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-- Send in your registration form.

ASIC 2008

Seventh Annual Summer Interdisciplinary Conference



Madonna di Campiglio, Brenta Dolomites, Italy Sunday, July 6 - Friday, July 11, 2008.

Announcing ASIC 2008!

The Seventh Annual Summer Interdisciplinary Conference (ASIC 2008) will be held at the Hotel Touring in the resort village of Madonna di Campiglio on the west side of the Brenta group of the Italian Dolomites (see: http://www.campiglio.com/). Richard M. Shiffrin of Indiana University - Bloomington is the organizer: Email correspondence should be directed to or mailed to Richard M. Shiffrin at Indiana University (select 'Contact' from the menu for the address).

The subject matter of the ASIC conferences is interdisciplinary, within the broad frame of Cognitive Science. ASIC uses the very successful format of previous ASIC and AIC conferences: Days are free for leisure activities and discussions among participants. The talks/posters are in the later afternoon/early evening, followed by dinner. The date has been chosen to make it convenient for attendees to bring family/friends. The conference is open to all interested parties, and an invitation is NOT needed to attend. However, due to the small number of spots for speakers, the organizer will select the attendees to give talks, and additional attendees will have the opportunity to present posters.



Previous Years' Websites

Several parts of this year's website are still under construction. For examples of previous years' websites, visit ASIC 2007, ASIC 2006 and ASIC 2005.

Invitation

The conference is open to all scholars who fit the very general theme of the conference, and their family and friends. An individual invitation is NOT needed. We encourage you to send the conference information to friends and colleagues. If you are interested in organizing a half or whole topic session, contact the organizer.

Conference Aims

The conference will cover a wide range of subjects in cognitive science, including:

- modeling of cognition
- neuroscience, cognitive neuroscience
- psychology (including perception, psychophysics, attention, information processing, memory and cognition)
- computer science and artificial intelligence
- machine intelligence and learning
- methodology and statistics
- linguistics, psycholinguistics and computational linguistics
- philosophy of mind, cognitive science

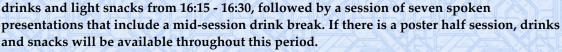
We especially invite talks emphasizing theory, mathematical modeling, and computational modeling (including neural networks and artificial intelligence). Nonetheless, we require talks that are comprehensible and interesting to a wide scientific audience. Speakers will provide overviews of current research areas, as well as of their own recent progress.

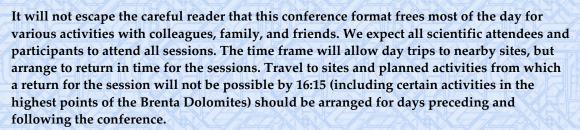


Conference Format

There is a single speaking session each day. If the number of participants exceeds the number of speaking slots (about 42), then the first half session on a day to be chosen will be devoted to posters. Information on submitting proposals for presentations (speaking or posters) is on the page of this website labeled 'Talk and Poster Submissions''. Please submit talk/poster information on the website, even if you have already sent (some of) this information to the organizer.

The conference will start with registration and a reception from 15:00-16:30 on Sunday, July 6. On subsequent days (except a poster day) there will be







You are not officially on the request list for presenting research (talks or posters) until you send the registration fee, preferably by Paypal. visit the Registration page at this website.





Rooms at Hotel Touring are limited, so reserve soon (the hotel can offer additional rooms at an adjacent hotel when space is full). For information visit the Lodging page at this website.

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Registration Information for ASIC 2008

If you are planning to attend ASIC 2008, please fill out the registration form and submit your registration fee. This fee pays for room and equipment rentals, snacks, banquet, etc.

This year's fee schedule, in US dollars:

	By check in US dollars:	By Paypal:
Prior to Jan. 1, 2008	175	180
Jan. 1, 2008 - March 1, 2008	225	230
After March 1, 2008	300	305

There are two ways to pay the registration fee:

- 1. Send a check for the correct amount to ASIC 2008, c/o Richard M. Shiffrin, Psychology Dept., Indiana University, Bloomington, IN 47405.
- 2. Online by PayPal (this will entail a \$5 handling fee).

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SUBMISSIONS OF TALKS AND POSTERS

Whether you would prefer to give a talk or poster, and whether you have already sent some of this information to the organizer by email, please provide on the link below a list of authors (with the presenter indicated), their affiliations, and emails; a title, and an abstract (limit 250 words). These may be changed later, so do not hesitate to send them as early as possible. The organizer will use these to organize the sessions. Please go to the submission form to indicate your preference for talks or posters.

The spoken talks are absolutely limited to 30 minutes, a time that includes interruptions for questions, and final discussion. It would be best to plan for twenty minutes of actual speaking. The talks should be aimed not at specialists, but at a general scientific audience. Poster details will be provided later, should a poster session be required.

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TRAVEL TO AND ABOUT MADONNA DI CAMPIGLIO

General Position:

A major superhighway, A4, runs across northern Italy, just south of the Dolomites, from Milan on the west to Venice on the east. About 2/3 of the way to Venice, another major highway, A22, heads north from Verona to the Brenner Pass, and thence to Innsbruck, Austria. North of the A4 and west of the A22 are Lake Garda, and then further north, the Brenta group of the Dolomites. Madonna di Campiglio is on the west side of the Brenta group.

Flights to any of the four cities (Milan, Verona, Venice, Innsbruck) are recommended as providing the easiest access to the conference. Cars may be rented at any of these airports. Hotel Touring has parking available, free of charge to attendees. For those attendees not seeking the easiest access, note that driving through the Alps and Dolomites can be an adventure, but is spectacular and worthwhile in its own right.

AIR

The three closest major international airports are Milan, Verona, and Venice (a little further and over the Brenner Pass is Innsbruck). Many participants will want to rent a car and drive to Campiglio (note that automatic shifting is usually only provided upon special request). Hotel Touring is in Campiglio, and is directly at and below the Brenta group, so a car is not required, but there are many interesting sites in the vicinity, for site-seeing, leisure activities, and adventure activities, so many will find a car useful.

AUTO

Driving directions to Madonna di Campiglio, Northern Italy:

Highway A4 goes from east from Milan past Brescia, Verona, Vicenza, Padova, to Venice. Highway A22 leaves the A4 east of Brescia and just west of Verona and goes north past Trento, Bolzano and over the Brennero pass to Innsbruck (Austria). The Brenta group lies west and a little north of Trento. From Milan the distance is about 207 km.

From the A4, Brescia Est exit: Follow directions to Lago d� Idro (using SP BS 23 when one nears Lago d� Idro), and then SS 237 north to SS 239 to Campiglio.

From the A22, Rovereto Sud exit: SP 90 west (directions to Nago) then SP 240D north to SS 45 north to Sarche, then 237 west to SS 239, then north to Campiglio. [At Nago a slight detour to the north end of Lake Garda is worthwhile head to Nago Torbole and Riva del Garda.

From Riva go north on SS 45, then as above.] (82 km)

From the A22, Trento Centro exit: A4 to A22, north to Trento Centro exit. Take SS45 west to Sarche and then SS237 west to the intersection with SS239. Take SS239 north to Campiglio. (73 km)

From the A22 from the north (e.g. Innsbruck): Exit S. Michele all'Adige, direction Mezzolombardo. Then SS 43 north past Cles to SS 42 southwest to SS 339 south to Campiglio (71 km).

TRAIN and BUS

Madonna can be reached by various combinations of TRAIN and BUS, from the major airports and cities in the area [DETAILS TO BE ADDED LATER]

[Collegamenti giornalieri da/con Mal�, Bolzano, Trento, Milano, Brescia Orari Autostradale - Orari S.I.A. - Orari Alpi in Bus Orari Trasporti Pubblici della Provincia]

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Lodging

We have placed a hold on all rooms and suites at the hotel. The following prices are per person per day, and include half board per person (breakfast and dinner, as described in the MEALS link on this website).

- 48 euros for two persons in a double room
- 54 euros for one person in a single room
- 73 euros for one person in a double room
- 43 euros for three persons in a triple room
- Suites: 2 rooms plus living room + bathroom: 4 people at 48 euros.

Lodging reservations should be made early, because space is limited and we expect a large attendance. For the hotel website see www.htouring.it. Reservations can be made by contacting the hotel. The hotel emails are and The telephone number is (0)465-441051. The fax is: (0)465-440760. There is also a reservation link on the hotel website. Reservations can be made by [TO BE FILLED IN LATER].

Attendees who attempt to reserve after Hotel Touring has booked all available space will be booked into an adjacent hotel, at similar rates (but all meals will still be taken at Hotel Touring).

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Food/Dining

The meals will be taken at the dining hall at Hotel Touring.

Breakfast and buffet dinner are included as part of the lodging charges for all attendees and guests at Hotel Touring. Lunches can be taken, as desired, either at the hotel or at many restaurants in town. Lunches to go, for various outings, can also be arranged.

The dining will be buffet style, and a variety of dining options has been arranged, including vegetarian meals (not just salads). There will a banquet dinner at the hotel to end the conference, including wine and beer.

The food and drink offerings at the opening reception, the session starts, the mid-session breaks, and a supplement for the final banquet are paid for from the participants registration fees.



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Climate, Weather, Clothing

The weather in Madonna di Campiglio in early July is typically quite pleasant, even hot at times, although like any mountain setting, rain is a possibility. Evenings are usually pleasantly cool. As one moves high up into the Brenta Dolomites (as much as 6000 ft. above town) the temperatures of course can drop significantly, and one should be prepared accordingly on such outings. Do not forget sun cream. Biting insects do not seem to be much of a problem. For various adventure outings, specialty clothing may of course be needed (see the link on this website to ACTIVITIES.

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Activities

A very useful resource is the Tourist Office in Madonna di Compiglio, at which English speakers can normally be found:

Address: Via Pradalago 4, I-38084 Madonna di Campiglio

Phone: +39 0465 44 20 00 Fax: +39 0465 44 04 04

Overview

Links

http://www.summitpost.org/area/range/150821/brenta-group.html
General information in English on the Brenta, with descriptions of the various mountain subgroups and areas in the Brenta.

http://www.parks.it/parco.adamello.brenta/Eindex.html

This site is mostly in English, though some links are in Italian. It gives some general information about the Brenta and its surrounding locales.

http://www.dolomitiparkhotel.com/dolom-in/index.htm

This site was constructed in English (except for some sublinks) by a group of hotels (apparently), but is nonetheless quite useful, for example giving information about walks and tours in the Brenta, and including many photos.

http://www.dolomitibrenta.it/

This site gives the most detailed information about activities, walks, via ferrata, and climbs in the Brenta, but is unfortunately only in Italian (and German).

http://www.guidealpinecampiglio.it/

This site, in Italian, is the site of the Alpine Guides, and gives much information about climbing and mountain excursions.

http://www.liberavventura.it/

This is the site (mostly in Italian) of our conference guide, Guido Bonvicini.

Tourism

For tourism during the conference, the cities of Trento and Bolzano are closest, and Verona, Vincenza, and Padova (and possibly Venice, Milan, and Innsbruck) are close enough for day trips that would allow return to Campiglio in time for the daily conference proceedings. Not far from Campiglio (south) is Riva del Garda, a pleasant and accessible resort town on the northern tip of Lake Garda. However, generally speaking, tours taking significant amounts of time to the old cities of Northern Italy and elsewhere had best be planned for days before and after the conference.

Mountains

(This website contains a pictorial guide to many of the activities discussed here).

The conference is being held in the Dolomites, a remarkable set of rocky

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crags in Northern Italy, with valleys typically starting about 3000 feet and peaks rising to 10,000 feet. Most of the Dolomites are east of the highway to the Brenner pass, with a single group, the Brenta, to the west of this highway. However, the Brenta group is often



considered the most spectacular of all the Dolomite groups. Madonna di Campiglio is situated directly at the base and against the west side of the Brenta group, which rises about 6000 ft directly from town. The area in general has many enormous sheer cliffs rising from green valleys and beautiful lakes, and large numbers of sharp pinnacles and spires. There are many beautiful hiking paths and via ferrata linking extremely well appointed huts throughout the Brenta group.

HIKING

The hiking opportunities are plentiful, dramatic and pleasant. The hiking trails (as well as via ferrata see below) often link huts situated throughout the Brenta, some quite high in the mountains, almost always in spectacular settings. The Brenta has numerous beautiful and spectacular hikes at all levels of length and difficulty, many of which can be done during the conference, and others that require more time or multiple days. Especially interesting possibilities for days prior to or after ASIC are hikes from Refugio to Refugio for several days. The websites under \$\infty \text{LINKS} \infty \text{ give a good deal of information.}

There are a few books in English:

The Dolomites of Italy; James and Anne Goldsmith; ISBN 1-55650-162-5.
-In English. Walks and hikes and much information. Brenta pages 154-167.

Trekking in the Dolomites; Henry Stedman; (Trailblazer 2001) ISBN (British) 1-873756-34-8.

-Long multiday Dolomite Treks, but only trek covered in the Brenta is a short one day trek, on pages 196-7.

Brenta Dolomites: Scramblers' Guide; Anderson; (West Col, 1982).
-May be hard to find.





VIA FERRATA

Via Ferrata translates as Pron Ways or Pron Walks, a term referring to the iron cables that are strung along the paths hacked into cliffsides. These paths also link the huts in the region, and provide an exciting and spectacular alternative to the regular hiking trails, an alternative that provides the feel and exposure of climbing, without the technical requirements or any danger. One wears a harness with two attached slings and carabiners, each hooked onto the cables. One walks along the path, sliding the carabiners along the cables as one walks. When one reaches a staple (attaching the cables to the cliffs) one unclips one carabiner and moves it to the other side of the staple, and then does the same with the other carabiner, so there is never a time



that one is not safely attached to the cable. This system insures safety and as a result many families and children take these walks, as do school groups and the equivalent of boy scouts and girl scouts. Safety aside, the settings and exposure are spectacular enough to provide a thrill to those following the via ferrata, and the views are unparalleled. There are many Via Ferrata scattered throughout the Brenta, and these vary in terms of length, difficulty, and ease of access. The Via Ferrata are rated for difficulty, allowing one to choose one to match one's abilities and maximize enjoyment.

There are several methods to enjoy the Via Ferrata. One can hire a guide locally; the prices are generally modest, and the guides will supply all equipment needed for the outing. Alternatively one can choose a suitable Via Ferrata (see below) and self guide. Guido Bonvicini will again be at the conference, and will bring 10 sets of gear (Harness, Helmet, Ferrata kit such as slings, carabiners). He will rent these at a very modest fee to interested parties. We will also provide advice concerning which Via Ferrata are suitable for use on conference session days, and which are better reserved for days prior to or after the session days (on which days more time is available). We intend to offer at least one group outing on a suitable Via Ferrata during the conference, led by Guido or a local guide. Email the organizer with the number in your party who might wish to join, and the days of the conference on which this would be possible.

There are at least two good books in English on Via Ferrata in the Dolomites, including those in the Brenta:

Via Ferrata-Scrambles in the Dolomites; Hofler/Werner; (translated by Cecil Davies) Cicerone Press, 1992. ISBN 1-85284-089-7.

English translation of classic text. Brenta covered on pages 204-236.

Via Ferratas of the Italian Dolomites: Vol 2; Graham Fletcher/John Smith; Cicerone 2003. ISBN 1-85284-380-2.

Newer guide. Brenta covered pages 174-210.

TIMING OF ACTIVITIES

The Brenta Dolomites have a scale that can fool visitors not acquainted with the Alps, making some tours into day long outings, or even longer. As a result, at least a few of the best and most spectacular hikes and via ferrata cannot really be done starting in the morning at the hotel, and returning in time for the sessions at 16:15. We will provide advice at the conference concerning which hikes and via ferrata can be done in one day in time for a return. However, some of the most spectacular and worthwhile activities on earth involve hikes and via ferrata that link the Refugios (huts). Many locals and visitors make a point of planning multi-day trips moving each day from hut to hut, and we highly recommend such an activity for any of our conference attendees able to do so before of after the conference

itself.

REFUGIOS

The refugios are typically very inexpensive and surprisingly well equipped little hotels. They usually have both semi private rooms (for four) and large rooms with multiple beds. The ones lower in the mountains sometimes have hot showers available, and all are supplied by small cableways, so that fresh food arrives daily form the nearby village(s). As a result, the refugios have waitress and waiter served dining rooms, and one orders from a menu hot meals prepared to order and newly made desserts. The refugios also have fresh bed linens and towels available for a modest fee. The refugios are placed on rocky promontories in the most spectacular settings that can be found, with remarkable scenery. I strongly recommend arranging one strip to the Brenta group so that a few days at least can be spent moving from refugio to refugio. In early July, reservations are usually not essential, but can be made by telephone.

Telephone numbers for the refugios are given on the website http://www.dolomitiparkhotel.com/rifu-in/index.htm (subheading Brenta Refuges).

Aside from overnight stays the refugios are a nice target for a hike or a hike plus a Via Ferrata: One can have lunch/dessert and drinks in a most pleasant setting. Approximate time to reach some of the refugios (others are also quite possible) by the most direct means are:

- Graffer: Cable car plus 30 min. walk (or 2 h. from Town)
- Casinei: 40 min. from Vallesinella and 1 hour return via the "waterfalls"
- Tuckett: 2 hours from Vallesinella parking place; 1,30 min from Groste Cablecar
- Brentei: 2 hours from Vallesinella Parking place
- Alimonta: 2, 30 h from Vallesinella Parking place

See http://www.dolomitiparkhotel.com/rifu-in/index.htm for more and very much more detailed information. Just click on the name of the Refugio.





CLIMBING

(I should begin by noting that Guido Bonvicini is an expert on climbing in this general area, and especially the Sarca Valley south of the Brenta).

There are numerous opportunities for climbing in and around the Brenta Group. In the Brenta itself, there are many famous and classic very long multi-pitch routes, usually not so technically challenging (except for route finding), but demanding a great deal of time. If time can be found to do one of these, it would definitely be worthwhile, spectacular, and something to remember lifelong. A very famous climb high in the Brenta is Campanile Basso, a

large spike about 400 meters high (see for example:

http://www.summitpost.org/mountain/rock/151122/Campanile-

Basso-di-Brenta.html). This was the last major Dolomite Peak to be climbed, but has routes varying from beginner level to expert (many pictures are included on this website, because this was my first major outdoor climb). This climb is at the top of the group, and likely requires a stay overnight in one of the nearby huts and an early start the next day (to beat the crowds). A return can be made that day in time for the sessions.

There are many other climbing areas in the Brenta, some directly above Compiglio, of various lengths and difficulties, and at various altitudes above town. The old guide (in Italian) is hard to find. A new one is in the last stages of preparation and should be available in town by the time of the conference. There are a number of books giving information about the classic, long climbs:

Dolomites- Selected Climbs; Ron James; Alpine Club (London. 1988) ISBN 0-900523-55-7. In English. Mostly classic and long climbs. Brenta climbs pages 19-45.

Classic Dolomites Climbs; Annette Kohler, Norbert Memmel ISBN 0-89886-693-6. English translation. Brenta climbs pages 196-214 (again long easy classics)

Dolomites West and East; Ron James; Alpine Club (2005) ISBN 0-900523-65-4. In English. Updated selected climbs. Brenta climbs pages 17-64.

There are also a number of climbing areas in the area surrounding the Brenta, and reachable for day climbing during the conference. The climbing areas in the Sarca Valley south of the Brenta are famous (Arco is the city that is renowned as the jumping off place for climbs in this area). The area has numerous climbs at all lengths and difficulty levels. Two books in English that describe some of these are:

Gardasee Kletterfuhrer Climbing Guide; Matthias Heinkel; ISBN 3-928719-15-7.

Both German and English. Sport climbing (shorter climbs) from Lake Garda north through the Sarca Valley, ending just south of the Brenta Group.

Italian Rock; Al Churcher; (Cicerone 1988) ISBN 0-902363-93-X.

In English. Many northern Italy areas, but only covers Arco (just north of Lake Garda and south of the Brenta pages 136-148.

A few useful links, though mostly in Italian, are:

http://www.guidealpinecampiglio.it/

This site, in Italian, is the site of the Alpine Guides, and gives much information about climbing and mountain excursions.

http://www.liberavventura.it/

This is the site (mostly in Italian) of our conference guide, Guido Bonvicini.

BIKING AND MOUNTAIN BIKING

There are wonderful opportunities for both biking and mountain biking in the area. Bicycles may be rented in Compiglio. There are many tours, and many (most) are quite beautiful. Some itineraries and maps may be found on: http://www.campiglio.net/Although the text is in Italian, the maps are excellent and largely self explanatory.

CANYONING

Canyoning is an excellent and exciting sport that can be done without prior experience and by children (above a certain age). Participants don a wetsuit and enter a stream that drops rapidly through a gorge, having sections with rapids, whitewater, and waterfalls. One descends with a combination of swimming/floating, jumping, and rappelling (controlled by the guide). There are excellent streams a short distance from Compiglio, and this makes a wonderful outing. Some of you may have been on such an outing on a rather short stream the last time we were in the Dolomites, at Cavalese. Guido Bonvicini will lead a group (if there is interest). The costs will be given later. Please let me know if you are interested, and how many might be in your party.

For some photos that will excite your interest see: http://www.liberavventura.it/go_detail_gallery.php?id_master=1

PARASAILING AND PARAGLIDING

These can only be done alone by experienced practitioners. However, completely inexperienced attendees wanting a real thrill can have a wonderful time in a tandem ride on a single (extra large) parasail, with an expert running the show. This opportunity should be available at Pinzolo.

SAILING, CANOEING, KAYAKING, HYDROSPEEDBOATING

Sailing is found at Lake Garda, south of Compiglio. The other water sports mentioned are found in the area, and further information about these will be added to this site later.

RAFTING

At Male and Dimaro several companies offer excellent tours. One of the best rafting rivers in the Alps is not far. See: http://www.raftingcenter.it/en_index_rafting.html. This gives one company veswebsite in English.

Example Costs

Minimum costs for an alpine guide are Euro240/day, for Hiking, Via Ferrata, or Climbing. Costs move higher for harder, longer, or more technical activities. Costs increase for more members per party, though the per person cost decreases. Sometimes there are discounts available through the local tourist boards or hotel. With the decrease in the value of the dollar, these costs may seem high, but from great experience, I can assure everyone that the return on value is exceptional, and one should never hesitate to engage the services of guides. They are rigorously trained and certified, regularly recertified, extremely knowledgeable, and (as opposed to some Swiss and French guides) very eager to provide a good experience to clients.

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On Sunday at 3:30 there will a reception with wine and beer, refreshments and snacks, followed by the session at 4:30

Each daily session from Monday through Friday starts about 4:15 with snacks and refreshments, followed by the session at 4:30
[Every session will have a 15 min. refreshment break about midway]

Talks should be planned for a maximum of 30 minutes
--there will be time for an additional eight
minutes of questions during and following the talk

The speakers below are listed alphabetically. The listed session chair will order the presentations and time the session.

Sunday, July 6: High Level Cognition

Chair: Simon Dennis

SIMON DENNIS, STEFAN FRANK, GAIL MCKOON, FRED SCHAUER, BOBBIE SPELLMAN, INGMAR VISSER,

Monday, July 7: Short Term Memory

Chair: Steve Lewandowski

GORDON BROWN, EDDY DAVELAAR, SIMON FARRELL, STEVE LEWANDOWSKI, BEN MURDOCK, KLAUS OBERAUER

Tuesday, July 8: Perception

Chair: Tom Busey

BRUNO BOCANEGRA, TOM BUSEY, ROSIE COWELL, BOB FRENCH, CASIMIR LUDWIG

Wednesday, July 9: Long Term Memory 1

Chair: Dave Huber

PERNILLE HEMMER, DAVE HUBER, ANGELA NELSON, JEROEN RAAIJMAKERS, RICHARD SHIFFRIN

Thursday, July 10: Long Term Memory 2, and Interesting Science

Chair: Rene Zeelenberg

GEORGE KACHERGIS, DIANE PECHER, RENE ZEELENBERG ROGER RATCLIFF, ADINA ROSKIES

Friday, July 11: Categories, Concepts, Features

Chair: Adam Sanborn JARED HOTALING, DANIEL LAFOND, ADAM SANBORN, VLADIMIR SLOUTSKY, MATT ZEIGENFUSE

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(When sufficient titles, and abstracts for talks and posters arrive, I will begin posting them in this section)

Alphabetical listing by speaker

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O P | Q | R | S | T | U | V | W | X | Y | Z

B

Speaker's Name: First Author's Name:

First Author's Affiliation:

Second Author's Name: Second Author's Affiliation:

Title:

Abstract:

Bruno Bocanegra Bruno Bocanegra

Erasmus University Rotterdam

Ren� Zeelenberg

Erasmus University Rotterdam

Emotion impairs high frequency spatial vision

In order to respond adaptively to threat in the environment

our brains are equipped with specialized mechanisms that enhance the visual processing of emotional events. Although a previous study indicated that emotion enhances vision, the generality of this finding remains unknown. Do the benefits of emotion extend to all basic dimensions of vision or are they limited in scope? Here, we provide the first demonstration that emotion not only improves but also impairs low-level vision. Our results indicate that the brief presentation of a fearful face enhances orientation sensitivity for low spatial frequency gabors, but diminishes sensitivity for high spatial frequency gabors. We show this counterintuitive pattern of benefits and deficits is due to a sensitivity shift across the spatial frequency spectrum, triggered by the global facial configuration in the fearful expressions. Consistent with previous neuroimaging data, the selective low-frequency benefits suggest that emotion enhances magnocellular visual processing. Additionally, we propose that the high-frequency deficits might be due to cross-inhibition between magno- and parvocellular visual pathways. Our results reveal an emotional mechanism that improves the detection of coarse features at the expense of fine-grained visual details, presumably in order to facilitate responses to motivationally significant stimuli.

C

Speaker's Name: First Author's Name: First Author's Affiliation:

Second Author's Name:

Title:

Andrew Cohen
Andrew Cohen

University of Massachusetts

Michael Ross

Exploring mass ratio perception with psychological Markov chain Monte Carlo sampling

Abstract:

A number of previous studies have examined humans' ability to deduce the relative mass of objects in idealized collisions. Using a newly developed technique of psychological Markov chain Monte Carlo sampling (Sanborn & Griffiths, 2006), this work examines subjects' mental representations of different collision mass ratios. The results reveal strong inter-subject similarities and qualitative differences between the representations of 1:1 and 1:2 ratios. The results suggest that while subjects have a narrow and constrained (albeit incorrect) internal model of 1:1 collisions, their representations of other ratios are vague and diffuse.

D

Speaker's Name: First Author's Name:

First Author's Affiliation:

Title:

Abstract:

Eddy Davelaar Eddy Davelaar

Birkbeck, University of London

Primary memory: contributions to free recall performance On the same page on which William James introduced the terms primary and secondary memory, he presented his view on how they are implemented in the brain, which is not different from Hebb's view. Here I start with the view that primary memory is the activated part of long-term memory, or better yet that primary memory is the process (see also, Norman, 1968) by which temporarily activated long-term knowledge is maintained in active state beyond its expected unaided life-time. The current debate in the literature is whether a short-term buffer needs to be postulated in order to account for performance on free recall tasks (Brown, et al, 2007; Davelaar, et al, 2005; Howard, et al, 2007). I will briefly touch on dissociations in recency effects over the short- and long-term, on dissociations between immediate and longerterm free recall tasks, and some points of confusions. One source of confusion is the unclarity of the concept of activation-based short-term store. I will show using simulations why an activation-buffer is different than a fixedbox buffer and its association with working memory models that assume that the content of working memory is the activated part of long-term memory (Cowan, 1999; McElree, 2006; Oberauer, 2002).

F

Speaker's Name: First Author's Name:

First Author's Affiliation:

Title:

Abstract:

Stefan Frank Stefan Frank

University of Amsterdam

Testing the Surprisal Theory of Word-reading Time
According to so-called "surprisal theory" (Hale, 2001; Levy,
2008), a word's probability of occurrence given its sentence
context is inversely logarithmically related to the time
required to read that word. Tests of this theory have
implicitly assumed that the (subjective) probabilities a reader
assigns to words correspond to the (objective) probabilities as
extracted from text corpora. If surprisal theory is correct and
subjective probabilities indeed correspond to objective
probabilities, an objectively more accurate probability model
should also provide more accurate predictions of wordreading times. To investigate whether this relation holds, we
compared two models that can generate word probabilities

and that have been suggested as a basis for psycholinguistic models of sentence processing. However, they make very different assumptions as they originate from disparate fields: One is a Simple Recurrent Network (SRN; the quintessential connectionist model), the other a Probabilistic Context-Free Grammar (PCFG; the standard model in computational linguistics). Both models were trained on a part of the Wall Street Journal corpus and tested on the Dundee corpus, which contains both newspaper texts and corresponding eyemovement data. Preliminary results show that the SRN generates more accurate word probabilities, whereas the PCFG provides better predictions of reading times. This suggests that subjective probabilities cannot be estimated by objective probabilities or that surprisal theory is simply incorrect. If we do hold on to the theory, the results indicate that a system based on tree-structures forms a better psycholinguistic model than does a connectionist system.

Speaker's Name:

First Author's Name:

First Author's Affiliation:

Second Author's Name:

Second Author's Affiliation:

Title:

Abstract:

Bob French Bob French

LEAD-CNRS, U. of Burgundy, Dijon, France

Cowell Rosemary

LEAD-CNRS, U. of Burgundy, Dijon, France

Rule Extraction in Category Learning: a semi-supervised

neural network model

We develop a semi-supervised �dual-network� connectionist model of category learning in which rules gradually emerge from a standard Kohonen network. The architecture is based on the interaction of a statistical-learning (Kohonen) network and a competitive-learning rule network. The rules that emerge in the rule network are essentially weightings of individual features according to their importance for categorisation. These rules emerge due to the presence of noise on the input of the Kohonen network. Once the combined system has learned a particular rule, it deemphasizes those features that are not sufficient for categorisation, thus allowing correct classification of novel, but atypical, stimuli, for which a standard Kohonen network fails. We will explain the principles and architectural details of the model and show how it works correctly for stimuli that are misclassified by a standard Kohonen network.

Н

Speaker's Name:

First Author's Name:

First Author's Affiliation:

Second Author's Name:

Second Author's Affiliation:

Title:

Abstract:

David Huber

Yoonhee Jang

University of California, San Diego

David Huber

University of California, San Diego

Measuring the statistical dependence between familiarity and

recall

Following study of paired words, participants were given a sequence of test trials that alternated between 1) forced choice recognition of single words and 2) use of the target from step 1 as a cue for recall of the studied associate. This recognition followed by cued recall procedure produces a 2X2 table for memories that do or do not support recognition combined

with memories that do or do not support cued recall. In addition, recognition performance was manipulated through immediate repetition priming (i.e., the Jacoby-Whitehouse paradigm) and also through speeded versus non-speeded responding. Multinomial Processing Tree (MPT) models of these data were used to examine the influence of priming on recognition and the influence of speeded responding on recognition. Finally, an appropriate MPT was used to measure the statistical dependence between familiarity based recognition versus recall based recognition.

K

Speaker's Name:
First Author's Name:
First Author's Affiliation:
Second Author's Name:
Second Author's Affiliation:

Title: Abstract: George Kachergis George Kachergis Indiana University Richard Shiffrin Indiana University

Context Effects in Recognition Memory: A Bayesian Analysis Many people have had the experience of knowing what song will play next on an album (even one heard only a few times). Conversely, many people fail to recognize an acquaintance encountered in an unfamiliar context. Our studies explore the automatic or incidental storage of associations between successively encountered words on a list (storage of such associations is a key assumption found in the models of Howard and Kahana, and the REM-II model of Mueller, Nelson, and Shiffrin). We find evidence in episodic recognition memory for such storage. We explore the effects of the previous item s familiarity, semantics, and study-list position on the accuracy and response time for a target word preceded at test by same, similar, or different context words. We use Hierarchical Bayesian data analysis to motivate the formulation of a model.

Speaker's Name:
First Author's Name:
First Author's Affiliation:
Second Author's Name:

Third Author's Name: Third Author's Affiliation:

Title: Abstract: Krystal Klein Krystal Klein Indiana University

Chen Yu Richard Shiffrin Indiana University

What You See is What You Learn

Recent studies suggest that both adults and infants can potentially solve the reference uncertainty problem in language learning through the use of cross-situational statistical information (e.g. Yu & Smith, 2007). Here we present data from several new experiments wherein adults are exposed to a rapid series of learning trials containing uncertainty in sound-to-picture mappings, but in which this uncertainty is resolved across multiple trials. By monitoring the eye movements of adult participants with various degrees of initial knowledge about sound-to-picture mappings, we provide added constraints upon models of temporally-extended statistical language learning (Yu, Smith, Klein & Shiffrin, 2007).

Speaker's Name:

Maria Kozhevnikov

First Author's Name: First Author's Affiliation:

Title:

Abstract:

Maria Kozhevnikov

George Mason University

The role of immersivity in three-dimensional spatial

transformations

The majority of experimental studies on 3D visual-spatial processing have been conducted using traditional 2D displays. We were interested in the contribution of immersion to 3D image transformations and compared subjects • performance on spatial transformation tasks within traditional 2D, 3D non-immersive (stereo glasses), and 3Dimmersive (head mounted display with position tracking) environments. Fifteen participants completed perspectivetaking test where they imagined transforming their own perspective to another perspective in a computerized scene and pointed to one of several objects from the new perspective. In addition, the participants completed a Shepard and Metzler Mental Rotation Task, in which they were asked to mentally rotate 3D objects along the picture (X), vertical (Y), or depth (Z) axes. While the patterns of subjects responses were not significantly different in 2D and 3Dnon-immersive environment, we found a unique pattern of responses in 3D immersive environment, suggesting that immersion triggered significantly greater use of body-related egocentric object coding and visuo-motor strategies than two other non-immersive environments. In particular, while the subjects used scene-based spatial frame of reference in non-immersive environments, they use viewer-center encoding and body-related frame of reference while performing spatial transformation tasks in a 3D immersive environment. Overall, our findings suggest that 3DI environments are different from 3D non-immersive and 2D traditional environments, and that only 3D immersive environments provide adequate information for building the spatial reference frame crucial for high-order motor planning and egocentric encoding.

L

Speaker's Name:

First Author's Name:

First Author's Affiliation:

Second Author's Name:

Second Author's Affiliation:

Title:

Abstract:

Daniel Lafond

Daniel Lafond

Universit Laval

Yves Lacouture

Universit Laval

Testing the predictive accuracy of decision tree models of

categorization

This work examines the descriptive and predictive accuracy of three decision tree models of categorization adapted from Trabasso, Rollins and Shaughnessy (1971). These models aim to provide a quantitative account of categorization response times, choice proportions and typicality judgments at the individual-participant level. Study I modeled results from Cohen and Nosofsky (2003) experiment. Overall, the decision tree models achieved comparable fits to that of two exemplar models, the EGCM-RT (Lamberts, 2000) and the EBRW-PE (Cohen & Nosofsky, 2003). In Study II, we replicated and extended Cohen and Nosofsky's experiment by asking participants to give subjective typicality ratings for each stimulus. A post-test phase called the four-questions

game (Sayeki, 1969) provided the constraints required to systematically identify a unique decision tree for each participant. Model I, II and III showed increasingly good fits to the data, which follows from their respective complexity and flexibility. However, there is a risk that more flexible models provide better fits simply by adjusting to noise in the data (overfitting). We compared the predictive accuracy of Model I, II and III using a cross-validation procedure. The predictive accuracy of the three models was generally good, though a different degree of overfitting was observed depending on the model, on the dependent variable and on the number of trials in the test phase of the experiment (i.e., the level of noise). This test provides a challenging new benchmark for comparing categorization models.

Speaker's Name: First Author's Name:

First Author's Affiliation:

Title:

Abstract:

Hsin-I Liu Hsin-I Liu

University of the Incarnate Word

Communication as a disguise of symbolic violence:
Bourdieu s structural analysis of socio-cultural domination

This paper will argue that the most important theoretical question for Bourdieu is how symbolic violence is reproduced and transmitted in contemporary capitalist societies. Symbolic violence can be briefly defined as **\$\Phi\$** the form of domination that is only exerted through the communication in which it is disguised. In other words, Bourdieu provocatively claims that the relations of communication are always interwoven with relations of power, and that no human communication is without socio-cultural domination. Such a domination is structured in capitalist societies and insured not by ideological control but by institutional mechanisms respecially those on "the reinforcement of predispositions." Moreover, Bourdieu indicates that the mode of domination is always inscribed in communication. The whole content of communication (and not just the language used), � as he eloquently puts it, � is unconsciously modified by the structure of the relationship between speakers." However, in my view, the major theoretical difficulty facing Bourdieu is how the dominant class those who have material and symbolic capitals ensures that the members of society (especially the dominated class) accept or reproduce their discourses of social reality, i.e. symbolic violence, when different interpretants have different interpretations and the process of interpreting is continuously changing. The ultimate question becomes: how does the dominant group guarantee individual dissensions and practical tactics to be confined to minimum and local levels that totally suppress major forms of challenge or threat to this dominating structure of symbolic violence in capitalist societies?

Speaker's Name: First Author's Name: First Author's Affiliation:

Title:

Abstract:

Casimir Ludwig
Casimir Ludwig
University of Bristol

Temporal integration underlying saccadic eye movement decisions

ecisions recodic ava mayamanta ara am

Saccadic eye movements are among the most frequent perceptual decisions humans make. In recent years more

general models of perceptual decision making, such as signal detection and sequential sampling models, have been applied to account for where observers look (and **?** in the case of sequential sampling models • when they look there). I will review applications of these models in the oculomotor domain, with particular emphasis on models that assume sensory evidence in favour of a number of potential saccade targets is integrated over time up to some criterion level. Next, I will present data from a number of studies that illustrate this strategy does not always hold. When observers are required to select a saccade target on the basis of luminance contrast in the presence of external noise, their eye movement decisions appear to be based on a very limited and fixed epoch of sensory evidence. This epoch is not adjusted according to the strenght of this evidence. Finally, I will present a number of alternative models and assess their ability to account for the experimental data. These models allow for inferences to be made regarding 1) the nature of the temporal filter that provides the input to a downstream "decision unit"; 2) whether the decision unit integrates the signal over time or compares momentary values against some threshold; 3) the duration of the integration/sampling window.

M

Speaker's Name: Michael McKenna First Author's Name: Michael McKenna

First Author's Affiliation: Florida State University, Philosophy

Title: Reasons-responsiveness and free will Abstract:

I identify free will with all of the control required for moral responsibility, and I analyze that control in terms of an agent's responsiveness to reasons. The puzzle is how to capture the proper spectrum of responsiveness as required for morally responsible agency. Although I follow Fischer and Ravizza's 'mechanism-based' approach, unlike them, I do not remain agnostic about how to individuate the mechanisms. In my presentation, I offer a proposal for mechanism individuation.

Abstract:

Speaker's Name: Angela B. Nelson First Author's Name: Angela B. Nelson First Author's Affiliation: Indiana University Second Author's Name: Richard M. Shiffrin **Second Author's Affiliation:** Indiana University

Title: How Experience Shapes Memory

> Novel items (Chinese characters) were trained in a visual search task to have differential experience. The induced frequency differences were shown to produce marked effects on episodic and implicit memory transfer tasks (Nelson & Shiffrin, 2006). Because each novel item is randomly assigned for each participant to a frequency category, these results are inconsistent with the REM model account of frequency effects (Shiffrin & Steyvers, 1997). This account posited higher frequency items to have higher frequency features. We present a new variant of the REM model incorporating contextual diversity in an item s representation, particularly

the diversity imposed by different item sets simultaneously in short term memory during training: Features of such nearby items join a target item so representation. This model is a simplification of the REM-M model proposed by Mueller and Shiffrin (e.g. 2006), and is related to the ideas found in the TCM model of Howard and Kahana (e.g. 2002). Because the higher frequency items are seen in a larger variety of contexts than lower frequency items, the higher frequency items develop a more diverse representation in the lexicon. The model is shown to account for frequency effects found by Nelson and Shiffrin (2006).

0

Speaker's Name: First Author's Name: First Author's Affiliation: Title:

Abstract:

Chrispine OMONDI Chrispine OMONDI

Coffee Research Foundation, P O Box 4, 00232 Ruiru, Kenya. COFFEE QUALITY ASSESSMENT: THE CASE OF TWO KENYAN CULTIVARS, RUIRU 11 AND SL 28

It is widely recognized that coffee quality is the single most important factor that determines coffee prices in the international market. The prominence given to Kenya coffee world-wide is derived from the fine quality coffee it supplies to the world market. Therefore selection for desirable attributes of coffee quality has been the subject of detailed studies in the development of coffee varieties in Kenya. Quality parameters of two Kenya coffee cultivars Ruiru 11 and SL 28 believed to be similar in their major quality attributes were assessed to determine factors that influence the final beverage quality. Both varieties were grown in two locations in different agro-ecological zones. The parameters assessed were bean quality, beverage quality and overall class. The data was subjected to multivariate hierarchical cluster analysis based on Eucledian Distance Matrix Method. The study revealed that the growing environment had a strong effect on the expression of quality parameters exhibited by Ruiru 11 and SL 28. The study also tested the consistency of cup tasters to evaluate similar samples and arrive at similar results. It was revealed that there was significant difference among cup-tasters. In other words, when cup tasters were presented with similar blind samples for assessment, the results varied from one cup-taster to the other. The study recommends proper management of the growing environment to obtain the desired quality attributes and branding to meet the preferred taste of different consumers.

Speaker's Name: First Author's Name: First Author's Affiliation: Title:

Abstract:

Chrispine OMONDI Chrispine OMONDI

Coffee Research Foundation, P O Box 4, 00232 Ruiru, Kenya. COFFEE QUALITY ASSESSMENT: THE CASE OF TWO KENYAN CULTIVARS, RUIRU 11 AND SL 28

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studies in the development of coffee varieties in Kenya. Quality parameters of two Kenya coffee cultivars Ruiru 11 and SL 28 believed to be similar in their major quality attributes were assessed to determine factors that influence the final beverage quality. Both varieties were grown in two locations in different agro-ecological zones. The parameters assessed were bean quality, beverage quality and overall class. The data was subjected to multivariate hierarchical cluster analysis based on Eucledian Distance Matrix Method. The study revealed that the growing environment had a strong effect on the expression of quality parameters exhibited by Ruiru 11 and SL 28. The study also tested the consistency of cup tasters to evaluate similar samples and arrive at similar results. It was revealed that there was significant difference among cup-tasters. In other words, when cup tasters were presented with similar blind samples for assessment, the results varied from one cup-taster to the other. The study recommends proper management of the growing environment to obtain the desired quality attributes and branding to meet the preferred taste of different consumers.

R

Speaker's Name: First Author's Name: First Author's Affiliation:

Title:

Abstract:

Adina Roskies Adina Roskies Dartmouth College

What can neuroscience tell us about free will

I will discuss the problem of free will in the context of new information from neuroscience. Specifically, I will consider whether the picture of decision-making that is emerging from neuroscience provides reason to think our actions are determined or not under our control. I provide several reasons to think that our philosophical positions about the correct relation between freedom and determinism is immune to input from the biological sciences, but I also argue that dependency on determinism is misconceived. Instead, I outline another view, and show how our philosophical views about free action can be consistent with a mechanistic model of brain function, and illustrate this by reference to current neuroscientific work.

S

Speaker's Name: Jean-Christophe Sarrazin First Author's Name: Jean-Christophe Sarrazin

First Author's Affiliation: UMR CNRS Mouvement et Perception

Second Author's Name: Emmanuel Dauc

Second Author's Affiliation: UMR CNRS Mouvement et Perception

Third Author's Name: **Axel Cleeremans**

Third Author's Affiliation: Universit Libre de Bruxelles

Title: Psychological hysteresis in sudden awareness: a functionnal correlate of recurrent processing

Abstract: In this study we explore the idea that sudden motor

awareness emerges as the result of global competition biased by top-down modulation, which implements global constraint satisfaction. The contents of conscious experience at some point in time thus reflect the application of the

brain s knowledge on the current situation so as to yield the most adapted representations in the service of action. Such processes in turn critically depend on recurrent, or reentrant processing. Subjects carried out a reaching movement, which was disturbed by a haptic arm on some trials. Participants (1) pointed at the target as accurately as possible before returning to the start position, making a visuomotor adjustment to the target if required and (2) reproduced the spatial path of the movement they had just made, as accurately as possible, to give an indication of their awareness of the pointing movement. We analysed the spatial disparity between the initial and the reproduced movements on those with a movement disturbance. In this framework, we assume that once a recurrent neural activity due to the disturbance has reached a certain threshold, the visuomotor adjustment is suddenly consciously perceived so that the conscious activity may show hysteresis---as Libet (1973) has claimed---since the activity is probably held above a threshold to some extent by some mechanism, such as loops with positive feedback. This activity corresponds to the neural correlates of consciousness (NCC). Introducing a minimalist dynamics model, we highlight the computational principles of the conscious perception process.

Speaker's Name:

First Author's Name:

First Author's Affiliation:

Title:

Abstract:

Lawrence Shapiro Lawrence Shapiro

University of Wisconsin - Madison

Representation and the Philosophy of Science

Embodied, Embedded, and Situated Cognitivists have in recent years offered accounts of cognition that seek to minimize or modify traditional conceptions of representation in cognitive explanation (see, e.g. Beer 1993, Thelen xxxx, Brooks 1991). Some of these efforts draw on notions like simplicity, unification, and indispensability that philosophers of science have studied for decades. However, it is not clear how concepts like these "fit" into theories of cognition (how are they to be measured?), and so appeals to these notions in order to justify a particular stand on representation are hard to evaluate. In this paper I examine some work in E-E-S cognition in order to illustrate difficulties that arise when trying to justify a minimal or modified conception of representation through application of ideas like simplicity, unification, and indispensability.

Speaker's Name:

First Author's Name:

First Author's Affiliation:

Second Author's Name:

Second Author's Affiliation:

Third Author's Name:

Third Author's Affiliation:

Title:

Andrew Cohen Indiana University Adam Sandborn Indiana University

Richard Shiffrin

Richard Shiffrin

Indiana University

Model Selection with Little Data: Analyze by Groups or

Individuals?

In selecting a best model it is often better to use individual analysis (fitting models separately to individuals) than group analysis (fitting the combined data): Grouping can distort the form of data, and different individuals might perform the

Abstract:

task using different processes and parameters. This situation can change dramatically when there is only a small amount of data per individual, due to the possible introduction of distortions and biases into individual analyses. We show this with a simulation technique in which data are generated from each of two known models, each with parameter variation across simulated individuals. We examine how well the generating model and its competitor each fare in fitting (both sets of) the data, using both individual and group analysis. We examine the accuracy of model selection (the probability that the generating model will be selected by the analysis method.) Trials per condition and individuals per experiment are varied systematically. Four pairs of cognitive models were compared: exponential vs. power models of forgetting; GCM (two versions) vs. prototype models of categorization; and FLMP vs. LIM models of information integration.

Speaker's Name: First Author's Name: First Author's Affiliation:

Title: Abstract: Sverker Sikstr�m
Sverker Sikstr�m

Lund University Cognitive Science

Exploring the High Dimensional Semantic Space in the Brain Processing of words from semantic word classes activates networks of semantic representations in the human brain. Earlier research has investigated this by subtracting brain activity evoked from two semantic word categories chosen prior to the experiment. Here we show that arbitrary semantic representations in the brain can be investigated by utilizing high dimensional semantic spaces, which can be generated from the information of co-occurrence in huge text corpora. This method is applied to data were subjects study words list during EEG recording. We correlate estimates of semantic distance with ERP potentials to study semantic representations in the brain. The results show that a large number of different semantic categories show specific topographical patterns across time. This method has a number advantages including studying of arbitrary word classes, and single concepts. Furthermore, semantic space does not require a non-semantic control condition, nor trialby-trial matching between the psychological construct and brain measure.

Speaker's Name:
First Author's Name:
First Author's Affiliation:
Second Author's Name:
Second Author's Affiliation:

Title:

Abstract:

Mark Steyvers Mark Steyvers

University of California, Irvine

Pernille Hemmer

University of California, Irvine

A Bayesian Model for Reconstructive Memory

It is well established that prior knowledge influences reconstruction from memory, but the specific interactions of memory and knowledge are unclear. Extending work by Huttenlocher et al. (1991, 2000) we propose a hierarchical Bayesian model of reconstructive memory in which prior knowledge interacts with episodic memory at multiple levels of abstraction. The combination of prior knowledge and noisy memory representations is dependent on familiarity. We present empirical evidence of the hierarchical influences of prior knowledge, showing that the reconstruction of familiar

objects is influenced toward the specific prior for that object, while unfamiliar objects are influenced toward the overall category.

Seventh Annual Summer Interdisciplinary Conference

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Conference Organizer

Rich Shiffrin Indiana University - Bloomington

Tel: Fax:

Address Correspondence to:

Annual Summer Interdisciplinary Conference (ASIC 2008) c/o Prof. Richard Shiffrin
Psychology Department
Indiana University
1101 E. 10th St.
Bloomington, IN 47405

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