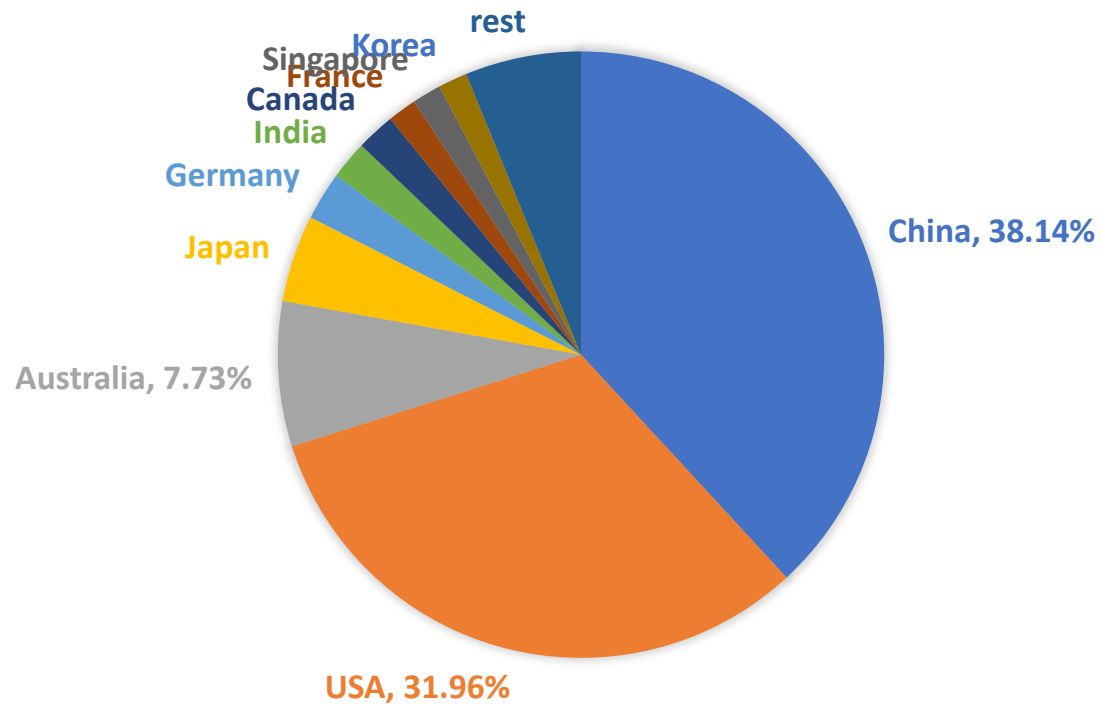Australia, 5.12%

China, 40.95%

USA, 25.31%

Technical Program Statistics

- Accepted papers
  - 95 regular papers (9.1% acceptance rate)
  - 99 short papers
  - 18.5% total acceptance rate
  - Authors from 20 countries/regions
  - Top countries of first authors: China (74), USA (62)
  - 8 papers with highest weighted average scores were recommended as Best paper candidates to Best Paper Award Committee (for selection of 1 Best paper+ 1 Best Student Paper)

Accepted

FIRST AUTHOR SUBMISSIONS

China, 38.14%

USA, 31.96%

Australia, 7.73%

Japan

Germany

India

Canada

France

Singapore

Korea

rest

Acceptance Rate (among the top-10 countries in terms of first author submissions)

| Japan	Australia	USA	Germany	Canada	China	Singapore	India	Korea	France
29.03%	27.8%	23.2%	19.2%	18.2%	17.5%	16.7%	16.7%	16.7%	16.7%

Hot Topics （Accepted papers in 2019）

Top 4 in 2019: 52% accepted papers

Top accepted in 2019

Rank	Topic	# papers
1	1.1 Novel data mining algorithms in traditional areas	56
2	2.5 Mining and link analysis in networked settings	20
3	2.7 Data mining in electronic commerce	14
4	1.4 Mining spatial and temporal datasets	11
5	1.2 Models and algorithms for new, structured, data types	9
6	1.6 Mining textual and unstructured datasets	9
7	4.4 Healthcare, epidemic modeling, and clinical research	7
8	2.9 Mining in emerging domains – Other	7
9	...	

On average
- Accepted Papers: 4.61/Paper (vs. 4.09/paper in 2018)
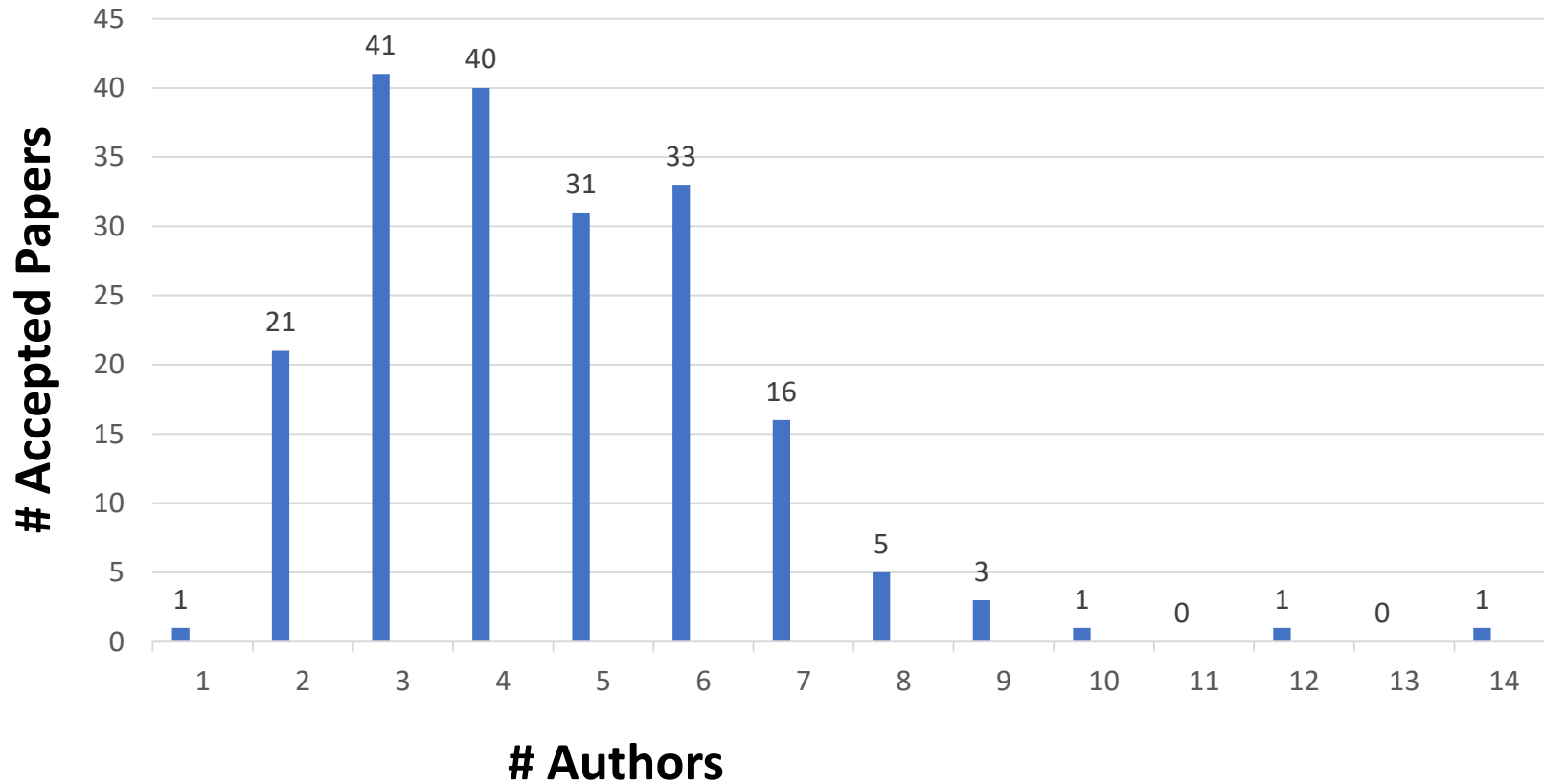
Submission Time Analysis

	>=2W	1W-2W	1D-1W	12H-1D	6H-12H	2H-6H	0H-2H
Submission rate	0.05369	0.0489	0.3519	0.2052	0.1438	0.185	0.0125
Acceptance rate	0.1607	0.2157	0.188	0.1495	0.2333	0.1917	0.077

Submission tile analysis (ICDM'18)

Submission Title Words Analysis

- Classes: positive - acceptance, negative – reject
- Words: $\{w_1, \cdots, w_n\}$
- Probability estimation

$$P(C|w_i) = \frac{1 + \#w_i \ in \ C}{2 + \#w_i}$$

- Regularization: to remove bias for rare words

$$Reg(w_i) = 1 - e^{-\sqrt{\frac{\#w_i}{max_j \#w_j}}}$$

- Significance

$$P(C|w_i) \cdot Reg(w_i)$$

Top 10 Positive Title Words

| Rank	Word	Probability	Significance
1	learning	24. 19%	0. 1406
2	adversarial	43. 24%	0. 1366
3	network	16. 73%	0. 1058
4	graph	21. 30%	0. 1029
5	neural	22. 62%	0. 0997
6	dynamic	31. 43%	0. 0969
7	alignment	54. 55%	0. 0955
8	feature	28. 57%	0. 0953
9	generation	43. 75%	0. 0934
10	data	19. 61%	0. 0928

Top 10 Negative Title Words

Rank	Word	Probability	Significance
1	network	83. 27%	0. 5263
2	learning	75. 27%	0. 4374
3	deep	80. 95%	0. 3874
4	based	90. 79%	0. 3850
5	data	80. 39%	0. 3807
6	graph	78. 70%	0. 3804
7	model	84. 15%	0. 3674
8	prediction	83. 54%	0. 3596
9	detection	82. 19%	0. 3432
10	neural	77. 38%	0. 3409

WordCloud
Accepted   VS   Rejected
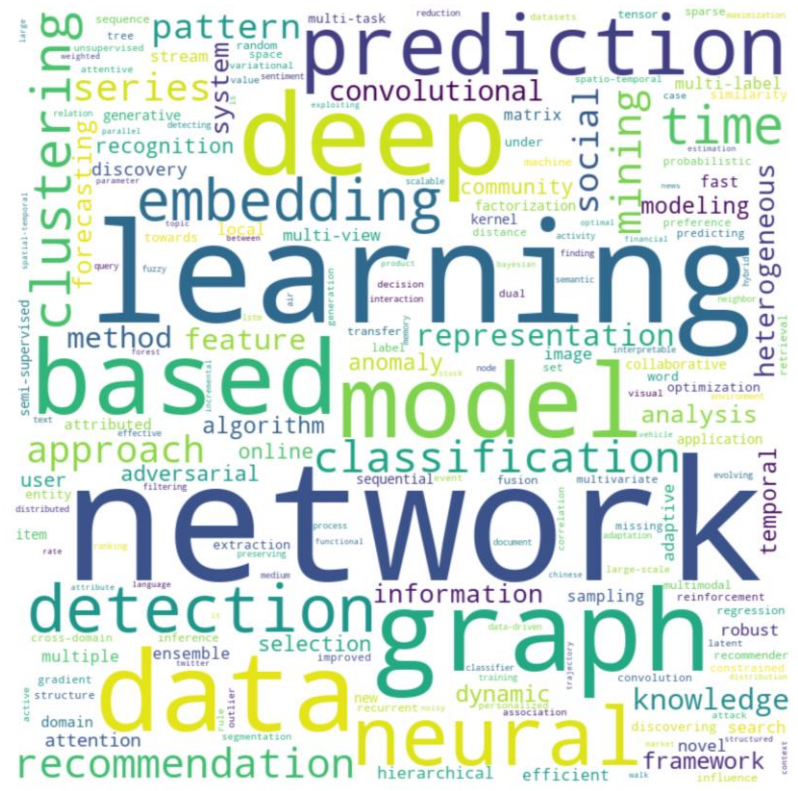
Thanks to …

- General Chairs
  - Xindong Wu
  - Francisco Herrera
- Local Chair
  - Qing He
- Tutorial Chairs
  - Wei Ding
  - Zhi-hua Zhou
- Ph.D. Forum Chairs
  - Ivan Brugere
  - Yi Yu
- Panel Chairs
  - Jian Pei
  - Myra Spiliopoulou

- Demo Chairs
  - Shuai Ma
  - Saurav Karmakar
- Finance Chair
  - Dejing Dou
- Contest Chair
  - Jia Wu
- Workshop Chairs
  - Xueqi Cheng
  - Panagiotis Papapetrou
- Sponsorship Chair
  - Jun Huan

- Best Paper Award Chair
  - Hanghang Tong
- Registration Chair
  - Yang Gao
- Publicity Chairs
  - Yanfang (Fanny) Ye
  - Kailash Budhathoki
  - Xiaonong Jin
- Web Chair
  - Gongqing Wu

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Proposal for Organizing
IEEE International Conference on Data Mining (ICDM)
Location: Sorrento, Italy
Dates: November 17-20, 2020

Conference Venue Description

Where is Sorrento?

Where is Sorrento?
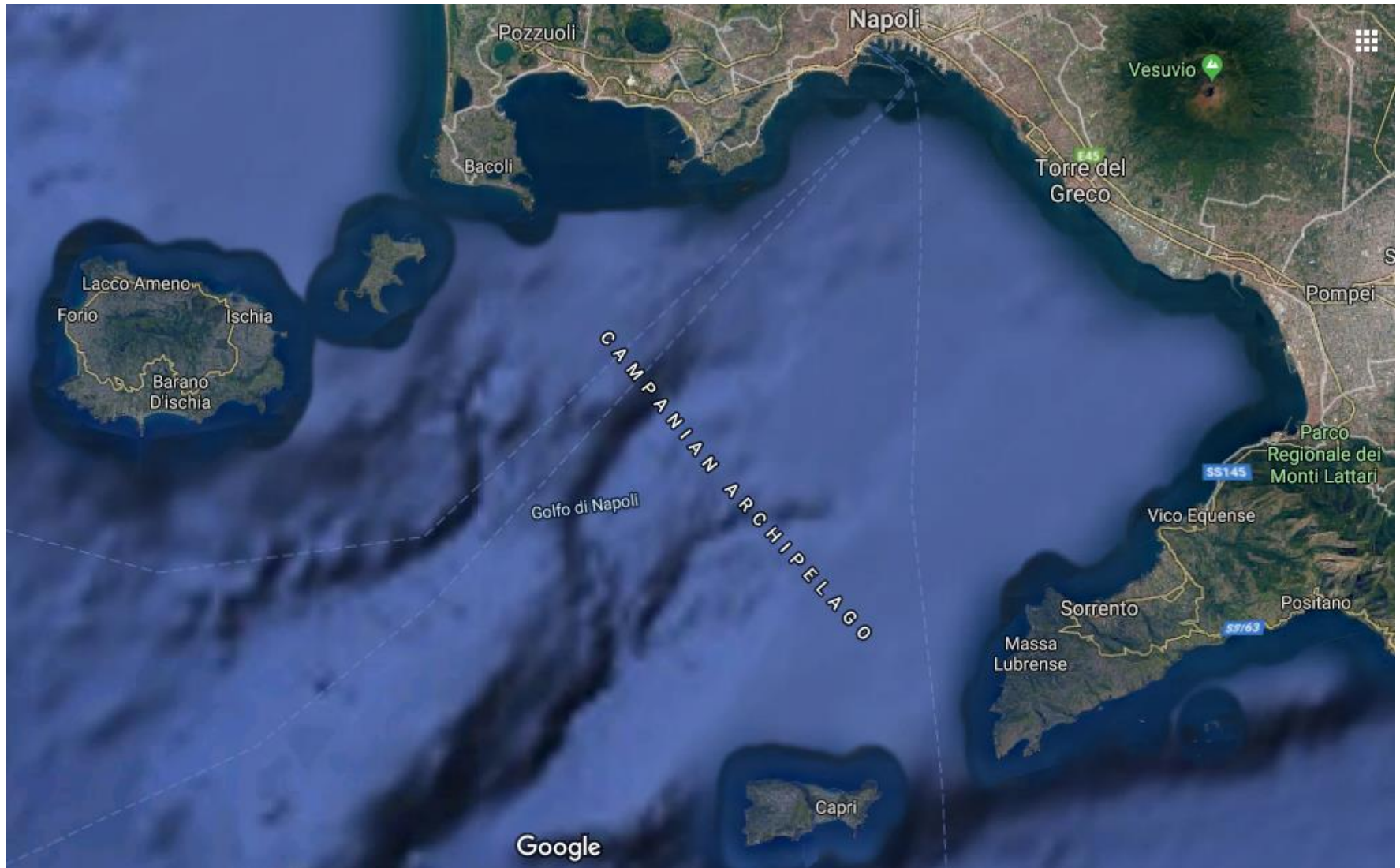
The Sorrento Peninsula...

- The **Sorrento Peninsula** is located in Southern Italy and separates the Gulf of Naples to the north from the Gulf of Salerno to the south.

- The peninsula is named after its main town, **Sorrento**, which is located on the Gulf of Naples coast.

- Celebrated tourist attractions that are in close proximity with Sorrento include the **Amalfi Coast** to the south, then to the west, the **Island of Capri** off the tip of the peninsula in the Tyrrhenian Sea, and finally, **Pompei** and **Herculaneum** few miles to the North and... two millennia back in time.

Amalfi coast

Capri

Pompei and Herculaneum ruins

The Sorrento Peninsula...

- Sorrento peninsula has a landscape unique in the world, where low and high hills, deep valleys and majestic mountains alternate, where the man's work - who levelled even the most impervious areas, transforming them in the famous terraces degrading towards the sea, on which he cultivated orange and lemon trees, olive groves and vineyards - has been grandiose.

- These are the delightful gardens that in spring time exhale a stirring scent of orange - blossom. The mild and dry climate for most part of the year makes Sorrento peninsula the ideal destination in every season.

Unique Landscape

Lemon Trees

Wonderful Gardens

About Sorrento…

- **Sorrento** is one of Italy's most famous resort towns.

- Placed on a perch high above the Mediterranean, it is like a "balcony over the sea" with views that extend from the island of Procida across the Gulf to Naples and Mt. Vesuvius.

- The city sits on the bluff that ends abruptly at a sheer cliff that plummets straight down to the sea. It has, for more than two millennia, enjoyed the status of seaside destination, starting with the Greeks. It came into its own as a summer destination during the Roman era, when emperors Agrippa, Tiberius and Augustus had their splendid villas here.

Sorrento view from the sea

A view over the sea

A top view

About Sorrento…

- Sorrento sits in a sheltered spot on the promontory, protected by the surrounding hills. It has been an important port for centuries of seafarers.

- It has been called "Gentile" ("the nice one") for its mild climate, elegant streets and gardens, and friendly residents. It has many millennia of welcoming travelers, and the tradition of hospitality is carried on proudly.

- Sorrento's climate is classified as warm and temperate. The rain in Sorrento falls mostly in the winter, with relatively little rain in the summer. The Köppen-Geiger climate classification is Csa. The average temperature in Sorrento is 16.6 °C. Precipitation here averages 796 mm.

Other Sorrento views

About Sorrento…

- Sorrento may just be the ideal destination:
  - It has two beautiful marinas, a lively city center, gorgeous views, fabulous restaurants and sidewalk cafes.
- Sorrento is a welcoming place with interesting streets to wander, shops to peruse, beaches to enjoy and food specialties to savor.

Typical food and drink

Sorrento marinas

Sorrento: Main Attractions

- The center of the city's life is **Piazza Tasso**, which is full of energy and people at all hours. The square is named after the poet Torquato Tasso. In the main square, well known as Largo of the Caste, is the Baroque Church del Carmine, within its interior a painting by Onofrio Avellino. On the square stands a statue of S. Antonino Abbate. From the square you come onto the shopping street Via San Cesareo.

- **Corso Italia** is lined with cafes, restaurants and shops but the entire historic center has life, sights and eateries tucked away in the side streets. There are loads of pretty palaces fronting the streets, attesting to the town's prosperity.

- **The Villa Comunale** is a civic park bursting with blooms and trees, a popular gathering spot for the citizens.

Piazza Tasso

Corso Italia

Villa Comunale

Sorrento: Main Attractions

- **Piazza Vittoria** contains the Temple of Venus, or what remains of the ancient structure.

- The **Church of San Francesco** has a cross-vaulted cloister that hosts concerts and art exhibitions.

- The **Romanesque Duomo**, the city's cathedral, dates back to the 1400s. It has gorgeous doors with a fresco over the portal. It's accompanying bell tower has a clock faced with maiolica tiles and there are ancient columns shoring up its base.

Piazza Vittoria
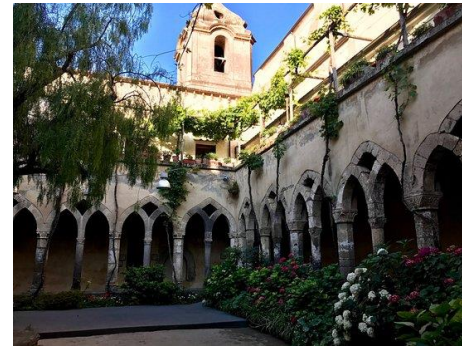
San Francesco Chruch

Duomo

Sorrento: Main Attractions

- **Vallone dei Mulini** is a historic valley in Sorrento. Its name derived from its beginning function: to grind grain. The valley originates from the antediluvian waters in a tufa plane about 37,000 years ago, following the eruption of the Campi Flegrei. It is known for its variety and unique plants. These plants settle within ferns. Possible reasons for the appearance of these rare plants include moisture in the area, nearly complete lack of ventilation, sun exposure, and the presence of tuff.

- The **Museo Correale** is a patrician palazzo that the noble counts donated to the city, along with the family's private art collection. There are three centuries of masterpieces and an unusual clock collection in the villa's halls.

Vallone dei Mulini

Museo Correale

Sorrento: other interesting places to visit...

- It's also great for seeing the region as you can get:
  - ferries to **Naples**, **Amalfi**, **Capri** and **Ischia**;
  - Local trains (Circumvesuviana) to **Pompeii** and other towns of **Sorrento Coast** (**Vico Equense**, **Piano di Sorrento**, **Meta di Sorrento**, **Castellammare di Stabia**) ;
  - buses to the other towns along the famed **Amalfi Coast** (Amalfi, **Positano**, **Minori**, **Maiori**, **Vietri**, etc.);
  - excursions organized by local companies to visit **Vesuvio** and other famous places (e.g., **Pompeii and Hercolaneum ruins**) .

Ferries to Ischia, Napoli, Capri, Amalfi

Trains and bus for Sorrento and Amalfi coast

Excursion to Vesuvio

Conference Venue:
The Hilton Sorrento Palace

- The conference will be held at **Hilton Sorrento Palace** (https://www.hiltonsorrentopalace.it/en/).

- Overlooking the coastline, Hilton Sorrento Palace is home to magical views of the Bay of Naples and Mount Vesuvius.

Conference Venue:
The Hilton Sorrento Palace

- Relaxation, excitement, beauty: experience it all at the idyllic Hilton Sorrento Palace. At Hilton Sorrento Palace, it is possible to: breathe in the scent of glorious citrus groves while lying next to six outdoor pools; savour cocktails or light bites at the poolside bar; gaze out over the Bay of Naples from the room's private balcony.

- To ensure trips are truly relaxing, multi-lingual staff and concierge services are available at the hotel.

- Hotel's facilities:
  - 335 sophisticated rooms;
  - 1 exquisite restaurant and a chic lounge;
  - 6 outdoor pools and 1 grotto-style indoor pool;
  - 1 Infinity Pool next to the Settimo Club Lounge;
  - 1 Contemporary Japanese Restaurant.

Conference venue: Other arrangements

- At walking distance from the main conference hotel, there are a number of available hotels. An un-restricted list is the following:
    - Conca Park (**** - 5 minutes walking distance): https://www.concapark.com/en/
    - Plaza (**** - 10 minutes walking distance): http://www.plazasorrento.com/en/
    - Antiche Mura (**** - 10 minutes walking distance): http://hotelantichemura.com/
    - Michelangelo (**** - 15 minutes walking distance): https://www.michelangelohotel.it/en/
    - Tramontano (**** - 15 minutes walking distance, or 5 minutes minibus): http://www.hoteltramontano.co.uk/en/
    - Grand Hotel Vesuvio (**** - 10 minutes minibus): http://www.vesuviosorrento.com/en/
    - Hotel Leone (*** - 2 minutes walking distance): https://www.hotelleone.com/en/
    - Villa di Sorrento (*** - 10 minutes walking distance): https://www.villadisorrento.it/en/
- It is also possible to choose different solutions:
    - Bed & Breakfast arrangements , not only in Sorrento but also in the near towns (e.g., Vico Equense, Castellammare);
    - More cheap hotels in Sorrento or nearby (see for example by www.booking.com);
    - Etc.

Sorrento: Travel Information

- Sorrento can be reached from two main airports:
  - Naples "Capodichino" International Airport http://www.aeroportodinapoli.it/en
    - Naples "Capodichino" International Airport is 8 km north of Naples. It is the main airport in Campania with national and international flight services.
  - Rome "Leonardo da Vinci" International Airport http://www.adr.it/web/aeroporti-di-roma-en-
    - Rome "Leonardo da Vinci" International Airport is the major airport in Italy. It is one of the busiest airports in Europe by passenger traffic with almost 43 million passengers served in 2018. The airport serves as the main hub for Alitalia, the largest Italian airline, and Vueling, a Spanish low-cost carrier owned by International Airlines Group.
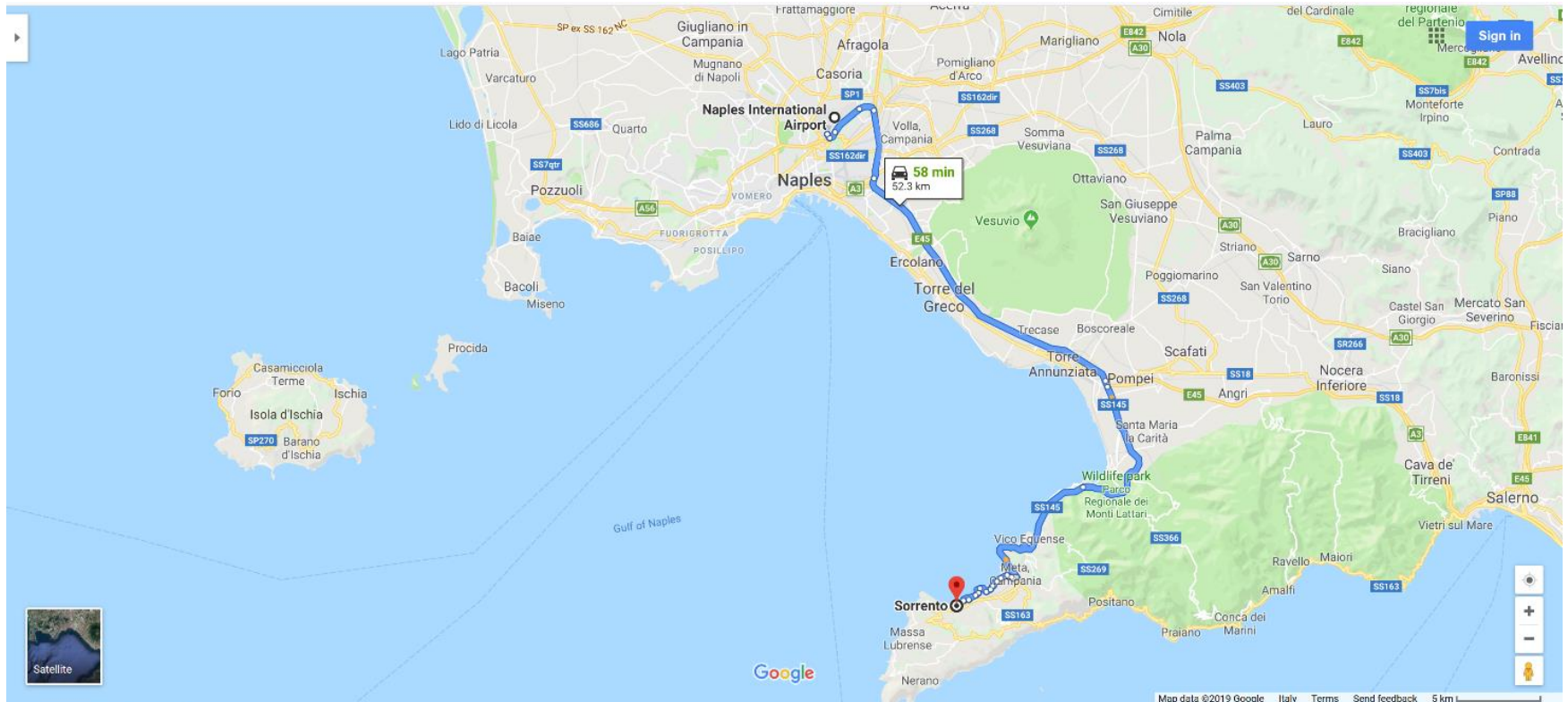
How to reach Sorrento…

- From Naples "Capodichino" International Airport:
  - info: the distance between the Naples "Capodichino" International Airport and Sorrento is about 52 km, the approximate travel time is about 1 hour and 20 minutes;
  - by train: **Circumvesuviana** from Napoli Centrale Station: https://www.eavsrl.it/web/
  - by bus: **Curreri bus service**: https://www.curreriviaggi.it/;
  - by shuttle: **Seahorse shuttle** service: https://www.seahorsecarservice.com/en/;
  - by taxi:
    - **Consorzio Taxi Napoli**: https://www.taxinapoli.it/en/
    - **Radio Taxi La Partenope**: https://www.radiotaxilapartenope.it/
  - by renting a car…

How to reach Sorrento...
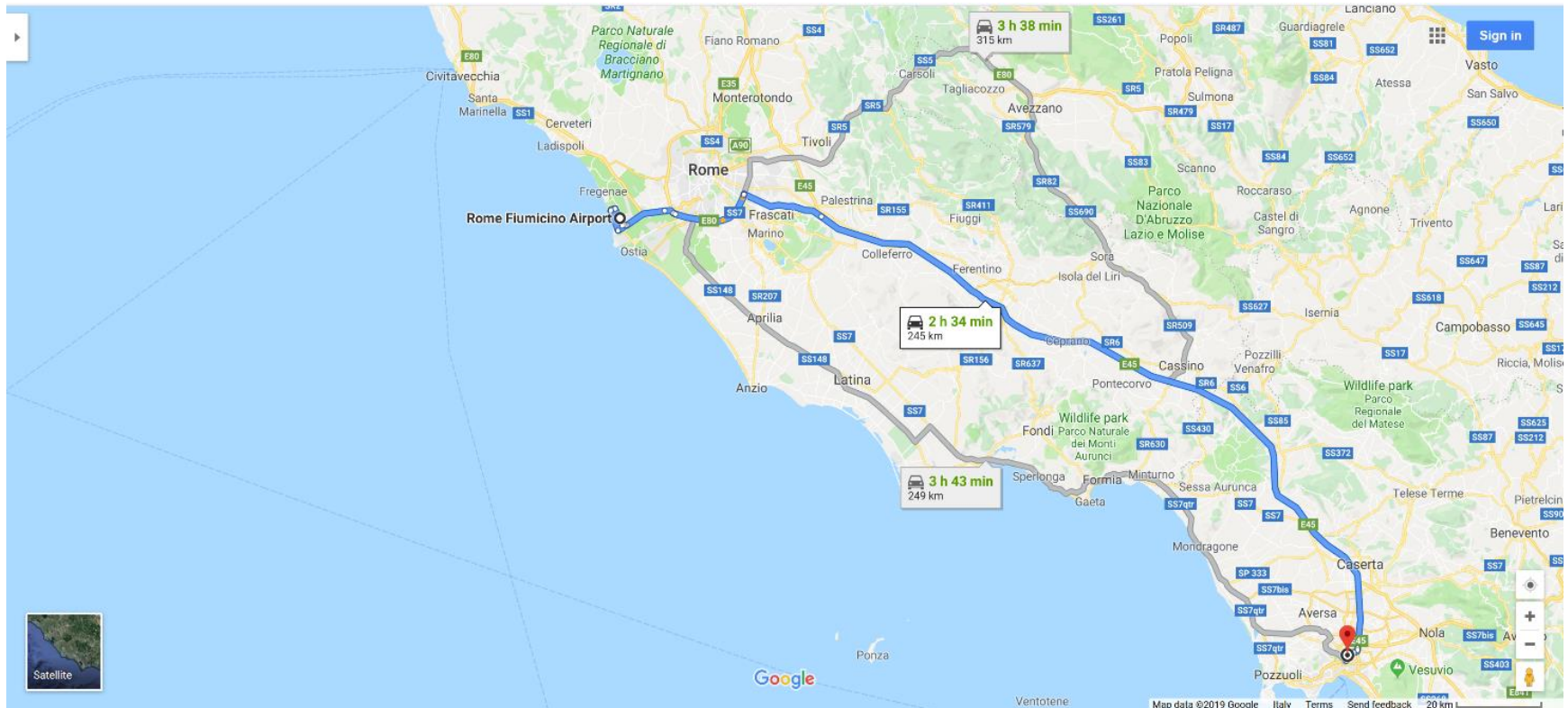
- From Naples "Capodichino" International Airport

How to reach Sorrento…

- From Rome "Leonardo da Vinci" International Airport:
  - info: the distance between the Rome "Leonardo da Vinci" International Airport and Sorrento is about 280 km, the approximate travel time is about 3 hours and 15 minutes;
  - by train (to reach Napoli Centrale Station): **Trenitalia**, the main Italian Train Agency: https://www.trenitalia.com/en.html;
  - by bus: Flixbus: https://global.flixbus.com/;
  - by shuttle: Rome - Civitavecchia Cruise Port - Airports – Transfers: https://www.transfers-rome-civitavecchia.com/
  - by renting a car…

How to reach Sorrento…

- From Rome "Leonardo da Vinci" International Airport

How to reach Sorrento…

- As regards the two main hub for Sorrento, they can be reached from several places all around the world. In more details:
  - Naples "Capodichino" International Airport can be reached from the following international destinations:
    - Germany, The Netherlands, Greece, Spain, Switzerland, Ireland, United Kingdom, France, Poland, Belgium, Romania, Hungary, Morocco, Denmark, United Arab Emirates, Croatia, Scotland, Finland, Turkey, Lithuania, Ukraine, Portugal, Luxemburg, Malta, Russia, USA, Norway, Czech Republic, Egypt, Sweden, Israel, Albania
  - Rome "Leonardo da Vinci" International Airport can be reached by practically all over the world, including Europe, North America, South America, Asia, Africa and Oceania.

Additional Notes on Reaching Sorrento

- Sorrento is an international tourist hot-spot and people will enjoy to come in Sorrento. Unfortunately, Sorrento has not an airport, due to geographical aspects.

- The nearest international airports are, as already described, Naples "Capodichino" International Airport and Rome "Leonardo da Vinci" International Airport.

Additional Notes on Reaching Sorrento

- The distance between Naples "Capodichino" International Airport and Sorrento is about 50 km and it can be covered in about 1 hour.

- Indeed, as already seen, reaching Sorrento from Naples "Capodichino" International Airport is very easy due to the fact the area is highly-oriented to tourism-sector's activities.

- Sorrento can be reached from Naples via to local train ("Circumvesuviana") and local buses (several regional companies) that start from both Naples airport and/or Naples Central Station.

- In addition to this, there are shuttle service companies that can arrange multiple transfers by reservation. Therefore, the local arrangement organization can support the shuttle reservation of ICMD 2020 participations by grouping them in 4-5 person, according to their arrival time. Grouping by 4-5 person will also reflect in reduced individual fees.

Useful links

- https://en.wikipedia.org/wiki/Sorrento
- http://www.sorrentotourism.com/en/index.php
- http://www.sorrento-italy.net/info_sorrento_en.php
- http://www.reidsitaly.com/destinations/campania/amalfi_coast/sorrento/planning/t-o.html
- http://www.fondazionesorrento.com/en/gastronomy-asp.php

In SORRENTO

ICDM 2020: Nov 17-20 Sorrento/Italy

Organizers

General Chairs
Alfredo Cuzzocrea, University of Calabria, Italy
Carlo Zaniolo, University of California, Los Angeles, USA

Steering Committee Chair
Xindong Wu, University of Louisiana at Lafayette, USA

Program Chairs
Jun Huan, Baidu Research, China
Claudia Plant, University of Vienna, Austria

Demo Chairs
Jiannong Cao, The Hong Kong Polytechnic University, Hong Kong
Arno Siebes, University of Utrecht, The Netherlands

Tutorial Chairs
Diane Cook, Washington State University, USA
Min-Ling Zhang, Southeast University, China

Panel Chairs
Ranga Vatsavai, North Carolina State University, USA
Wei Wang, University of New South Wales, Australia

And many others.

Call for Papers

All areas of data mining, in particular also emerging topics like:

- ☐ ethical data analytics
- ☐ automated data analytics
- ☐ data-driven reasoning
- ☐ interpretable modeling
- ☐ cyber-physical systems
- ☐ multi-modality data mining
- ☐ and heterogeneous data integration and mining.

Thank You!

- In the afternoon,
  - 1 Panel on Marketing Intelligence
  - 1 Contest on Knowledge Graph
  - 3 Technical Sessions
  - 1 Tutorial on Table Extraction and Understanding.