

PIMS Summer School: The Economics and Mathematics of Systemic Risk and the Financial Networks

Summer School Program

July 21-25, 2014

Pacific Institute for the Mathematical Sciences Earth Sciences Building (ESB) 2207 Main Mall, Vancouver

















Summer School Schedule:

Time	Mon Jul 21	Time	Tue Jul 22	Wed Jul 23	Thur Jul 24	Fri Jul 25	
	Registration & Check in (ESB		Jean-Pierre	Darrell	Darrell	Darrell	
10:00am - 10:30am	Atrium)	9:00am - 10:20am	Fouque	Duffie	Duffie	Duffie	
Coffee Break (ESB 2012 Lobby)		Coffee Break (ESB 2012 Lobby)					
11.00am -	Jean-Pierre	11.00am -	Jean-Pierre	Yuliy	Yuliy		
12:20pm	Fouque	12:20pm	Fouque	Sannikov	Sannikov	Rama Cont	
Lunch (Magma Café)		Lunch (Magma Café)					
2:00pm -	Paul	2:00pm -	Paul	Paul		Yuliy	
3:20pm	Glasserman	3:20pm	Glasserman	Glasserman	Rama Cont	Sannikov	
Coffee Break (ESB 2012 Lobby)		Coffee Break (ESB 2012 Lobby)					
3:40pm -	Jean-Charles	3:40pm -	Jean-Charles	Jean-Charles			
5:00pm	Rochet	5:00pm	Rochet	Rochet	Rama Cont		
		5:00pm - 6:00pm	Reception				

^{*}All abstracts are available on page 4.

^{**}All summer school sessions will be held in ESB Room 2012 (see building floor plan on page 3.

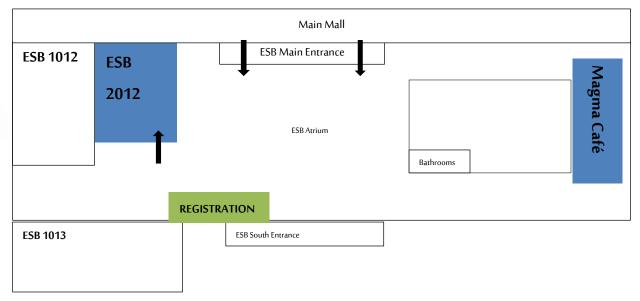
^{****}July 22 evening reception will be hosted in the ESB Atrium.

Getting Started:

- Get connected: Select the "ubcvisitor" wireless network on your wireless device. Open up a web browser, and you will be directed to the login page.
- **Event Evaluation Survey**: Please help PIMS to improve the quality of its events and plan for the future by filling out the survey at the end of the conference. It is located at: http://goo.gl/7adu9e.

Building Floor Plan:





Course Summaries

Rama Cont (Imperial College, London)

Title: Channels of Contagion in Financial Systems

Understanding the mechanisms underlying systemic risk requires to change the traditional focus of risk modeling and examine the link between the *structure* of the financial system and its *stability*, with a focus on *contagion mechanisms* which may lead to large scale instabilities in the financial system. Some channels of contagion which have played an important role in past crises are: insolvency contagion through counterparty exposures [1,2,3], withdrawal of liquidity in funding channels and price-mediated contagion [4,5] through fire sales of assets.

We review some recent work on the mechanisms underlying these channels of contagion, with a focus on the nature of the 'network' underlying each contagion mechanism and the implications of these results for the monitoring and regulation of systemic risk. In particular, we will attempt to illustrate the importance of the *interaction* between these various channels and how this interaction may undermine regulatory efforts focused only on a single mechanism.

References:

[1] H Amini, R Cont, A Minca (2011) <u>Resilience to contagion in financial networks</u>. To appear in: *Mathematical Finance*. http://onlinelibrary.wiley.com/doi/10.1111/mafi.12051/abstract

[2] H Amini, R Cont, A Minca (2012) <u>Stress testing the resilience of financial networks</u>, <u>International Journal of Theoretical and</u> applied finance, Vol 15, 1250006.

[3] R Cont, A Moussa, E B Santos (2013) <u>Network structure and systemic risk in banking systems</u> in: J.P. Fouque & J. Langsam (Eds.) *Handbook of Systemic Risk*, Cambridge University Press.

[4] R Cont, L Wagalath (2011) <u>Running for the exit: short selling and endogenous correlation in financial markets.</u> <u>Mathematical Finance</u>, Vol 23, Issue 4, p. 718-741, October 2013.

[5] R Cont, L Wagalath (2012) <u>Fire sale forensics: measuring endogenous risk</u>. To appear in: *Mathematical Finance*. http://ssrn.com/abstract=2051013

[6] R Cont, Th Kokholm (2014) Central Clearing of OTC Derivatives: bilateral vs multilateral netting, Statistics and Risk Modeling, Vol 31, No 1, 3-22.

 $\underline{http://www.degruyter.com/view/j/strm.2014.31.issue-1/strm-2013-1161/strm-2013-1161.xml?format=INT-1.0014.31.issue-1/strm-2013-1161/strm-2013-1161.xml?format=INT-1.0014.31.issue-1/strm-2013-1161.xml?form-1/strm-2013-116$

Darrell Duffie (Stanford University)

Title: Risk Sharing in Over-the-Counter Markets

I will begin with an overview of the purpose and structure of OTC markets, and how they can be a source of systemic risk. This will be followed by a brief review of search-based theories of trade and information sharing in OTC markets. Then I will

turn to theories and evidence regarding the use of collateral, the role of central clearing, and failure management. The failure management topic will finish with a model of the efficient application of legal stays that could be imposed on OTC contracts at the point of bankruptcy or administrative failure resolution. These stays can yield effective payment or settlement priority to OTC contracts. Stays can be efficient, or not efficient, depending on the setting. The affected OTC contracts include derivatives, repurchase agreements, securities lending agreements, and clearing agreements. I assume a basic knowledge of game theory and of measure-theoretic probability theory, particularly counting processes with an intensity.

Jean-Pierre Fouque (University of California, Santa Barbara)

Title: Diffusion Models for Systemic Risk

We will present inter-bank borrowing and lending models based on systems of coupled diffusions. First-passage models will be reviewed and applied to mean-field type models in order to illustrate systemic events and compute their probability via large deviation theory. Then, a game feature will be introduced and Nash equilibria will be derived or approximated using the Mean Field Game approach.

Paul Glasserman (Columbia University)

Title: Contingent Capital and Financial Networks

These lectures will cover two topics. The first is contingent capital in the form of debt that converts to equity when a bank nears financial distress. These instruments offer a potential solution to the problem of banks that are too big to fail by providing a credible alternative to a government bail-out. Their properties are, however, complex. I will discuss models for the analysis of contingent capital with particular emphasis on their incentive effects and the design of the conversion trigger. The second topic in these lectures is the problem of quantifying contagion and amplification in financial networks. In particular, I will focus on bounding the potential impact of network effects under the realistic condition that detailed information on the structure of the network is unavailable.

Jean-Charles Rochet, (University of Zurich)

Title: Financial Stability

Lecture 1: *The lender of last resort:* An analysis of the economics and politics of banking crises, and episodes of bail-outs of failing financial institutions.

Rochet Vives (2004) "The Lender of last Resort: was Bagehot right after all?" JEEA, 6, 1116-1147, reprinted in Rochet,
 J.C. (2008) "Why are there so many banking crises?, Princeton University Press, chapter 2

Lecture 2: *Capital Regulation and Credit cycles:* Rationale for solvency regulations: micro VS macro-prudential. Will Basel III be sufficient? Countercyclical Capital buffers

Admati et al.(2011) "Why bank capital is not expensive"

Gersbach and Rochet (2013) Capital Regulation and Credit Fluctuations".

Lecture 3: Short Term Financing by banks: limited private gains, huge social losses. What doctrine for macro-prudential regulators?

 Hanson Kashyap and Stein (2011) "A Macro-prudential Approach to Financial Regulation" Journal of Economic Perspectives.

Yuliy Sannikov (Princeton University)

Title: Economies with Financial Frictions: A Continuous Time Approach

The recent financial crisis has made obvious the need for models of financial stability. These three lectures will cover recent advancements in the modeling of crisis episodes, with particular emphasis on the use of continuous-time methods which make these models more tractable. Useful background reading includes the following:

- http://www.princeton.edu/princeton_initiative/program/yuliy_lecture2_2013.pdf
- http://www.princeton.edu/~sannikov/macro_finance.pdf
- http://www.princeton.edu/~sannikov/survey_macrofinance.pdf



Recreational Activities

at the University of British Columbia



Aquatic Centre
6121 University Boulevard
(604) 822- 4522 www.aquatics.ubc.ca

The UBC Aquatic Centre features a 50-metre indoor pool, seasonal 55-yard outdoor pool, whirlpool, fitness/weight room, sauna/steam rooms, seasonal patio area and diving boards from one to ten meters.

Summer Hours: Please call for swim times, lessons, etc.

Beaty Biodiversity Museum 2212 Main Mall

(604) 827- 4955 <u>www.beatymuseum.ubc.ca</u>

A new public museum dedicated to enhancing the public's understanding and appreciation of biodiversity. It is home to over 20,000 fossils from all over the world, including the largest blue whale exhibit in Canada

Summer Hours: Wed-Sun: 11:00am-5:00pm





Belkin Art Gallery 1825 Main Mall (beside Fredric Wood Theatre) (604) 822- 2759 www.belkin.ubc.ca

The Morris and Helen Belkin Art Gallery's mandate is to research, exhibit, collect, publish, educate and develop programs in the field of contemporary art and in contemporary approaches to the practice of art history and criticism.

Summer Hours: Tues-Fri: 10:00am-5:00pm

Sat-Sun: 12:00pm-5:00pm

Botanical Garden 6804 Marine Drive

(604) 822-9666 www.ubcbotanicalgarden.org

Established in 1916, the UBC Botanical Garden has an outstanding collection of temperate plants displayed according to their geographic areas. Exhibits of regional plants include the Native Garden and Alpine Garden.

Summer Hours: Daily 9:00am-5:00pm





Tennis Courts 2525 West Mall & 6010 Thunderbird Boulevard (604) 822- 2505

All guests staying at the University of British Columbia are welcome to use the tennis courts located at Place Vanier and Totem Park Residences. There are additional courts at the UBC Coast Club located at 6160 Thunderbird Blvd. Please call for information on reservations, fees and special packages.

Museum of Anthropology 6393 NW Marine Drive

(604) 822-5087 www.moa.ubc.ca

The Museum of Anthropology is one of North America's premier museums. School programs focusing on the Northwest Coast First Nations are available. All programs encourage discussion, observation and hands-on experience with touchable objects to learn about people and cultures. School programs must be arranged in advance.

Summer Hours: Daily 10:00am-5:00pm Tues: 10:00an-9:00pm





Nitobe Memorial Garden 1903 Lower Mall

(604) 822-9666 www.nitobe.org

Considered to be the best traditional, authentic Japenese Tea and Stroll garden in North America and among the top five Japanese gardens ouside Japan, the Nitobe Garden includes a rare authentic Tea Garden with a ceremonial Tea House. The exquisite work of art was created out of two=and-a-half acres (one hectare) of pristien forest by landscape architects and gardeners recommended by the government of Japan.

Summer Hours: Daily 10:00am-5:00pm

Pacific Spirit Regional Park Park Office 4915 West 16th Avenue (604) 224-5739

The Pacific Spirit Regional Park encompasses 763 hectares of forest and foreshore surrounding UBC, and boasts 35 kilometres of walking trails. Experience a variety of landscapes, from estuary marshes, rock and cobble beaches, wooded ravines, ancient bog and upland forests. Regional Park Interpreters offer customized group programs on themes ranging between edible plants, birds, and bog ecology.





Student Recreation Centre 6000 Student Union Boulevard

(604) 822-6000 www.rec.ubc.ca or www.birdcoop.ubc.ca

The SRC is one of Canada's premier University fitness facilities. It includes 1,800 square-feet of gym space, a full service fitness and weight room, a 2,300 square-foot dance studio, and a 1,600 square-foot traditional martial arts dojo.

Summer Hours: Mon-Thurs: 6:30am-9:00pm Saturday: 10:00am-6:00pm Friday: 630am-7:00pm 12:00pm-6:00pm

University Golf Course 5185 University Boulevard (604) 224 4848 years university

(604) 224- 1818 www.universitygolf.com

Designed to satisfy players of every level, the course features low-mowed rough and few hazards of water to carry over. Still, it does present challenges even for the experienced golfer. Greens on Par 3's are well protected by sand and require stealth accuracy. Move back to the championship tees and put a little more distance between you and the pins. 18 holes, Par 72.

Summer Hours: First tee time: 6am Last tee time: 8pm



Campus Dining

at the University of British Columbia

From world-class catering to casual dining, coffee shops and internationally-inspired food outlets, UBC offers a delicious assortment of food services solutions. Here is an overview of food service providers certain to deliver a satisfying campus dining experience.

UBC Food Services www.food.ubc.ca

Serving only locally-roasted fair trade organic shade-grown coffee at all UBC Food Services non-franchise locations

Wescadia Catering

Conference and special event catering www.catering.ubc.ca

Sage Bistro at University Centre

Casual fine dining available for breakfast, lunch and special events www.sage.ubc.ca

The Point Grill at Marine Drive Residence

New upscale casual dining restaurant open for brunch, lunch, and dinner. Open M-F

Triple O's at David Lam Research Centre

Casual dining in a family-friendly environment. Open daily

Residence Dining

Totem Park and Place Vanier Cafeterias For information about group meal plans, please call 604-822-6204 or email rene.atkinson@ubc.ca

Pacific Spirit Place Cafeteria at the SUB

Student Union Building, 6138 Student Union Blvd Pacific Spirit Place is open weekdays for breakfast and lunch. For information about group meal plans, please call 604-822-9310 or email fred.cheng@ubc.ca

Bakeshop Pasta Bar Koya Japan Salad Bar Manchu Wok Pizza Pizza Subway















Proudly Brewing Starbucks Coffee

Starbucks Coffee at Student Union Building The Barn at Main Mall Starbucks Coffee at Fred Kaiser Steamies Café at the Bookstore Pond Café at Ponderosa Centre

More Great Locations...

Niche Café at Beaty Biodivesity Museum Caffé Perugia at Life Sciences Centre Café MOA at Museum of Anthropology lke's Café at Irving K. Barber Learning Centre Tim Horton's at Forest Sciences Centre

Food Outlets

at the Student Union Building (SUB)

The SUB features a variety of food outlets all under one roof and conveniently located at the heart of campus. Get a delicious bagel or muffin to go, grab a slice of pizza at Pie R Squared, pick up some freshly made sushi or sit and enjoy a juicy beef burger at Pit Pub. The SUB has something for everyone!

Concourse and Sub-Level

Blue Chip Cookies



Proudly serving organic, fair trade coffees, cappuccinos and lattés. All our cookies and fabulous baked goods are made inhouse and baked fresh daily.

Bernoulli's Bagels



Montreal-style bagels, sandwiches, and bagel melts using high-quality ingredients and freshly squeezed vegetable or citrus juice!

The Delly



Fresh sandwiches made to order. A wide selection of salads, wraps, curries, soups and pasta made daily.

The Honour Roll



Maki rolls, nigiri, sushi, donburi rice bowls and bento boxes are made fresh throughout the day. Ask about party platters and catering.

The Pit Burger Bar



Charbroiled hamburger specials, veggie burgers, hot wings, beer-battered fish & chips and more!

The Pit Pub



Satellite big-screen sports, six high-definition TV's, great drink prices, and a great atmosphere!



The Moon Noodle House



Great wonton soup, daily specials, fresh steamed veggies, combos and hot & sour soup.

The Patio BBQ



On the south side of the SUB, Monday to Friday (weather permitting) offering grilled 1/4 pound burgers, veggie burgers, smokies and drinks.

The Pendulum Restaurant



Delicious grilled sandwiches and panninis, and lots of vegetarian and vegan dishes!

Pie R Squared



Great house-made pizza slices, great prices, cold drinks. Now offering soft-serve ice cream and doughnuts.

www.catering.ubc.ca

NEED CATERING? For catered events or meals on the go, Wescadia Catering offers a multitude of menu ideas to meet a range of dietary needs. We pride ourselves on our knowledgeable, friendly staff, professional service and quality ingredients.

University Boulevard

Restaurants and Food Outlets

University Boulevard boasts a vibrant neighbourhood feel, and features dozens of places to enjoy a sit-down meal, people-watch over coffee, or grab a quick bite on the run. Visitors will feel right at home choosing from internationally-recognized franchises and unique offerings from local entrepreneurs.

The Boulevard Coffee Roasting Co.

at David Strang, 5870 University Blvd. **theboulevard.ca**

Mahony & Sons Public House

at David Strang, 5990 University Blvd. www.mahonyandsons.com

The Well Café

at Regent College, 5800 University Blvd.

University Village

5700 Block, University Blvd.

Blenz Coffee Shop Booster Juice & Snack Bar

McDonald's Breakfast – Late-Night Fast Food

Pearl Fever Tea House & Snack Bar

Mio Japan Japanese Fast Food

Pita Pit Lunch – Late-Night Take-Out & Delivery

International Food Fair

University Marketplace, Lower Level

A-1 Vietnamese Food Pho & Noodle House

Curry Point East Indian

Donair Town Persian, Mediterranean, Catering Leona Mediterranean Food Lebanese



One More Sushi Japanese Dining
Only U Café Deli & Diner
Starbuck's Coffee Shop
University Pizza Take-Out & Delivery
Vera's Burger Shack Diner
Village Restaurant Chinese Dining

Malaysian Cuisine Malaysian, Thai Osaka Sushi Japanese Timpo Mongolian BBQ Stir-Fry Yi Kou Xiang Chinese

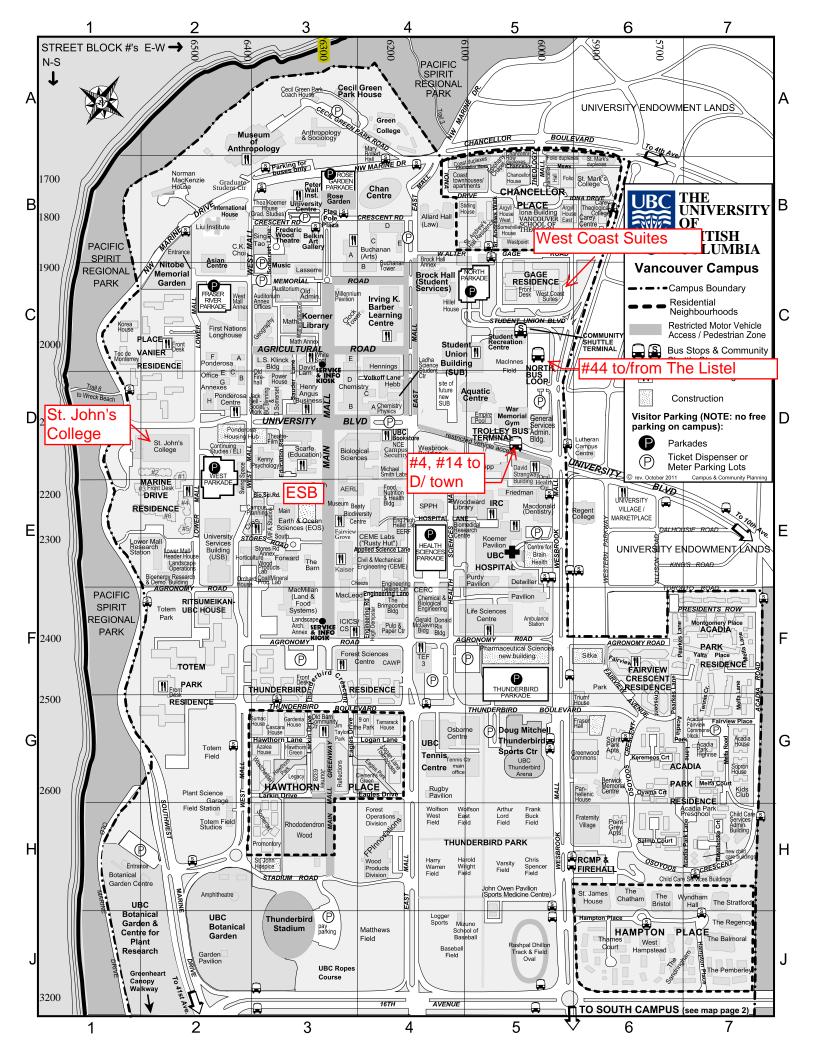












Map Directory

Site or Building Name & Address	Grid
Abdul Ladha Science Student Ctr, 2055 East Mall	
Acadia House, 2700-2720 Acadia Rd	
Acadia Park Residence	F/H-6/
Acadia Park Highrise, 2725 Melfa Rd	
Acadia Park Preschool, 2750 Acadia Park Lane	
Anthropology & Sociology Bldg, 6303 NW Marine Dr	
Aquatic Centre, 6121 University Blvd	D
Aquatic Ecosystems Research Lab (AERL), 2202 Main Mall	
Asian Centre, 1871 West Mall	
Auditorium Annex Offices, 1924 West Mall	
Barn (daycare), 2323 Main Mall	
B.C. Binning Studios (formerly Hut M-17), 6373 University Blvd	
Beaty Biodiversity Centre & Museum, 2212 Main Mall	
Belkin (Morris & Helen) Art Gallery, 1825 Main Mall Berwick Memorial Centre, 2765 Osoyoos Cres	
Bioenergy Research & Demonstration Bldg., 2337 Lower Mall	
Biological Sciences Bldg [Science Faculty office], 6270 University	
Biomedical Research Ctr, 2222 Health Sciences Mall	
Biotechnology Laboratory, 2125 East Mall Bollert (Mary) Hall, 6253 NW Marine Dr	
Bookstore, 6200 University Blvd	
Botanical Garden Centre/Gatehouse, 6804 SW Marine Dr	
Botanical Garden Pavilion (enter at Gatehouse, 6804 SW Marine	
Botan. Gard. Greenhses/ Workshops, 6088 S. Campus Rd	
Brimacombe Building, 2355 East Mall	
BROCK HALL: Student Services & Welcome Centre, 1874 Ea Brock Hall Annex, 1874 East Mall	
Buchanan Building (Blocks A, B, C, D, & E) [Arts], 1866 Main Ma	
Buchanan Tower, 1873 East Mall	C4
C.K. Choi Building for the Institute of Asian Research, 1855 Wes	
Campus & Community Planning, 2210 West Mall	
Campus Security, 2133 East Mall	
Carey Theological College, 1815 Wesbrook Mall	
CAWP (Centre for Advanced Wood Processing), 2424 Main Mall	
Cecil Green Park Coach House, 6323 Cecil Green Park Rd	
Cecil Green Park House, 6251 Cecil Green Park Rd	A
CEME — see Civil & Mechanical Engineering Building	Saudh Camani
Centre for Comparative Medicine, 4145 Wesbrook Mall	outn Campu:
CERC (Clean Energy Research Ctr), 2360 East Mall	
Chan Centre for the Performing Arts, 6265 Crescent Rd	
Chancellor Place neighbourhood	
Chemical & Biological Engineering Bldg, 2360 East Mall	
Chemistry A Block - Chemistry Physics Building, 6221 University Chemistry B.C,D & E Blocks, 2036 Main Mall	
Child Care Services Administration Bldg, 2881 Acadia Rd	
Child Care Services Bldgs, Osoyoos Cresc and Revelstoke Crt	
CIRS — see Centre for Interactive Research on Sustainability	
Civil & Mechanical Engineering Bldg (CEME), 6250 Applied Scie	
Civil & Mechanical Eng. Labs ("Rusty Hut"), 2275 East Mall Coal & Mineral Processing Lab, 2332 West Mall	
Continuing Studies Bldg [English Language Institute], 2121 West	
Copp (D.H.) Building, 2146 Health Sciences Mall	
Cunningham (George) Building [Pharmaceutical Sc.], 2146 East	
David Lam Learning Centre, 6326 Agricultural Rd	
David Lam Management Research Ctr, 2033 Main Mall Donald Rix Building, 2389 Health Sciences Mall	
Doug Mitchell Thunderbird Sports Centre, 6066 Thunderbird Blvd	
Dorothy Somerset Studios (formerly Hut M-18), 6361 University I	
Earth Sciences Building (ESB) under construction, 2207 Main Ma	
Earth & Ocean Sciences (EOS) - Main and South, 6339 Stores F	
Earthquake Engineering Research Facility (EERF), 2235 East M Engineering High Head Room Lab, 2225 East Mall	
English Language Institute (E.L.I.) — see Continuing Studies Bu	
Environmental Services Facility, 6025 Nurseries Rd	South Campus
Fairview Crescent Residence, 2600-2804 Fairview Cres	F
Fire Department, 2992 Wesbrook Mall	
First Nations Longhouse, 1985 West Mall	
Flag Pole Plaza (Main Mall & Crescent Rd) Food, Nutrition and Health Bldg, 2205 East Mall	
Forest Sciences Centre [Faculty of Forestry], 2424 Main Mall	
Forward (Frank) Building, 6350 Stores Rd	E
FPInnovations (Forest Operations & Wood Products), 2601/2665	
FPInnovations (Pulp & Paper Division), 3800 Wesbrook MallS	
Fraser Hall (public rental housing), 2550 Wesbrook Mall Fraternity Village, 2880 Wesbrook Mall	
Frederic Wood Theatre, 6354 Crescent Rd	
Friedman Bldg, 2177 Wesbrook Mall	
Gage Residence, 5959 Student Union Blvd	C
General Services Administration Bldg (GSAB), 2075 Wesbrook N	//allD
Geography Building, 1984 West Mall	
Gerald McGavin Building, 2386 East Mall	F4
Graduate Student Centre — see Thea Koerner House Green College, 6201 Cecil Green Park Rd	Λ.
Greenheart Canopy Walkway, Botanical Garden, 6804 SW Marin	
Greenwood Commons (public rental housing), 2660 Wesbrook N	
Hampton Place neighbourhood	H/J-6/
Hawthorn Place neighbourhood	G/H
Hebb Building, 2045 East Mall	
Hennings Building, 6224 Agricultural Rd Henry Angus Building [Sauder School of Business], 2053 Main N	
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Hillel House - The Diamond Foundation Centre for Jewish Campus Lit	fe.	Point Grey Apartments, 2875 Osoyoo
6145 Student Union Blvd		Police (RCMP) & Fire Department, 29
Horticulture Building/Greenhouse, 6394 Stores Rd	E2/3	Ponderosa Centre, 2071 West Mall
Hugh Dempster Pavilion, 6245 Agronomy RdRd	F4	Ponderosa Office Annexes: A, B, & C
ICICS/CS (Institute for Computing, Information		Ponderosa Office Annexes: E to H, 20
& Cognitive Systems/Computer Science), 2366 Main Mall		Power House, 2040 West Mall
Instructional Resources Centre (IRC), 2194 Health Sciences Mall		Pulp and Paper Centre, 2385 East Ma
International House, 1783 West Mall		Ritsumeikan-UBC House, 6460 Agror
In-Vessel Composting Facility, 6035 Nurseries RoadSouth		Rose Garden
Irving K. Barber Learning Centre, 1961 East Mall		Roy Barnett Recital Hall - in Music Bu
Jack Bell Building for the School of Social Work, 2080 West Mall John Owen Pavilion & Allan McGavin Sports Medicine Centre,	D3	Rugby Pavilion, 2584 East Mall Scarfe (Neville) Building [Education],
3055 Wesbrook Mall	Н5	School of Population & Public Health
Kaiser (Fred) Building [Faculty of Applied Science], 2332 Main Mall		Simon K.Y. Lee HKU-UBC House — I
Kenny (Douglas T) Building, 2136 West Mall		Sing Tao Building, 6388 Crescent Rd.
Kids Club, 2855 Acadia Rd		Sopron House, 2730 Acadia Rd
Klinck (Leonard S.) Bldg, 6356 Agricultural Rd		South Campus Warehouse, 6116 Nur
Koerner (Walter C.) Library, 1958 Main Mall		Spirit Park Apartments, 2705-2725 Os
Landscape Architecture Annex, 2371 Main Mall	F3	St. Andrew's Hall/Residence, 6040 lo
Lasserre (Frederic) Building, 6333 Memorial Rd	C3	St. John's College, 2111 Lower Mall
Law, Faculty of — see Allard Hall		St. Mark's College, 5935 Iona Dr
Leon and Thea Koerner University Centre, 6331 Crescent Rd		Staging Research Centre, 6045 Nurse
Life Sciences Centre, 2350 Health Sciences Mall		Stores Road Annex, 6368 Stores Rd.
Liu Institute for Global Issues, 6476 NW Marine Dr		Student Recreation Ctr, 6000 Student
Lower Mall Header House, 2269 Lower Mall		Student Union Bldg (SUB), 6138 Stud
Lower Mall Research Station, 2259 Lower Mall		TEF3 (Technology Enterprise Facility
Macdonald (J.B.) Building [Dentistry], 2199 Wesbrook Mall		Thea Koerner House [Faculty of Grad Theatre-Film Production Bldg, 6358 L
MacLeod (Hector) Building, 2356 Main Mall		Thunderbird Residence, 6335 Thunder
Marine Drive Residence (Front Desk in Bldg #3), 2205 Lower Mall		Thunderbird Stadium, 6288 Stadium I
Material Recovery Facility, 6055 Nurseries RdSouth		Thunderbird Winter Sports Ctr — see
Mathematics Annex, 1986 Mathematics Rd		Totem Field Studios, 2613 West Mall
Mathematics Building, 1984 Mathematics Rd		Totem Park Residence, 2525 West M
Medical Sciences Block C, 2176 Health Sc. Mall		TRIUMF, 4004 Wesbrook Mall
M.F.A. Studios (formerly B.C. Binning MFA Studios), 6363 Stores Rd		Triumf House (TRIUMF Visitor's Residence
Michael Smith Laboratories, 2185 East Mall	D4	U BC Bookstore, 6200 University Blvd
Museum of Anthropology (MOA), 6393 NW Marine Dr	A2/3	UBC Farm, 6182 Wesbrook Mall
Music Building, 6361 Memorial Rd		UBC Hospital, 2211 Wesbrook Mall
Networks of Ctrs of Excellence (NCE), 2125 East Mall		UBC Tennis Centre, 6160 Thunderbird
Nitobe Memorial Garden, 1895 Lower Mall	B/C2	UBC Thunderbird Arena (in Doug Mite
Nobel Biocare Oral Heath Centre (David Strangway Bldg),		University Centre (Leon & Thea Koeri
2151 Wesbrook Mall		University Neighbourhoods Association
Norman MacKenzie House, 6565 NW Marine Dr		University Services Building (USB), 2
NRC Institute for Fuel Cell Innovation, 4250 Wesbrook MallSouth		Vancouver School of Theology, 6000 Walter H. Gage Residence, 5959 Stu
Old Administration Building, 6328 Memorial RdOld Auditorium — see Auditorium		War Memorial Gymnasium, 6081 Univ
Old Barn Community Centre, 6308 Thunderbird Blvd	G3	Wayne & William White Engineering [
Old Firehall, 2038 West Mall		Wesbrook Bldg, 6174 University Blvd
Orchard House, 2336 West Mall		Wesbrook Place neighbourhood
Osborne (Robert F.) Centre/Gym, 6108 Thunderbird Blvd		Wesbrook Village shopping centre
Panhellenic House, 2770 Wesbrook Mall		West Mall Annex, 1933 West Mall
Peter Wall Institute for Advanced Studies, 6331 Crescent Rd		West Mall Swing Space Bldg, 2175 W
Place Vanier Residence, 1935 Lower Mall	C/D2	Wood Products Laboratory, 2324 Wes
Plant Ops Nursery/Greenhouses, 6029 Nurseries RdSouth	Campus	Woodward IRC, 2194 Health Science
Plant Science Field Station & Garage, 2613 West Mall	H2	Woodward Library, 2198 Health Scien
	\	E A
COLUTIA		EAST.
SOUTH \\\\\\\\\\\		14/505
	1000	WEST future school
CAMPUS	/ ///	E) School

