Court File No.: 11-51657

ONTARIO
SUPERIOR COURT OF JUSTICE

BETWEEN:

JOANNE ST. LEWIS

Plaintiff

and

DENIS RANCOURT

Defendant

AFFIDAVIT

(In support of Defendant's Motion for Leave to Appeal)

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I, **Denis Rancourt**, of the City of OTTAWA, in the Province of Ontario, AFFIRM AS FOLLOWS:

1. I am the self-represented Defendant in the action. As such, I have knowledge of the matters sworn to in this affidavit.

2. This affidavit is in support of my motion as the moving party for Leave to Appeal a judge's decision made at the Case Conference held on February 8, 2012.

3. The Registrar was not able to provide an earlier two-hour bilingual motion hearing date than the date indicated in the Notice of Motion.

I. Defendant's Anti-Discrimination Record

4. I am married to a person of colour born in Madagascar, Africa. My two daughters are persons of colour.

5. I have dedicated myself to social justice and anti-discrimination in my career as a university professor and as a public intellectual. This includes on-going extensive volunteer work and sustained critical commentary.

6. I had a 23-year career at the University of Ottawa where I was promoted to the highest rank of tenured Full Professor in 1997. My University of Ottawa, Faculty of Science 2008 *Curriculum Vitae* is attached as **Exhibit-A** to my affidavit.

7. I was dismissed by the University of Ottawa in 2009, in what is an on-going academic freedom case presently being investigated by an Independent Committee of Inquiry of the Canadian Association of University Teachers (CAUT). Attached as **Exhibit-B** to my affidavit are relevant CAUT web site pages.

8. The dismissal is presently in binding labour arbitration between my union (APUO, Association of Professors University of Ottawa) and the University of Ottawa. On-going hearings are scheduled into May 2012.

<u>Social justice advocacy -- recent and on-going</u>

9. I am the volunteer Producer and Host of the weekly one-hour radio show "5 O'Clock Train" on CHUO 89.1 FM Ottawa since 2005. The show is centered on social justice issues, including discrimination and racism.

10. I created and ran the weekly documentary film, speaker and discussion series "Ottawa Cinema Politica" that ran continuously on-campus from 2005 to 2009. The public series was focussed on social justice issues.

11. In 2011, I contributed twenty two "chroniques" (episodes) to the French-language CHUO 89.1 FM Ottawa radio show "Jambo", at the invitation of the show's CHUO staff Producer. Jambo is dedicated to the French-language Afro-Canadian community in Ottawa.

12. I am recognized for applying the social-justice-centered teaching method known as "pedagogy of liberation" and I have given several invited conference talks and panels about this (*CV*, Exhibit-A).

13. I am a long-time advocate of student rights and I have been a featured speaker at student conferences across Canada and abroad.

14. I am French Canadian and I am a long-time advocate of minority language rights, including contributing to "L'Association francophone pour le savoir-Acfas" (ACFAS) and developing and advocating for French and bilingual university courses.

15. I am an anti-war advocate and I have contributed to several events including:
    - organizing a 2004 colloquium at the University of Ottawa (with renown MIT expert Prof. Theodore A. Postol) to critically examine the technology of missile defence;
    - inviting and hosting a major 2006 Ottawa lecture by renown Afghan Member of Parliament and human rights activist Malalai Joya; and
    - being an invited panelist at a 2010 NoWar-Paix Ottawa event.

16. I am an advocate of whistleblower protection and, as such, I am an active member of Canadians for Accountability, a registered non-profit Ottawa-based advocacy and support group. I also regularly provide radio media interviews to related groups such as FAIR Canada and Democracy Watch.

17. I am a supporter and advocate for independent community (centre) spaces and I have contributed speaking or workshop volunteer engagements at such spaces in Ottawa and other Canadian cities.

18. I am a regular and frequent volunteer invited contributor about social justice in university and college courses and programs in Ottawa, including:
    - education, University of Ottawa;
    - social work, Carleton University;
    - human rights law, Carleton University;
    - psychology, University of Ottawa;
    - criminology, University of Ottawa;
    - documentary film making, Algonquin College; and
    - international studies, Carleton University.

19. My sustained critical commentary and public participation for social justice includes regular publishing to four blogs:
    - "The Five O'Clock Train" in support of my CHUO 89.1 FM radio show,
    - "U of O Watch" for public responsibility critique of the University of Ottawa,
    - "Activist Teacher" for social commentary and activism, and
    - "Climate Guy" for commentary about environmental priorities.

II. Defamation Action

20. The defamation action (filed on June 23, 2011) arises out of a 2008 Student Federation of the University of Ottawa (SFUO) Student Appeal Centre (SAC) report which concluded that there was systemic racism in part of the University's treatment of visible minority students. The SFUO-SAC report is attached as **Exhibit-C** to my affidavit.

21. In 2008 the Plaintiff made an academic "evaluation report" for the University about the 2008 SFUO-SAC report. The Plaintiff's evaluation report concluded that the SFUO-SAC report did not demonstrate any systemic racism at the University of Ottawa.

22. As part of my on-going activism against discrimination and for institutional responsibility, on December 6, 2008 I responded with a posted criticism of the Plaintiff's evaluation report. Following an SFUO-SAC 2011 release of relevant access to information documents, I restated my criticism of the Plaintiff's academic work in a February 11, 2011 blogpost.

23. In my February 11, 2011 criticism I quoted historically renown Black justice figure Malcolm X who first defined the modern use of the critical term "house Negro", a common term used to critique Black public figures in the United States, Canada, and elsewhere, which I believe means "A privileged person of colour working with power to help maintain the status of less-privileged persons of colour." My belief is based on the famous speech of Malcolm X: A transcript of the Malcolm X speech YouTube video-clip used (embedded) in my February 11, 2011 blogpost is attached as **Exhibit-D** to my affidavit.

24. A law-news media report about the litigation has described the origin and use of the Malcolm X phrase: August 29, 2011 article in the *Law Times*, attached as **Exhibit-E** to my affidavit.

25. The defamation action seeks damages of $1 million.

26. Until recently there had been virtually no discovery in the action. The Plaintiff refused to discuss a discovery plan and moved to bar all discovery until the Mandatory Mediation session, held on December 6, 2011. Then the Plaintiff further filed a motion on December 6, 2011, barring examination for discovery until a Plaintiff's intended (not served) motion for summary judgement would be heard.

27. The latter motion to bar examinations for discovery and to set a summary judgement motion schedule was heard on January 26, 2012 and the action was put under Case Management by consent on that date.

28. At present the Plaintiff has dropped her summary judgement demand and now wants trial, and has reversed her position on Discovery and now seeks examinations for discovery to occur in parallel with my January 5, 2012 motion to dismiss the action for abuse of process (maintenance and champerty) – January 5, 2012 Notice of Motion attached as **Exhibit-F** to my affidavit.

III. Motion for Leave to Appeal – Supporting Evidence

29. On February 9, 2012 I ordered the Court transcript of the February 8, 2012 Case Conference at which the contested decision of the Court occurred. On February 13, 2012 I received a 3:15pm email from Record Management Clerk Megan Robertson informing me that the transcript order was being processed, with "Transcrip Order ID #12-10873."

30. Attached as **Exhibit-G** to my affidavit is an Affidavit of Service affirmed and filed with the Court on February 6, 2012, for service of my February 5, 2012 open court motion Notice of Motion.

31. On February 6, 2012, the Registrar, in the person of Timothy Wade Ginley, informed me in person that it would not accept Court-filing of my February 5, 2012 open court motion Notice of Motion. The Registrar was definitive:
    (a) that this or any other Notice of Motion could not be filed without a motion hearing date,
    (b) that the Registrar would not provide a motion hearing date because the action is in case management, and
    (c) that case management Judge Beaudoin would need to assign a motion hearing date before the Notice of Motion could be filed.

32. At the Case Conference with Judge Beaudoin on February 8, 2012, Mr. Peter K. Doody, counsel for the University of Ottawa, confirmed that he had been served with my February 5, 2012 open court motion Notice of Motion.

33. Attached as **Exhibit-H** to my affidavit is a copy of my February 5, 2012 open court motion Notice of Motion.

34. Attached as **Exhibit-I** to my affidavit is a copy of a three-part email exchange between Plaintiff's counsel Mr. Dearden and me, ending with my email of February 7, 2012 at 10:32am. Here, Mr. Dearden's email was sent at 7:36am on February 7, 2012.

35. Attached as **Exhibit-J** to my affidavit is a copy of an email I sent to Judge Beaudoin (with permission, via case management coordinator Kathy Estabrooks, and with the other party in cc) on February 6, 2012 at 3:59pm. The three attachments to the email (Exhibit-J) describe my proposals regarding case management scheduling of motions. The email was also forwarded to Mr. Doody, Counsel for the University of Ottawa, on the same day at 4:58pm.

36. Before the start of the February 8, 2012 Case Conference convened by Judge Beaudoin, Judge Beaudoin stated that he had my email (Exhibit-J) in-hand.

37. When I attended the February 8, 2012 Case Conference, I expressed a clear expectation that my open court motion would be scheduled as part of the case management schedule being established that day. I expected that the filing of my Notice of Motion would be followed by a possible supporting affidavit if needed (see Exhibit-I), a motion record, and a factum.

38. Attached as **Exhibit-K** to my affidavit is a copy of the English version of Judge Beaudoin's "ENDORSEMENT (at Case Conference)" dated February 8, 2012, sent to me from case management coordinator Kathy Estabrooks by email attachment on February 10, 2012 at 3:20pm.

39. At the February 8, 2012 Case Conference convened by Judge Beaudoin, Judge Beaudoin:

(a) refused to accept from me a copy of my open court motion Notice of Motion;
(b) did not permit me to make an oral presentation about my open court motion;
(c) refused that any dates be scheduled for my open court motion;
(d) accepted a copy of a prior Master's order and/or reasons for decision provided by the other party (counsel Anastasia Semenova) whereas I was not given a copy of the documents handed to the judge; and
(e) superficially justified not assigning dates for my open court motion without applying the relevant Dagenais/Mantuck test for legal procedure openness.

40. At the February 8, 2012 Case Conference and in his "ENDORSEMENT (at Case Conference)" (Exhibit-K) Judge Beaudoin justified not assigning case management schedule dates for my open court motion by stating that examinations for discovery are not subject to the open court principle. I never stated or indicated that the open court principle should apply to examinations for discovery and I state in my February 6, 2012 Notice of Motion (Exhibit-H):

> "6. Out-of-court examinations of witnesses and deponents of affidavits on motions are not subject to Deemed Undertaking (Rule 30), and thus fundamentally differ from Examinations for Discovery. The Defendant does not challenge that examinations for discovery are not subject to the open court principle."

Sworn and affirmed before me at the City of Ottawa, Ontario, on

February 16, 2012

.....
Commissioner for Taking Affidavits
(or as the case may be)
Timothy Wade Ginley, a Commissioner, etc.,
City of Ottawa, for the Government of Ontario,
Ministry of the Attorney General.
Expires December 2, 2013.
Timothy Wade Ginley, un commissaire, etc.,
ville d'Ottawa, au service du gouvernement de
l'Ontario, Ministère du Procureur général.
Date d'expiration: le 2 décembre 2013.

.....
(Signature of deponent)
Denis Rancourt

This is Exhibit "A"

to the Affidavit of Denis Rancourt,

sworn before me this

16 day of February, 2012.

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FACULTY OF SCIENCE DATE: May, 2008

CURRICULUM VITAE

Name: Denis Gabriel Rancourt Date of birth: March 23, 1957

Dept.: Physics Rank: Full Professor

WEB SITE: http://www.science.uottawa.ca/~dgr/

1. DEGREES

Degree	Institution	Location	Year
Ph.D.	University of Toronto	Toronto	1984
M.Sc.	University of Toronto	Toronto	1981
B.Sc.	University of Ottawa	Ottawa	1980

2. ACADEMIC, RESEARCH & INDUSTRIAL EXPERIENCE:

Positions held	Institution	Dates
NSERC Post doctoral fellow	Centre de Recherche Paul Pascal CNRS, Talence, France	1984-1985
NSERC Post doctoral fellow	Kamerlingh Onnes Laboratorium Leiden, The Netherlands	1985-1986
Post doctoral fellow	University of Ottawa	Nov. 1986/ Mar. 1987
Assistant Professor and University Research Fellow (NSERC)	University of Ottawa	1987-1992
Associate Professor	University of Ottawa	1992-1997
Full Professor	University of Ottawa	1997-

3. EXTERNALLY-AWARDED RESEARCH GRANTS AND CONTRACTS:

Year	Agency (Type)	Title of project	Type	Amount per year
1987	NSERC Equipment	Mössbauer effect spectroscopy system	IR	$ 34,063
1987	Rector's Fund	Mössbauer spectroscopy vacuum furnace and temperature controller (Equipment)	IR	$ 6,901
1987-89	NSERC Operating Grant as URF	Magnetism and spin-dynamics of synthetic-metal superlattices and metallic modulated structures	IR	$ 19,000
1989-90	NSERC Operating Grant as URF	Magnetism and spin-dynamics of synthetic-metal superlattices and metallic modulated structures	IR	$ 20,000
1989-90	NSERC Equipment	Mössbauer exchange gas helium cryostat (equipment)	IR	$ 23,394
1989-90	NSERC Equipment	Compressor for helium recovery system (equipment) (PI=Prof.Gilles Lamarche)	GR	$ 34,740
1989-90	Research Services	Industry-University seed money: Quantitative analysis by Mössbauer spectroscopy for industrial and mining materials processing	IR	$ 10,000
1990-91	NSERC/EMR	Mössbauer determination of sulfate impurities in haematite	IR	$ 11,100
1990-92	NSERC Operating Grant	Magnetism of Fe-Ni Invar alloys graphite intercalation compounds, and micas - using Mössbauer spectroscopy	IR	$ 30,000
1992	NSERC Equipment	Dedicated pumping station for Mössbauer laboratory	IR	$ 10,507
1992	NSERC Equipment	Mössbauer cryostat with 9T superconducting magnet (PI=Prof.Z. Stadnik)	GR	$ 44,412
1992-95	NSERC Operating Grant	Fe-Ni Invar alloys, phlogopite annite oxyannite micas, and synthetic microcrystalline hematites: studied by Mössbauer spectroscopy	IR	$ 30,000

1992	NSERC Equipment	X-ray powder diffractometer with primary beam monochromator (PI=Prof.Z.Stadnik)	GR	$210,676
1992	NSERC	Risc workstation network (PI=Prof.G.Slater)	GR	$ 33,884
1994	CANMET/ EMR	Determination of iron forms in Canadian coals by Mössbauer spectroscopy	IR	$ 40,200
1995-96	Environment Canada (NWRI)	Mössbauer and XRD characterization of sediments (3 contracts)	IR	$ 8,734
1995-98 1998-99	NSERC Operating Grant	Mössbauer spectroscopy methodology, synthetic and meteoritic Fe-Ni alloys, and crystal chemistry and 2D magnetism in layer silicates	IR	$ 28,900 $ 31,790
1996	NWRI	Mössbauer analyses of slag samples (2 contracts)	IR	$ 8,000
1996-97	NWRI	Mineralogical analyses of sediments (4 contracts)	IR	$ 8,065
1997-98	NWRI	Quantification of vivianite in lake sediments (2 projects)	IR	$ 6,760
1998	URF	Mössbauer source for identification of new alloy species	IR	$ 1,550
1998	Human Resources Development Canada	Summer career placement program	IR	$ 1,700
1998	URF University Research Fund	Use of colloidal Fe precipitates in wastewater treatment. (PI=Danielle Fortin)	GR	$ 3,000
1999-03	NSERC Research Grant	Condensed matter physics perspective on Earth and planetary materials	IR	$ 34,650
2000	NWRI	Mineralogical profile of an aquatic sediment core	IR	$ 20,000
2000	NSERC Equipment	Magnetometer for characterization of materials (with 4 co-applicants)	IR	$143,876
2000	GSC	Mössbauer mineralogy of sediment core sections from the Champlain Sea (1 contract)	IR	$ 2,400

2000	GSC	Influence of diagenetic processes on lake sediment records, MITE	IR	$ 36,000
2000-01	Noranda Research Agreement	Speciation and mineralogy of copper in sediments	IR	$ 7,400
2000-05	NSERC Strategic Project Grant (SPG)	Quantitative mineralogy and geochemical modelling of lake sediments for advanced applications (with 7 co-applicants)	GR	154,193 160,217 166,217 160,217 112,460
2000-05	GSC in-kind	Quantitative mineralogy and geochemical modelling of lake sediments for advanced applications (with 7 co-applicants)	GR	415,422 301,042 616 616 616
2002-03	CANMET in-kind	Synthesis of mining and environmentally relevant iron oxyhydroxides and co-precipitates	IR	100,000 100,000
2001	NSERC Equipment	Urgent repair and upgrade of Mossbauer laboratory	IR	$ 31,660
2002	NSERC Equipment	Urgent replacement of balances for materials science	IR	$ 15,379
2003-08	NSERC Discoveries	Condensed matter physics perspective on Earth, planetary, and environmental materials	IR	$45,000
2008-13	NSERC Discoveries	Reactive environmental Fe-oxyhydroxide nanoparticles	IR	$34,891

4. **<u>SUPERVISION OF GRADUATE WORK</u>** (see thesis titles, etc., at end of CV):

		Successfully Completed	In progress	Inactive
(A)	Doctoral Thesis	5	3	
(B)	Master's Thesis	10	3	
(C)	Post Doctoral Fellow (incl. co-sup.)	13	1	
(D)	Visiting Scholars	2	0	
(E)	Co-supervision Ph.D.	5	0	
(F)	Co-supervised M.Sc.	0	1	
(F)	Undergraduate summer research and COOP student work terms	42	0	

(H) Independent researchers on sabbatical/research leave:

(1) Dr. J.Y. Ping, Beijing, China (2 x 1.5 years)

(2) Dr. Roger Thiel, Leiden, the Netherlands (3 months)

(3) Dr. Ray Enzweiller, Cincinnatti, USA (2 weeks)

(4) Dr. Hideki Murakami, Akita, Japan (3 weeks)

(5) Dr. Jim Amonette, Batelle, USA (1 week)

(6) Dr. Ravi Kukkadapu, Batelle, USA (2 visits, ~1 week each)

(7) Prof. Aligen Tueraihemaiti, Xinjiang University, Urumqi, Xinjiang, China (1 year)

(8) Prof. Philippe van Cappellen, Utrecht University, The Netherlands (six months)

5. **<u>DISTINCTIONS AND AWARDS</u>**:

1) NSERC graduate scholarships 1980-84.

2) NSERC-PDF 1984-86.

3) NSERC-URF (University Research Fellow): 1986 national competition of university-supported candidates had a 20% success rate.

4) For the paper entitled "A New biintercalation compound, Fecl_2-Nicl_2-graphite..." judged best condensed matter physics paper to appear in the Canadian Journal of Physics in 1989. Awarded by the Canadian Association of Physicists.

6. <u>SCHOLARLY AND PROFESSIONAL ACTIVITIES</u>:

1) Scientific Program Committee: International Conf. on the Applications of the Mössbauer Effect 1993.

2) Reviewer for Physical Review and Physical Review Letters and over a dozen other journals.

3) Planning and Organizing Committee of the 1997-11th International Clay Conference (held every 4 years). ICC'97 held June 15-21, 1997, Ottawa.

4) Scientific Program Committee: Int. Conf. on the Applications of the Mössbauer Effect 1995.

5) Chair and organizer of symposium entitled "Mössbauer spectroscopy in clay science" at ICC'97. Held: June 17-21, 1997, Ottawa.

6) Organizer and main instructor of ICC'97 satellite Mössbauer workshop entitled: "Mössbauer spectroscopy applied to mineralogy: Data treatment and spectral analysis using MOSMOD". Held: June 14-15, 1997, Ottawa.

7) Canadian representative on the Int. Board on the Applications of the Mössbauer Effect (IBAME) at ICAME'95 and elected Canadian representative on IBAME, 1997-2007.

8) Member of the "Advisory Board for the Mössbauer Effect Data Center", starting November 10, 1995.

9) Special foreign member of the "Latin American Network of Basic and Applied Research on Magnetism and Magnetic Materials", starting May 26, 1996.

10) Past and/or present member of the following professional associations:

American Geophysical Union (AGU)
American Physical Society (APS)
American Society for Metals (ASM)
Canadian Association of Physicists (CAP)
Canadian Association on Water Quality (CAWQ)
Canadian Institute of Mining, Metallurgy and Petroleum (CIM)
Centre for Catalysis Research and Innovation (CCRI, UofO)
Centre for Research in Earth and Space Technology (CRESTech, Ontario)
Clay Minerals Society (CMS)
Geochemical Society (GS, international)
Institute for Research on the Environment and Economics (IREE, UofO)
Institute for the Environment (IE, UofO) (Research Associate)
International Mineralogical Association (IMA)
Material and Manufacturing Ontario (MMO)
Mineralogical Association of Canada (MAC)
Mineralogical Society of America (MSA)
Minerals Metals and Materials Society (TMS)
Ottawa-Carleton Geoscience Center (O.-C.G.C.)
Ottawa-Carleton Institute for Physics (O.-C.I.P.)

11) International Advisory Committee for ISIAME-2000 and ISIAME-2004 (International Symposium on the Industrial Applications of the Mössbauer Effect)

12) Advisory Board of University Watch (uwatch.ca), 2004-

13) Co-Chair, Steering Committee, Alternative Voices Series (AVS), 2004-

7. CONTRIBUTIONS TO TEACHING:

7.1 Courses Given Since Start of Initial Contract[a)], 1-APR-87

Term/ Year	No. of Students	Course	Title	Type[b)]	Language
F/87	6	PHY 4380[†]	Solid State I	M	E

W/88	80	PHY 1702†	Principes de Physique II	M	F
W/89	80	PHY 1702	Principes de Physique II	M	F
W/89	5	PHY 4385†	Solid State II	M	E
W/90	10	PHY 3385†	Physics of Materials	M	E
W/90	8	PHY 4385	Solid State II	M	E
F/90	2	PHY 5922†	Advanced Magnetism I	R,G	E
F/90	2	PHY 8391†	Solid State Magnetism	R,G	E
W/91	3	PHY 4785†	État Solide II	M	F
W/91	70	PHY 1702	Principes de Physique II	M	F
F/89	1	PHY 4905A†	4th Year Project	P	E
W/89	1	PHY 4905B†	4th Year Project	P	E
W/92	14	PHY 3385	Physics of Materials	M	E
W/92	4	PHY 4770†	Mécanique Quantique	M	F
F/92	9	PHY 3901†	3rd Year Laboratory	L(25%)	E/F
F/92	3	PHY 4904	4th Year Laboratory	L(25%)	E/F
F/92	2	PHY 8391†	Invar Alloys	R,G	E
W/93	7	PHY 4770	Mécanique Quantique	M	F
W/93	6	PHY 4785	État Solide II	M	F
F/93		SABBATICAL	(research mini-course/workshop given abroad)		
W/94		SABBATICAL			
F/94	12	PHY 6371†	Mössbauer Spectroscopy	M, G	E
W/95	120	PHY 1502†	Physique pour Ingénieurs	M	F
W/95	8	PHY 4770	Mécanique Quantique	M	F/E

F/95	25	PHY 8191/8391†	Materials Characterization	M, G	E
F/95	3	PHY 4005†	4th Year Projects	P	E
W/96	3	PHY 4005	4th Year Projects	P	E
W/96	120	PHY 1502	Physique pour Ingénieurs	M	F
W/96	9	PHY 4770/4370	Mécanique Quantique	M	F/E
F96	15	PHY 5130	Characterization Methods	M, G	E
W97	6	PHY 4770/4370	Mécanique Quantique	M	E/F
W97	120	PHY 1502	Physique pour Ingénieurs	M	F
F97	70	PHY 1703†	Physique et Environnement	M	F
F97	3	PHY 5922	Advanced Magnetism I	G, R	E
W98	70	PHY 1502	Physique pour Ingénieurs	M	F
F98	25	PHY 5130	Characterization Methods	M,G	E
F98	10	PHY 3901	3rd Year Lab	L(100%)	E/F
F98	1	PHY 8391†	Diffraction Physics	R,G	F
F98	3	GEO 4010†	4th Year Thesis	P(50%)	E/F
W99		SABBATICAL			
F99		SABBATICAL			
F99	1	PHY 4005	4th Year Projects	P	E
W00	1	PHY 4005	4th Year Projects	P	E
W00	29	PHY 1703	Physique et Environnement	M	F
W00	1	PHY 8191†	Biogenic Minerals	R, G	E
F00	30	PHY 5130	Characterization Methods	G, M	E
F00	5	PHY 4782	Etat Solide	M	F

W01	120	PHY 1702	Principes de Physique II	M	F
F00	2	PHY 4005	4th Year Projects	P	E
W01	2	PHY 4005	4th Year Projects	P	E
F01	20	PHY 1703	Physique et Environnement	M	F
F01	1	PHY 5922	Advanced Magnetism I	G, R	E
W02	120	PHY 1702	Principes de Physique II	M	F
W02	1	PHY 5347	Mineral Physics	G, R	F
W02	1	PHY 4005	4th Year Projects	P	E
F02	15	PHY 5130	Characterization Methods	G, M	E
F02	1	PHY 4005	4th Year Projects	P	E
W03	120	PHY 1702	Principes de Physique II	M	F
W03	1	PHY 6371	Mössbauer (Colour Physics)	G, R	E
F03		SABBATICAL			
W04		SABBATICAL			
F04	20	PHY 5130	Characterization Methods	G, M	E
F04	5	PHY 5347	Mineral Physics	G, R	E
W05	200	PHY 1702	Principes de Physique II	M	F
F05	100	PHY 1703	Physique et Environnement	M	F
F-05	7	PHY 8391-W†	Science and Society	M	E
W06	120	PHY 1702	Principes de Physique II	M	F
F06	120	SCI 1101†	Science in Society	M	E
W07	50	PHY 1722†	Principes de Physique II	M	F
F07	5	PHY 5130	Characterization Methods	G, M	E

W08	24	PHY 4385/5100	Solid State Physics	G, M	E
W08	21	PHY 4770	Mécanique Quantique	M	F

† Course given for first time since start of initial contract.

a) As NSERC U.R.F. in the first five years I had a contract maximum of two courses per academic year (2 x 3 cr. = 6 cr). All above courses are one-term (3 cr.) courses.

b) M = lecture type with assignments, mid-terms, and final exam.
R = reading course
G = graduate course
P = project course
L = practical laboratory (% responsibility)

7.2 Cinema Politica film and discussion series

During every week that there are classes during the academic year I have organized and moderated the Ottawa Cinema Politica film and discussion series, since the Fall 2005 term. This involves obtaining and reviewing the films, coordinating with the Cinema Politica parent site, inviting and hosting film makers and experts related to the issues presented in the films, moderating the post-film discussions, and promoting the event. The series now fills the auditorium every week and is listed in the Ottawa Xpress.

See: http://cinemapolitica.org/ottawa/

7.3 Guest lecturer in graduate courses

"Teaching science for social change" in the course: Social Justice in a Global Context, Prof. Marc Spooner, University of Ottawa, March 6, 2006.

"Activism and Universities" in the course: Globalization Studies, Prof. Anthony Hall, Lethbridge University, 2006 (by satellite).

"Professional Dissent" in the course: in the course: War and Dissent, Prof. Mel Watkins, Carleton University, February 16, 2006.

"Professionals that make a difference" in the course: Graduate course, Social Justice Activism and Social Movements, Prof. Rashmi Luther, Carleton University (Social Work Program), October 31, 2006.

"Activism in professional life" in the course: Graduate course, Social Justice Activism and Social Movements, Prof. Rashmi Luther, Carleton University (Social Work Program), October 25, 2007.

7.4 Professional and Research Workshops and Mini-Courses

S97 ICC'97 Mössbauer Spectroscopy Workshop, June 14-15, 1997. Organizer and chief instructor. Full capacity = 15 participants. Co-instructor, K. Lagarec. (See reference to associated Handbook below, under "Books, Monographs, and Handbooks authored").

8. CONTRIBUTIONS TO PUBLIC AWARENESS OF SCIENCE:

- Talks in high schools
- Judging at science fairs
- Careers talk on U of O day
- Wrote and participated in production of "Why Study Physics" pamphlet, 1995, now used as our standard promotional flyer
- Educational highschool student project video on magnetism (November, 2002)
- Talk at a CEGEP (March, 2003, see talks at institutions below)
- Editorial in the University of Ottawa *Gazette* (see media articles below)
- Poetry readings (e.g., *"The Physics That I Do"*; see readings below)
- See item 7.2 in above section. Many of the films deal with scientific issues such as patents, GMOs, weapons technology, health issues, space programs, use of animals in experimentation, etc.
- Since May 6, 2007, I have edited and managed the blog "Activist Climate Guy", which offers a radical political and scientific analysis of the global warming issue: http://climateguy.blogspot.com/ . (See section-12 below.)
- Many radio and print media interviews about environmental science and my scientific research (see media items below)

9. SIGNIFICANT ACADEMIC COMMITTEES:

1988-89 Dept. Academic Planning and Selection Committee

1989-90 Dept. Graduate Curriculum

1991-92 Dept. Undergraduate Curriculum

1992-93, F98 Dept. Undergraduate Laboratories

1995-98	DTPC
1995-2001	Dept. Space and Renovations
1997-98	Seminar coordinator
1996-98	APUO representative for Physics and Chemistry
1997-2002	Faculty Mechanical Shop User Committee
1997-2002	IREE Coordinating Committee
1998-2002	Environmental Science Program Steering Committee (interrupted during 1999 sabbatical)
1997-	Environmental Science and Engineering Group (ESEG) Chair and founding member
1996-98	Recruitment, Marketing, and High School Outreach (Department, ad hoc)
1998-2002	F. Guillon's equipment (Department, ad hoc)
1998-2000	Visiting Speakers Committee, IE
2000-04	Environmental Studies (Faculty of Arts) Steering Committee
2000	Physics Seminar Coordinator (W2000)
2000-02	Faculty Council
2000-06	Departmental Space Committee
2002	Ad hoc Departmental, Research Technical Support (Chair)
2002	Faculty Space Committee
2003	Chairman Selection Committee
2004-	Departmental Environmental Safety Representative

10. SIGNIFICANT CONTRIBUTIONS TO RESEARCH AND PATENTS:

My four major scientific and technological contributions to date can be briefly summarized as follows. More detailed itemized lists in each main area are given further below.

(1) Development of Mössbauer spectroscopy. Internationally recognized leader. Most advanced spectral analysis and data treatment methods: Developed the Voigt-based and extended Voigt-based hyperfine parameter distribution extraction methods; Developed an exact thickness correction algorithm. Commercialized software (Recoil^{TM}) used by renown labs around the world.

(2) Solution to the Invar problem of materials physics. Problem dates back to the 1897 discovery of classical Invar ($Fe_{65}Ni_{35}$) and to Guillaume's 1920 Nobel Prize for this discovery. Gave experimental demonstration of the solution and made first observation of the low-moment phase in Fe-Ni.

(3) Discovery of a fourth metallic meteoritic mineral: antitaenite. This is the first example in nature of two minerals (taenite and antitaenite) that have the same crystal structure and the same composition but different electronic structures, with associated different lattice parameters and magnetic and electronic properties.

(4) Fundamental discoveries in the crystal chemistry of layer silicates: Resolving the hydrogen loss and vacancy mechanisms of non-destructive oxidation of annite; consequences and exceptions of pseudo-hexagonal symmetry; geometric meso- and homo-octahedral concepts; demonstration of an upper tetrahedral rotation limit; dependence of inter-layer cation-oxygen bond length on continuous coordination number variable; mechanism for and necessity of tetrahedral sheet corrugation.

<u>Mössbauer spectroscopy methodology</u>

- Exact analytic absorber thickness correction algorithm
- Voigt-based analytic methods for hyperfine parameter distributions
- Spectral interpretation of minerals
- Cluster excitations and fluctuations in magnetic materials
- MOSMOD analysis software modules; developed, documented, and marketed
- Oriented single-crystal hyperfine quadruple splitting distribution analysis
- Mössbauer Resonant Electron Microscope (MREM)
- Recoil^{TM} Windows-95 and NT based software, now marketed by ISA Inc.
- Improved accuracy of quantitative site and valence analysis by a factor 10
- Extended Voigt-based method for correlated multi-dimensional hyperfine parameter distributions
- Methods for treating thickness effects in non-uniform absorbers

<u>Fe-Ni alloys: Invar, meteorites, etc.</u>

- Mössbauer spectral interpretation

- Microscopic cause of hyperfine field distributions
- Discovery of low-moment phase (Rancourt et al., 1989)
- First sufficiently accurate measurements of isomer shifts, to compare with theory
- Exact mean field theory of disordered magnetic alloys (Rancourt et al., 1993)
- Discovery of new meteoritic mineral phase: antitaenite (Rancourt and Scorzelli, 1995; see American Mineralogist 81 (1996) 766.)
- Microscopic models of the magnetism of high-moment FCC Fe-Ni alloys
- Theory of magneto-chemical phenomena in binary magnetic alloys
- First microscopic theory (non-MFT) of magneto-volume coupling in Invar alloys: combined Monte Carlo and molecular dynamics (Grossman and Rancourt, 1996)
- Demonstration of role of magnetic frustration in Invar behaviour
- Discovery of the high-moment/low-moment transition in FCC Fe-Ni alloys
- Solution of the Invar Problem, microscopic mechanism of the Invar effect
- Indentification and demonstration of the mechanism for the anti-Invar effect

Layer silicate mineralogy

- Mössbauer signature of tetrahedral Fe^{3+} (Rancourt et al., 1992)
- First kinetic characterization and microscopic model of the oxybiotite reaction (Rancourt et al., 1993)
- Coordination and valence state Fe-site populations obtained to ±0.2% (Rancourt et al., 1994)
- Resolution of cis/trans controversy in the Mössbauer spectral interpretation of minerals
- First observation of novel intrinsic 2D magnetic excitations in annite (Rancourt et al, 1994)
- First magnetic characterization of novel synthetic layer silicates with Fe, Co, Ni, Mg cations
- Generalization of microscopic layer misfit model to include differential thermal expansion
- First microscopic QSD characterization of novel synthetic (OH,F)-Annites (Rancourt et al., 1995)
- Observation of a pillaring collapse transition in annite-oxyannite
- Resolution of the oxybiotite and vacancy oxydations reactions of annite
- Fundamental cause of the Fe^{2+} quadrupole splittings in layer silicates
- Cause, consequences and exceptions of pseudo-hexagonal symmetry of octahedral sheets
- Cause of geometric meso- and homo-octahedral sheet structures
- Demonstration and measurement of an upper limit in tetrahedral rotation
- Demonstration of a dependence of inter-layer cation-oxygen bond length on a continuous coordination number variable
- Demonstration of a mechanism for and necessity of tetrahedral sheet corrugation

Graphite intercalation compounds (GICs)

- Theoretical model for magnetism of ferromagnetic transition metal chloride GICs. Referred to as the "Rancourt model" in several review papers.
- Microscopic intercalation mechanism ("bridging-transition") and structural model of $MC\ell_2$-GICs
- Frustration and finite-size magnetism of antiferromagnetic $MC\ell_2$-GICs
- Novel synthetic bi-magnetic graphite bi-intercalation compounds
- Charge transfer and intercalation mechanism of $FeC\ell_3$-GIC

Iron oxides and oxihydroxide

- Characterization of the smallest hematite particles (nanohematite, 2.5 nm dia.)
- Crystal chemistry of the hematite-hydrohematite-protohematite system
- Characterization of biogenic ferrihydrite
- Characterization of natural As-rich hydrous ferric oxides
- Direct demonstration of crystal filed colour mechanism in oxides
- Experimental invalidation of the template mechanism of bacterial-HFO (hydrous ferric oxide) interactions
- Demonstration that soil Fe oxyhydroxides increase their crystallinity on redox cycling; the opposite of the dominant paradigm of Fe cycling in soils.

Other areas

- Alternative mechanism/model for "heavy fermion" behaviour (Rancourt, NATO-ASI, 1987)
- Novel magneto-elastic coupling effects in solitonic 1D magnetic systems (Rancourt, 1986)
- Discovery of magnetically-induced hyperfine electric field gradient asymmetries (Rancourt et al., 1985)
- Phenomenology of domain wall pinning in ferromagnets: discovery of a quasi-universal relationship between the temperature-dependent remanent magnetization and the magnetic viscosity.

11. DETAILED LIST OF PUBLICATIONS (IN CHRONOLOGICAL ORDER):

Table of all written and oral scientific communications:

(Note: Numbers in parenthesis correspond to unrefereed written contributions. Numbers include communications listed in this CV, including any listed [submitted] works or works in press and any scheduled talks not yet given.)

-	Full papers in refereed journals:	71[+4]
-	Papers in refereed conference proceedings:	25
-	Invited refereed plenary and special session papers at international conferences:	10
-	Books, monographs, and handbooks authored:	(2)

- Review papers and book forwards: (3)
- Chapters in books: (not counting chapters from invited talks) 1
- Books edited: (2)

TOTAL REFEREED PAPERS AND CHAPTERS: 107(7)[+4]

- Invited plenary and special session talks at conferences (no paper): 29

TOTAL INVITED CONFERENCE TALKS:
(with and without published paper) 39

- Contributed posters and talks at conferences (no paper): 70
- Articles for Encyclopedias: (2)
- Technical reports: (18)
- Invited talks at institutions: 62

TOTAL WRITTEN AND ORAL CONTRIBUTIONS: 295[+4]

- Media and scientific review articles and interviews about our research: 16
- Media and non-scientific articles: 18
- Public readings (self-authored works, first readings only):
  poems, vignettes, essays, etc. >80
- Theses supervised (not including unofficial co-supervisions): 15
- Partly supervised or unofficially co-supervised theses: 5
- Supervision of fourth-year projects and BSc theses: 13

SOFTWARE TOOLS

- Scientific software packages developed 5

Full papers in refereed journals:

1. **D.G. Rancourt** and J.M. Daniels, The Influence of Unequal Magnetization Direction Probabilities on Mössbauer Spectra of Superparamagnetic Particles, Physical Review B29 (1984) 2410-2414.

2. **D.G. Rancourt**, S.R. Julian and J.M. Daniels, Mössbauer Characterization of Very Small Superparamagnetic Particles; Application to Intra-Zeolitic Alpha-Fe-203 Particles, Journal of Magnetism and Magnetic Materials, 49 (1985) 305-316.

3. J.M. Daniels, H.-Y. Lam, **D.G. Rancourt**, J.A. Westgate and D. York, The Discrimination of Pyroclastic Deposits on the Basis of the Mössbauer Spectra of their Magnetites, Earth and Planetary Science Letters, 73 (1985) 430-438.

3. **D.G. Rancourt**, S.R. Julian and J.M. Daniels, A New Interpretation for the Mössbauer Spectra of Invar Alloys; Anisotropic Hyperfine Field Fluctuations, Journal of Magnetism and Magnetic Materials, 51 (1985) 83-88.

5. **D.G. Rancourt**, New Theory for Magnetic Graphite Intercalation Compounds: Superferromagnetism in Two Dimensions, Journal of Magnetism and Magnetic Materials, 51 (1985) 133-140.

6. **D.G. Rancourt**, J.M. Daniels and H.Y-. Lam, Iron-57 Mössbauer Study of Fe2As; a Magnetically Induced Electric Field Gradient Asymmetry, Canadian Journal of Physics 63 (1985) 1540-1547.

7. **D.G. Rancourt**, C. Meschi and S. Flandrois, S=1/2 Antiferro-magnetic Finite Chains Effectively Isolated by Frustration: $CuCl_2$ Intercalated Graphite, Physical Review B 33 (1986) 347-355.

8. **D.G. Rancourt**, Low Temperature Behaviour of Ising Magnetic Chains; Decorated Solitons, Locally Enhanced Exchange and Diffusive Propagation, Solid State Communications 58 (1986) 433-440.

9. **D.G. Rancourt**, H.H.A. Smit, and R.C. Thiel, Metastable Compositionally and Magnetically Modulated State of Fe-Ni Invar and the Associated Super-Moment Dynamics from Mössbauer Spectroscopy, Journal of Magnetism and Magnetic Materials 66 (1987) 121-152.

10. **D.G. Rancourt**, B. Hun, and S. Flandrois, A New Biintercalation Compound, $FeCl_3$-$NiCl_2$-graphite, Studied by Fe-57 Mössbauer Effect Spectroscopy and SQUID Magnetization Measurements: An Ideally Decoupled Bimagnetic System, Canadian Journal of Physics 66 (1988) 776-790.

11. **D.G. Rancourt**, Phenomenology of Domain Wall Pinning in Ferromagnets and Application to Fe-Ni Invar, Journal of Magnetism and Magnetic Materials 78 (1989) 153-163.

12. **D.G. Rancourt**, S. Chehab, and G. Lamarche, Reentrant Magnetism, Antiferromagnetism, and Domain Wall Pinning in Nominally Ferromagnetic Fe-Ni Invar, Journal of Magnetism and Magnetic Materials 78 (1989) 129-152.

13. **D.G. Rancourt**, Accurate Site Populations from Mössbauer Spectroscopy, Nucl. Inst. Meth. Phys. Res. B (NIMB) 44 (1989) 199-210.

14. Hargraves, **D.G. Rancourt**, and A.E. Lalonde, Single Crystal Mössbauer Study of Phlogopite Mica, Canadian Journal of Physics 64 (1990) 128-144.

15. **D.G. Rancourt**, P. Hargraves, G. Lamarche, and R.A. Dunlap, Microstructure and Low Temperature Magnetism of Fe-Ni Invar Alloys, Journal of Magnetism and Magnetic Materials 87 (1990) 71-82.

16. **D.G. Rancourt**, G. Lamarche, P. Tume, A.E. Lalonde, P. Biensan, and S. Flandrois, Dipole-Dipole Interactions as Source of Spin Glass Behaviour in Exchange-Wise Two-Dimensional Ferromagnetic-Layer Compounds. Canadian Journal of Physics 68 (1990) 1134-1137.

17. **D.G. Rancourt**, S. Flandrois, P. Biensan, and G. Lamarche, Magnetism of a Graphite Bi-Intercalation Compound with Two Types of Ferromagnetic Layers: Double Hysteretic Transition in $CrCl_3$-$NiCl_2$. Canadian Journal of Physics 68 (1990) 1435-1439.

18. **D.G. Rancourt**, and J.-Y. Ping. Voight-Based Methods for Arbitrary-Shape Static Hyperfine Parameter Distributions in Mössbauer Spectroscopy. Nucl. Instr. Meth. Phys. Res. B (NIMB) 58 (1991) 85-97.

19. **D.G. Rancourt**, M.-Z. Dang, and A.E. Lalonde, Mössbauer Spectroscopy of Tetrahedral Fe^{3+} in Trioctahedral Micas. American Mineralogist 77 (1992) 34-43.

19'. **D.G. Rancourt**, Mössbauer Spectroscopy of Tetrahedral Fe^{3+}in Trioctahedral Micas-Reply. American Mineralogist 78 (1993) 669-671.

20. J.-Y. Ping, **D.G. Rancourt**, and R.A. Dunlap, Physical Bases and Break Down of Hyperfine Field Distribution Analysis in FCC Fe-Ni (5-70 at %Fe). Journal of Magnetism and Magnetic Materials 103 (1992) 285-313.

21. **D.G. Rancourt**, A.M. McDonald, A.E. Lalonde, and J.-Y. Ping. Mössbauer Absorber Thickness for Accurate Site Populations in Iron Bearing Minerals. American Mineralogist 78 (1993) 1-7.

22. **D.G. Rancourt**, J.-Y. Ping, and M.-Z. Dang. Fe-57 Mössbauer Isomer shifts in Randon FCC Fe-Ni Alloys: Experiment versus Electronic Structure Calculations. Canadian Journal of Physics 70 (1992) 1241-1243.

23. **D.G. Rancourt**, M. Dubé, and P.R.L. Heron. General Method for Applying Mean Field Theory to Disordered Magnetic Alloys. Journal of Magnetism and Magnetic Materials 125 (1993) 39-48.

24. **D.G. Rancourt**, P. Tume, and A.E. Lalonde. Kinetics of the $(Fe^{2+}+OH^{-})_{mica}$ = $(Fe^{3+}+O^{2-})_{mica}$ + H Oxidation Reaction in Bulk Single-Crystal Biotite Studied by Mössbauer Spectroscopy. Physics and Chemistry of Minerals 20 (1993) 276-284.

25. T.-B. Bai, S. Guggenheim, S.-J. Wang, **D.G. Rancourt**, and A.F. Koster van Groos. Metastable Phase Relations in the Chlorite-H_2O System. American Mineralogist 78 (1993) 1208-1216.

26. **D.G. Rancourt**, I.A.D. Christie, M. Royer, H Kodama, J.-L. Robert, A.E. Lalonde, and E. Murad. Determination of Accurate $^{[4]}Fe^{3+}$, $^{[6]}Fe^{3+}$, and $^{[6]}Fe^{2+}$ Site Populations in Synthetic Annite by Mössbauer Spectroscopy. American Mineralogist 79 (1994) 51-63.

27. **D.G. Rancourt**. Mössbauer Spectroscopy of Minerals I. Inadequacy of Lorentzian-Line Doublets in Fitting Spectra Arising from Quadrupole Splitting Distributions. Physics and Chemistry of Minerals 21 (1994) 244-249.

28. **D.G. Rancourt**. Mössbauer Spectroscopy of Minerals II. Problem of Resolving *cis* and *trans* Octahedral Fe^{2+} Sites. Physics and Chemistry of Minerals 21 (1994) 250-257.

29. **D.G. Rancourt**, J.-Y. Ping, and R.G. Berman. Mössbauer Spectroscopy of Minerals III. Octahedral-Site Fe^{2+} Quadrupole Splitting Distributions in the Phlogopite-Annite Series. Physics and Chemistry of Minerals 21(1994) 258-267.

30. **D.G. Rancourt**, I.A.D. Christie, G. Lamarche, I. Swainson, and S. Flandrois. Magnetism of Synthetic and Natural Annite Mica: Ground State and Nature of Excitations in an Exchange-Wise Two Dimensional Easy-Plane Ferromagnet with Disorder. Journal of Magnetism and Magnetic Materials 138 (1994) 31-44.

31. M. Dubé, P.R.L. Heron and **D.G. Rancourt**. Local Moment Magnetism of FCC Fe-Ni Alloys I. Cluster-Method Mean Field Theory. Journal of Magnetism and Magnetic Materials 147 (1995) 122-132.

32. M.-Z. Dang, M. Dubé and **D.G. Rancourt**. Local Moment Magnetism of FCC Fe-Ni Alloys II. Ising Approximation Monte Carlo. Journal of Magnetism and Magnetic Materials 147 (1995) 133-140.

33. L. Raki, **D.G. Rancourt** and C. Detellier. Preparation, Characterization and Mössbauer Spectroscopy of Organic Anion Intercalated Pyroaurite-like Layered Double Hydroxides. Chemistry of Materials 7 (1995) 221-224.

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34'. **D.G. Rancourt** and R.B. Scorzelli. Low-spin γ_{LS}-Fe-Ni proposed as a new meteoritic mineral - Reply. Journal of Magnetism and Magnetic Materials 174 (1997) 324-330.

35. A.E. Lalonde, **D.G. Rancourt** and G.Y. Chao. Fe-Bearing Trioctahedral Micas from Mont Saint-Hilaire, Québec. Mineralogical Magazine 60 (1996) 447-460.

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38. M.-Z. Dang and **D.G. Rancourt**. Simultaneous magnetic and chemical order-disorder phenomena in Fe_3Ni, FeNi and $FeNi_3$. Physical Review B 53 (1996) 2291-2302.

39. R.G. Berman, L. Ya Aranovich and **D.G. Rancourt**. Phase equilibrium constraints on the stability of biotite. Part 2: Fe-Al biotite in the system K_2O-FeO-Al_2O_3-SiO_2-H_2O. Current Research 1995-E; Geological Survey of Canada, 263-270.

40. **D.G. Rancourt** and M.-Z. Dang. Relation between anomalous magneto-volume behaviour and magnetic frustration in Invar alloys. Physical Review B 54 (1996) 12225-12231.

41. B. Grossmann and **D.G. Rancourt**. Simulation of magneto-volume effects in ferromagnets by a combined molecular dynamics and Monte Carlo approach. Physical Review B 54 (1996) 12294-12301.

42. K. Lagarec and **D.G. Rancourt**. Extended Voigt-Based Analytic Lineshape Method for Determining N-Dimensional Correlated Hyperfine Parameter Distributions in Mössbauer Spectroscopy. Nucl. Instr. Meth. Phys. Res. B (NIMB) 129 (1997) 266-280.

43. **D.G. Rancourt**, K. Lagarec, A. Densmore, R.A. Dunlap, J.I. Goldstein, R.J. Reisener, and R.B. Scorzelli. Experimental Proof of the Distinct Electronic Structure of a New Meteoritic Fe-Ni Alloy Phase. Journal of Magnetism and Magnetic Materials 191 (1999) L255-L260.

44. A.E. Lalonde, **D.G. Rancourt**, and J.Y. Ping. Accuracy of Ferric/Ferrous Determinations in Micas: A comparison of Mössbauer spectroscopy and the Pratt and Wilson Wet-Chemical Methods. Hyperfine Interactions 117 (1998) 175-204.

45. M.-Z. Dang, **D.G. Rancourt**, J.E. Dutrizac, G. Lamarche, and R. Provencher. Interplay of Surface Conditions, Particle Size, Stoichiometry, Cell Parameters, and Magnetism in Synthetic Hematite-like Materials. Hyperfine Interactions 117 (1998) 271-319.

46. A.A.T. Shabani, **D.G. Rancourt**, and A.E. Lalonde. Determination of cis and trans Fe^{2+} Populations in $2M_1$ Muscovite by Mössbauer Spectroscopy. Hyperfine Interactions 117 (1998) 117-129.

47. K. Lagarec and **D.G. Rancourt**. Fe_3Ni-type chemical order in $Fe_{65}Ni_{35}$ films grown by evaporation: Implications regarding the Invar Problem. Physical Review B 62 (2000) 978-985.

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50. K. Lagarec, **D.G. Rancourt**, S.K. Bose, B. Sanyal, and R.A. Dunlap. Observation of a composition-controlled high-moment/low-moment transition in the face centered cubic Fe-Ni system: Invar effect is an expansion, not a contraction. Journal of Magnetism and Magnetic Materials 236 (2001) 107-130. (10 figures, 103 references)

51. C. van der Zee, D. Roberts, **D.G. Rancourt**, C.P. Slomp. Nanogoethite is the dominant reactive oxyhydroxide phase in lake and marine sediments. Geology 31 (2003) 993-996.

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53. **D.G. Rancourt**, F. González-Lucena, P.-J. Thibault. Magnetic granulometry from equilibrium magnetization measurements: Mineral magnetometry of superparamagnetic particles and application to synthetic ferrihydrites. American Mineralogist 89 (2004) 987-997.

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55. C. van der Zee, C.P. Slomp, **D.G. Rancourt**, G.J. de Lange, and W. van Raaphorst. A Mössbauer spectroscopic study of the iron redox transition in eastern Mediterranean sediments. *Geochimica et Cosmochimica Acta* 69 (2005) 441-453.

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57. P.H.J. Mercier, R.J. Evans, **D.G. Rancourt**. Geometric crystal chemical models for structural analysis of micas and their polytypes. *American Mineralogist* 90 (2005) 382-398.

58. P. Piilonen, **D.G. Rancourt**, R.J. Evans, A.E. Lalonde, A.M. McDonald, and A.A.T. Shabani. The relationships between crystal-chemical and hyperfine parameters: A combined Fe-57 Mössbauer spectroscopy and single-crystal X-ray diffraction study. *European Journal of Mineralogy* 16 (2004) 989-1002.

59. P.H.J. Mercier, **D.G. Rancourt**, J.-L. Robert, R.G. Berman, G.J. Redhammer. Fundamental difference between synthetic powder and natural or synthetic single crystal 1M micas: Geomeric homo-octahedral versus meso-octahedral sheets. *American Mineralogist* 90 (2005) 399-410.

60. **D.G. Rancourt**, P.-J. Thibault, D. Mavrocordatos, G. Lamarche. Hydrous ferric oxide precipitation in the presence of nonmetabolizing bacteria: Constraints on the mechanism of a biotic effect. *Geochimica et Cosmochimica Acta* 69 (2005) 553-577.

61. R. James Evans, **D.G. Rancourt**, M. Grodzicki. Hyperfine electric field gradient tensors at Fe^{2+} sites in octahedral layers: Towards understanding oriented single-crystal Mössbauer spectroscopy measurements of micas. *American Mineralogist* 90 (2005) 1540-1555.

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64. A. Thompson, O.A. Chadwick, **D.G. Rancourt**, J. Chorover. Iron-oxide crystallinity increases during soil redox oscillations. *Geochimica et Cosmochimica Acta* 70 (2006) 1710-1727.

65. K. Telmer, B. Daneshfar, M.S. Sanborn, D. Kliza-Petelle, **D.G. Rancourt**. The role of smelter emissions and element remobilization in the sediment chemistry of 99 lakes around the Horne smelter, Québec. *Geochemistry: Exploration, Environment, Analysis* 6 (2006) 187-202.

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72. **D.G. Rancourt** and J.-F. Meunier. Constraints on structural models of ferrihydrite, as a nanocrystalline material. In press, *American Mineralogist*.

73. S.A. Kelly, **D.G. Rancourt**, and M.-Z. Dang. Superferromagnetism of goethite nanoparticles. Submitted (MS-BJ10884, Sep-2007) to *Physical Review B*. Will be re-submitted elsewhere, summer 2008.

74. P. Marchand and **D.G. Rancourt**. Nature and genesis of reactive environmental nanoparticle ferrihydrite. Submitted (MS-1151405, Oct-2007) to *Science*; under review. Will be re-submitted as a regular-length article elsewhere, summer 2008.

75. M.-Z. Dang, B. George, **D.G. Rancourt**, K. Telmer. Quantitative solid-phase modal and geochemical analyses of contemporary boreal forest lake sediments from 99 lakes: Inferred origins, transformations, and mixing in the mineral, organic matter, and inorganic-amorphous components. Await final co-author feedback for submission to *GCA*. (28 figures, 9 tables, 4 appendices)

Papers in refereed conference proceedings:

AGU	=	American Geophysical Union
ASLO	=	American Society of Limnology and Oceanography
EGS	=	European Geophysical Society
EUG	=	European Union of Geosciences
GAC	=	Geological Association of Canada
ICAME	=	International Conference on the Applications of the Mössbauer Effect
ICC	=	International Clay Conference
ICHI	=	International Conference on Hyperfine Interactions
ICOBTE	=	International Conference on Biogeochemistry of Trace Elements
ISEB	=	International Symposium on Environmental Biogeochemistry
LACAME	=	Latin American Conference on the Applications of the Mössbauer Effect
MAC	=	Mineralogical Association of Canada

1. J.M. Daniels, H.-Y. Lam, **D.G. Rancourt**, J.A. Westgate and D. York, 1983, Identification of the Origin of Volcanic Ash by Mössbauer Spectroscopy. Proceedings of the ICAME'83, Yu. M. Kagan and I.S. Lyubutin, Eds., vol. 5, p. 1671-1675 (Gordon and Breach Sci. Publ., NY, 1985).

2. **D.G. Rancourt**, J.M. Daniels, L.F. Nazar and G.A. Ozin, 1993, The Superparamagnetism of Very Small Particles Supported by Zeolite-Y, Hyperfine Interactions 15/16 (1983) 653-656; presented at the Sixth I.C.H.I., Groningen, July 4-8, 1983.

3. L.F. Nazar, G.A. Ozin, F. Hughes, J. Godber and **D.G. Rancourt**, 1983, Metal Atoms in solution: Versatile Reagents for Preparing Metal Cluster-Zeolite Catalysts; Application to the Selective Reduction of Carbon Monoxide to Butene, Journal of Molecular Catalysis, 21 (1983) 313-329; presented at an international conference on catalysis, Toronto, Summer 1983.

4. J.M. Daniels, **D.G. Rancourt**, and S.R. Julian, 1986, Magnetically Induced Electric Field Gradients, Hyperfine Interactions 28 (1986) 507-510; presented at I.C.A.M.E.-85, Leuven, Sept. 16-20.

5. S.R. Julian, J.A. Westgate, J.M. Daniels, **D.G. Rancourt** and P. Sullivan, 1987, A Comparison of the Titanomagnetites Produced by Several Volcanoes in Iceland, Hyperfine Interactions 41 (1988) 807-810; presented at I.C.A.M.E. -87, Melbourne, Aug. 17-21.

6. J.-Y.Ping, and **D.G. Rancourt**, Absolute Quantitative Analysis by Mössbauer Spectroscopy. Hyperfine Interactions 71 (1992) 1437-1440; presented at I.C.A.M.E.-91, Nanjing.

7. **D.G. Rancourt**, and J.-Y. Ping, Measured and Predicted Hyperfine Field Distributions (HFD's) in FCC Fe-Ni Collinear Ferromagnets, Hyperfine Interactions 69 (1991) 497-500; presented at I.C.A.M.E.-91, Nanjing.

8. J.-Y. Ping and **D.G. Rancourt**, Thickness Effects with Intrinsically Broad Absorption Lines. Hyperfine Interactions 71 (1992) 1433-1436; presented at I.C.A.M.E.-91, Nanjing.

9. I.A.D. Christie, **D.G. Rancourt**, G. Lamarche, M. Royer, H. Kodama and J.-L. Robert. Low Temperature Mössbauer Spectroscopy and Magnetism of Synthetic Annite Mica. Hyperfine Interactions 68 (1991) 315-318; presented at I.C.A.M.E.-91, Nanjing.

10. J.-Y. Ping, **D.G. Rancourt**, and Z.M. Stadnik, Voight-Based Methods for Quadrupole Splitting Distributions in Quasi-Crystals. Hyperfine Interactions 69 (1991) 493-496; presented at I.C.A.M.E.-91, Nanjing.

11. I.A.D. Christie, **D.G. Rancourt**, H. Kodama, E. Murad, and J.-L. Robert, Oxidation of Synthetic Annite Mica Characterized by Fe57 Mössbauer Spectroscopy; Hydrogen De-Intercalation and Host Layer Valence State Populations. NATO-ASI series B monograph of the proceedings of the NATO-ASI entitled "Chemical Physics of Intercalation II", (1993) p. 387-391, P. Bernier, J.E. Fisher, S. Roth, and S.A. Solin, Eds., Plenum, New York. Presented at the ASI: Chateau Bonas, France, June 29 - July 19, 1991.

12. J.-Y. Ping and **D.G. Rancourt**, Failure of the Direct HFD Extraction Method. Hyperfine Interactions, 92 (1994) 1209-1212; presented at ICAME 1993 (Vancouver, Aug. 93).

13. J.-Y. Ping and **D.G. Rancourt**, Effective Method of Direct QSD Extraction Using Combined Partial Deconvolution. Hyperfine Interactions, 92 (1994) 1203-1207; presented at ICAME 1993 (Vancouver, Aug. 1993).

14. L. Dou, R.J.W. Hodgson and **D.G. Rancourt**. Bayesian inference theory applied tohyperfine field distribution extraction. Presented at ICAME 1995 (Rimini, Sept. 1995). Conference Proceedings, Vol. 50, ICAME-95, I. Ortalli (Ed.), Italian Physical Society, 1996, 883-886.

15. P.H.J. Mercier, **D.G. Rancourt** and R.G. Berman. Aspects of the crystal chemistry of annite mica. Presented at ICAME 1995 (Rimini, Sept. 1995). Conference Proceedings, Vol. 50, ICAME-95, I. Ortalli (Ed.), Italian Physical Society, 1996, 789-792.

16. M.-Z. Dang and **D.G. Rancourt**. Monte Carlo simulations of temperature and composition dependent hyperfine field distributions in metallic alloys. Presented at

ICAME 1995 (Rimini, Sept. 1995). Conference Proceedings, Vol. 50, ICAME-95, I. Ortalli (Ed.), Italian Physical Society, 1996, 367-370.

17. K. Lagarec and **D.G. Rancourt**. A New Model for Multidimensional Distributions of Hyperfine Parameters in Mössbauer Spectroscopy. ICC'97 Proceedings: "Clays for Our Future" H. Kodama, A.R. Mermut, and J.K. Torrance (chief editors), Published by the ICC-97 Organizing Committee, Ottawa, Canada (1999) ISBN 0-9686314-0-7. Pages 215-220.

18. M.-Z. Dang, **D.G. Rancourt**, G. Lamarche, and M.E. Evans. Mineralogical Analysis of a Loess/ Paleosol Couplet from the Chinese Loess Plateau. ICC'97 Proceedings: "Clays for Our Future" H. Kodama, A.R. Mermut, and J.K. Torrance (chief editors), Published by the ICC-97 Organizing Committee, Ottawa, Canada (1999) ISBN 0-9686314-0-7. Pages 309-315.

19. A.A.T. Shabani, **D.G. Rancourt**, and A.E. Lalonde. Determination of cis- and trans-Fe^{2+} Populations in 2M1 Muscovite by Mössbauer Spectroscopy. ICC'97 Proceedings: "Clays for Our Future" H. Kodama, A.R. Mermut, and J.K. Torrance (chief editors), Published by the ICC-97 Organizing Committee, Ottawa, Canada (1999) ISBN 0-9686314-0-7. Pages 243-248.

20. P.H.J. Mercier, **D.G. Rancourt**, R.G. Berman, and J.-L. Robert.. Control of Site Populations, at Synthesis, by Inter-Sheet Differential Thermal Expansion in a T-O-T Layer Silicate. ICC'97 Proceedings: "Clays for Our Future" H. Kodama, A.R. Mermut, and J.K. Torrance (chief editors), Published by the ICC-97 Organizing Committee, Ottawa, Canada (1999) ISBN 0-9686314-0-7. Pages 221-228.

21. M.-Z. Dang, **D.G. Rancourt**, J.E. Dutrizac, G. Lamarche, and R. Provencher. Protohematite-Hydrohematite-Hematite Structuro-Chemical Phase Relationships in Hematite-Like Materials. ICC'97 Proceedings: "Clays for Our Future" H. Kodama, A.R. Mermut, and J.K. Torrance (chief editors), Published by the ICC-97 Organizing Committee, Ottawa, Canada (1999) ISBN 0-9686314-0-7. Pages 265-270. (selected for oral presentation).

22. T.P. Murphy, A. Lawson, **D.G. Rancourt**, M. Kumagai, and M. Sakai. Akanoi Bay, Lake Biwa Seasonal Changes in Porewater Phosphorus. Society for International Limnology, Dublin, August 10-14, 1998. In press, Verh. Int. Verein. Limnol. 48(1998).

23. T.P. Murphy, A. Lawson, M. Kumagai, and **D.G. Rancourt**. Sediment phosphorous release in Lake Biwa. 4th International Symposium on Sediment Quality Assessment (SQA'2000), October 24-27, 2000, Otsu, Japan. Submitted to proceedings.

24. S. Alpay, L. LOrtie, W.D. Gould, **D.G. Rancourt**, B. Mayer, F. Rosa, H.K.T. Wong, S.S. Dixit, A.S. Dixit, C. Provost, and G.E.M. Hall. Diagenetic metal remobilization

versus chronological metal loading in lake sediments. 6th ICOBTE, Guelph, Ontario, July 29 to August 2, 2001, ICOBTE 2001 Conference Proceedings, Extended abstract GO136.

25. **D.G. Rancourt**, P.-J. Thibault, and F.G. Ferris. Resolution and quantification of Fe sorbed to bacterial cell walls, biogenic ferrihydrite, and abiotic ferrihydrite by cryogenic ^{57}Fe Mössbauer spectroscopy. 6th ICOBTE, Guelph, Ontario, July 29 to August 2, 2001, ICOBTE 2001 Conference Proceedings, Extended abstract GO448.

Invited refereed plenary and special session papers at international conferences and workshops:

1. **D.G. Rancourt**, B. Hun and S. Flandrois, Magnetic Properties of Intercalated Transition Metal Chlorides which have Ferromagnetic In-Plane Coupling. Colloque Franco-Japonais sur les Composés d'Insertion de Graphique, École Normale Supérieure, Paris, Oct. 8-10, 1985, Ann. Phys. 11 (1986) C2 107-116.

2. **D.G. Rancourt**, Magnetic Phenomena in Layered and Intercalated Compounds. NATO Advanced Study Institute entitled Chemical Physics of Intercalation Castera Verdyzan, France, June 10-19, 1987, NATO-ASI Ser. B: Physics, 172 (1987) 79-103.

3. **D.G. Rancourt**, Pervasiveness of Cluster Excitations as Seen in the Mössbauer Spectra of Magnetic Materials. International Conference on the Applications of the Mössbauer Effect-87, Melbourne, Australia, August 17-21, 1987: Hyperfine Interactions 40 (1988) 183-194.

4/5. **D.G. Rancourt**. Mössbauer Spectroscopy in Clay Science. ICC'97 Proceedings: "Clays for Our Future" H. Kodama, A.R. Mermut, and J.K. Torrance (chief editors), Published by the ICC-97 Organizing Committee, Ottawa, Canada (1999) ISBN 0-9686314-0-7. Pages 201-205. (short version). Hyperfine Interactions 117 (1998) 3-38 (long version).

6. A.E. Lalonde, **D.G. Rancourt**, and J.Y. Ping. Accuracy of ferric/ferrous determinations in phyllosilicate: A comparison of Mössbauer and wet-chemical methods. ICC'97 Proceedings: "Clays for Our Future" H. Kodama, A.R. Mermut, and J.K. Torrance (chief editors), Published by the ICC-97 Organizing Committee, Ottawa, Canada (1999) ISBN 0-9686314-0-7. Pages 249-257.

7. R.B. Scorzelli, **D.G. Rancourt**, A.B. Dominguez, G. Poupeau, C.C. de Bon, M.E. Cisternas. Evidence by Mössbauer spectroscopy of the intergrowth tetrataemite/antitaemite in the Vaca Muerta mesosiderite. 60th Meteoritical Society Meeting, Hawaii, July 21-25, 1997. Meteoritics and Planetary Science 32(4) Supplement (1997) A117. (extended abstract)

8. K. Lagarec, **D.G. Rancourt**, S.K. Bose, and R.A. Dunlap. First observation of a composition-controlled low-moment/high-moment transition in the FCC Fe-Ni system: Implications regarding Invar and anti-Invar behaviours. Phase Transitions 75 (2002) 211-219. International Symposium on Structure and Dynamics of Heterogeneous Systems, August 28-29, 2000, Duisburg, Germany.

9. **D.G. Rancourt**. Invar behaviour in Fe-Ni alloys is predominantly a local moment effect arising from the magnetic exchange interactions between high moments. Phase Transitions 75 (2001) 201-209. International Symposium on Structure and Dynamics of Heterogeneous Systems, August 28-29, 2000, Duisburg, Germany.

10. **D.G. Rancourt**. Magnetism of Earth, planetary, and environmental nanoparticles. *In:* Nanoparticles and the Environment, J.F. Banfield and A. Navrotsky (editors), Reviews in Mineralogy and Geochemistry 44 (2001) 217-292 (Chapter 7). MSA Workshop, December 7-9, 2001, UC-Davis, CA, USA.

Review papers and book fowards:

1. **D.G. Rancourt**, The Invar Problem, Physics in Canada 45(1) January (1989) 3-10.

2. A.E. Lalonde and **D.G. Rancourt**, Les Micas: Des Minéraux Importants pour Comprendre l'Origine des Roches Granitiques. Interface, Sept.-Oct. (1991) 24-29.

3. **D.G. Rancourt**. Mössbauer spectroscopy in clay science – Forward. Hyperfine Interactions 117 (1998) 1-3.

Books, Monographs, and Handbooks authored:

1. **D.G. Rancourt** and K. Lagarec. ICC'97 Mössbauer Workshop Handbook, 1997, 144 pages.

2. **D.G. Rancourt.** Science for Activists (Beta version, 2005), 62 pages.

Chapters in books: (see also chapters related to invited talks, above)

1. **D.G. Rancourt**. Analytical Methods for Mössbauer Spectral Analysis of Complex Materials. Chapter 6, in: Mössbauer Spectroscopy Applied to Magnetism and Materials Science, Vol. 2, G.J. Long and F. Grandjean, Eds., Plenum Press, 1996, pages 105-124.

Books Edited:

1. **D.G. Rancourt** (Ed.) Mössbauer Spectroscopy in Clay Science. A special topic issue of Hyperfine Interactions 117 (1998) pp.436 (Invited and selected topics from the Mössbauer Symposium of ICC'97).

2. H. Kodama et al. (Eds., including associate editor **D.G. Rancourt**) ICC'97 Proceedings: "Clays for Our Future" H. Kodama, A.R. Mermut, and J.K. Torrance (chief editors), Published by the ICC-97 Organizing Committee, Ottawa, Canada (1999) ISBN 0-9686314-0-7. pp.825.

Book reviews:

1. **D.G. Rancourt**. "Applied Mössbauer Spectroscopy - Theory and Practice for Geochemists and Archaeologists", by S. Mitra. Canadian Mineralogist. 32 (1994) 469.

Scientific Activity Reports:

1. **D.G. Rancourt**. The 11th International Clay Conference (ICC-97). Mössbauer Effect Reference and Data Journal, 21 (1998) 263-264.

Invited plenary, keynote and special sessions talks or panels at regional, national, and international conferences (no paper):

1. **D.G. Rancourt**, Truly Quantative Fe^{3+} and Fe^{2+} Amounts in Iron Bearing Minerals, Mineral Physics Special Session at GAC-MAC-90, Vancouver, May 1990. (GAC = Geological Association Canada, MAC = Mineralogical Association Canada).

2. **D.G. Rancourt**, Mössbauer Spectral Lineshape Models and Spectral Analysis Methods. Mössbauer Workshop at the 28th Annual Meeting of the Clay Minerals Society, NASA Planetary Science Laboratory, Houston, Texas, October 1991.

3. **D.G. Rancourt**, Mössbauer Spectroscopy of Phyllosilicates. Mössbauer Workshop at the 28th Annual Meeting of the Clay Minerals Society, NASA Planetary Science Laboratory, Houston, Texas, October 1991.
4. **D.G. Rancourt**, A.E. Lalonde, G. Lamarche, J.-Y. Ping, M. Royer, I.A.D. Christie, P. Tume, and M.-Z. Dang, Mössbauer Spectroscopy, Magnetism, Crystal Chemistry, Oxidation, and Optical Properties of Natural and Synthetic Micas. Int. Conf. Applications Mössbauer Effect 1991, Nanjing, China, September 1991.

5. **D.G. Rancourt**, Interplay between Magnetism and Crystal Chemistry in Minerals. Magnetism in Minerals Session, AGU-CGU-MSA 1992 Spring Meeting, Montreal, 12-16 May 1992. Abstract published in EOS Spring Meeting Supplement.

Transactions, American Geophysical Union, 73(14) (1992) 97.6. **D.G. Rancourt**. Kinetics of the Oxyannite Reaction in Biotite: Microscopic Mechanism and Relation to Dehydroxylation. Plenary, Latin American Conference on the Applications of the Mössbauer Effect, Santiago, Chile, 7-11 November, 1994.

7. **D.G. Rancourt**, Structural Missfit Effects in the Crystal Chemistry of Annite: Towards a Single-Mineral Geothermometer/Oxygen Fugacity Probe. Plenary, Latin American Conference on the Applications of the Mössbauer Effect, Santiago, Chile, 7-11 November, 1994.

8. **D.G. Rancourt**, Extraction and Interpretation of Quadrupole Splitting Distributions in Layer Silicates. Plenary, Latin American Conference on the Applications of the Mössbauer Effect, Santiago, Chile, 7-11 November, 1994.

9. **D.G. Rancourt** and R.B. Scorzelli, Low-spin FCC Fe-Ni alloy phase (γ_{LS}-phase) proposed as a new meteoritic mineral. Plenary, Int. Conf. Applications Mössbauer Effect 1995, Rimini, Italy, 10-16 September, 1995.

10. **D.G. Rancourt**, *Mechanisms, at synthesis, for inter-layer lattice matching in layer silicates*. Special session entitled "Strain Accommodation in Materials", CAP Congress, Ottawa, June 16-19, 1996.

11. **D.G. Rancourt**. *Quantitative near neighbour anion coordination populations and strong short-range F-F avoidance in synthetic annite-fluorannite measured by Mössbauer spectroscopy.* ICC`97, Ottawa, June 15-21, 1997.

12. P.-J. Thibault, D. Mavrocordatos, **D.G. Rancourt**, D. Fortin, and G. Lamarche. *Comparisons of biogenic and abiotic hydrous ferric oxides using Mössbauer spectroscopy.* Selected for oral contribution at ICAME-99 (10% selection rate), Garmisch-Partenkirchen, Germany, August 29 - September 3, 1999.

13. P.H.J. Mercier, A.A.T. Shabani, **D.G. Rancourt**, A.E. Lalonde, R.G. Berman, and J.-L. Robert. *Quadrupole splitting distributions of biotite.* Selected for oral contribution at ICAME-99 (10% selection rate), Garmisch-Partenkirchen, Germany, August 29 - September 3, 1999.

14. K. Lagarec and **D.G. Rancourt**. *High-moment to low-moment transition does occur in the Fe-Ni system but thermal excitation of the low-moment phase does not cause the Invar effect.* Invited plenary talk at ICAME-99, Garmisch-Partenkirchen, Germany, August 29 - September 3, 1999.

15. D. Mavrocordatos, D. Fortin, and **D.G. Rancourt**. *Characterization of biogenic Fe-oxide precipitates by X-ray diffraction, Mössbauer spectroscopy, and analytical electron microscopy.* Invited plenary talk at ISEB-XIV, Deerhurst Resort, Huntsville, Ontario, September 26-30, 1999.

16. **D.G. Rancourt**, F.G. Ferris, and D. Fortin. *Sorbed iron on the cell wall of Bacillus subtilis characterized by Mössbauer spectroscopy: Evidence for bioreduction.* Invited plenary talk at ISEB-XIV, Deerhurst Resort, Huntsville, Ontario, September 26-30, 1999.

17. **D.G. Rancourt**. *Development of a single-mineral multi-variable geosensor based on the crystal chemistry of biotite.* The invited plenary talk at 41st Mössbauer Spectroscopy Discussion Group Meeting, The Royal Society of Chemistry, September 4-5, 2000, University of Greenwich, UK.

18. **D.G. Rancourt.** *Mössbauer spectroscopy of mud: Towards modeling complex environmental processes.* Invited Plenary Lecture (1 of 8), LACAME-02, Panama City, September 22-27, 2002.

19. **D.G. Rancourt.** *Recoil^{TM}: Its development, its structure, and examples of its use.* Invited Plenary Talk (1of 8), LACAME-02, Panama City, September 22-27, 2002.

20. **D.G. Rancourt.** *Advances in characterizing nanophase materials and composites.* Invited Symposium Talk (1 of 3), Nanophase Materials Symposium (2.8), Goldschmidt Geochemistry Conference, Copenhagen, June 6-12, 2004. Abstract 554-2.8.21. Geochimica Cosmochimica Acta 68(11S), 2004, p.A220.

21. **D.G. Rancourt.** *Adventures in mineral physics: From environmental nanoparticles to meteoritic anti-Invar via layer silicate surprises.* Invited Keynote Lecture (1 of 11), 82nd Annual Meeting of the Deutsche Mineralogische Gesellschaft (DMG) (German Mineralogical Association), Karlsruhe, September 20-22, 2004.

22. R.J. Evans, **D.G. Rancourt**, M. Grodzicki. *Electronic structure calculations for Mössbauer spectroscopy of disordered materials.* Invited talk; New applications of spectroscopy in mineral sciences session. 19th In ternational Mineralogical Association Conference, Kobe, Japan, July 23-28, 2006. (talk presented by DGR)

23. **D.G. Rancourt.** *Nature and genesis of ferrihydrite.* Invited talk; Recent progress of nanoparticle studies in Earth and planetary sciences session. 19th In ternational Mineralogical Association Conference, Kobe, Japan, July 23-28, 2006.

24. **D.G. Rancourt.** *Democracy is direct action.* Invited and selected talk/workshop at the ImagineOttawa – Ottawa Social Forum, October 20, 2007, Ottawa, Ontario.

25. **D.G. Rancourt.** *Anarchism in Academia Now!* Closing keynote talk at Resisting the University conference, March 3-7, 2008, Students for a Democratic Society, UBC, Vancouver, BC.

26. Invited panellist, with two others. April 15th 9:30-12am round-table: *To find yourself in the ranks of resistances.* Thinking about global justice: Acting locally. 2nd

symposium of the Laboratory for Justice Studies and Research, April 14-15, 2008, Department of Criminology, University of Ottawa.

27. **D.G. Rancourt.** *Minorités, solidarité, résistance, et confrontation : La place de l'anarchisme dans l'enseignement des sciences.* Invited keynote (90 minutes) in Colloque 611: Enseignement des sciences en milieu francophone minoritaire, hier et aujourd'hui: Quels espoirs pour demain? ACFAS, May 5-9, 2008, Québec.

28. Invited panellist, closing panel, with six others. *Table ronde: Education scientifique en milieu francophone minoritaire: Quels espoirs pour demain?* Colloque 611: Enseignement des sciences en milieu francophone minoritaire, hier et aujourd'hui: Quels espoirs pour demain? ACFAS, May 5-9, 2008, Québec.

29. **D.G. Rancourt.** *Making physics relevant by academic squatting.* Invited speaker in the session: Down from the Ivory Tower: Physics Teachers and Education Researchers as Activists. 2008 American Association of Physics Teachers (AAPT) Conference, July 19-23, Edmonton, Alberta.

Posters and talks presented at conferences (no paper):

1. **D.G. Rancourt**, J.M. Daniels and H.-Y. Lam, Spin Orientation in Antiferromagnetic Fe(2-x)Cr(x)As. Annual Meeting of the A.P.S., San Francisco, California, January 1982.

2. **D.G. Rancourt**, J.M. Daniels and H.-Y. Lam, Spin Structure of Fe_2As. Annual Meeting of the A.P.S., New York City, January 1983.

3. J.M. Daniels, H.-Y. Lam, **D.G. Rancourt**, J.A. Westgate and D. York, Identification of the Origin of Volcanic Ash by Mössbauer Spectroscopy. Annual Meeting of the A.P.S., New York, January, 1983.

4. S.R. Julian, J.M. Daniels, H.-Y. Lam and **D.G. Rancourt**, Polarization of Magnetic Order in $Fe_{1+x}Pt_{3-x}$. Annual Meeting of the A.P.S., New York, January, 1983.

5. **D.G. Rancourt** and J.M. Daniels, New Effects in the Mössbauer Spectra of Superparamagnetic Particles. Annual Meeting of the American Physical Society, San Antonio, Texas, January 1984.

6. **D.G. Rancourt**, B. Hun and S. Flandrois, Magnetic Study of a New Bi-Intercalation Compound $FeCl_3$-$Nicl_2$-Graphite: An ideally Decoupled Bimagnetic System. 18th Biennial Conference on Carbon, Worcester, Ma., July 19-24, 1987.

7. A.E. Lalonde and **D.G. Rancourt**, Accuracy of Mössbauer and Wet-Chemistry Fe^{3+}/Fe^{2+} Determinations in Biotite: Implications for Mineralogical and Petrological Studies, GAC-MAC-90, Vancouver, May 1990.

8. **D.G. Rancourt**, M. Royer, and M.-Z. Dang, Mössbauer Recoilless Fractions of Octahedral Fe^{3+} and Fe^{2+} in Mica, GAC-MAC-90, Vancouver, May 1990.

9. P. Tume, M. Royer, and **D.G. Rancourt**, Proton Diffusion in Mica, GAC-MAC-90, Vancouver, May 1990.

10. **D.G. Rancourt**, Novel Real Magnetic Systems Amenable to Theoretical Analysis, Stat. Phys. 45th Par., Montreal, October 20, 1990.

11. D.J. Dunlop, X. Song, D.G. Rancourt, Ferromagnetism in biotites, AGU-MSA Spring Meeting 1991. Abstract published in Spring Session Supplement of EOS, Transactions, American Geophysical Union, 72(17) (1991) 97.

12. I.A.D. Christie, **D.G. Rancourt**, H. Kodama, J.-L. Robert, Use of High and Low Temperature Mössbauer Measurements in the Determination of the Magnetic Structure of Micas. Magnetism in Minerals Session, AGU-CGU-MSA 1992 Spring Meeting, Montreal, 12-16 May 1992. Abstract published in Spring Session Supplement of EOS, Transactions, American Geophysical Union, 73(14) (1992) 97.

13. **D.G. Rancourt**, General Method for Applying MFT to Disordered Magnetic Alloys, Stat. Phys. 45th Par., Clarkson University, Potsdam, N.Y., October 3, 1992.

14. M. Dubé and **D.G. Rancourt**, Application of a Mean Field Method to Disordered FCC Fe-Ni Alloy, Stat. Phys. 45th Par., Clarkson University, Potsdam, N.Y., October 3, 1992.

15. M.-Z. Dang, **D.G. Rancourt**, and J.Y. Ping, Cause of the Fe-57 Hyperfine Field in FCC Fe-Ni. ICAME 93, Aug. 8-14, 1993, Vancouver, B.C.

16. A.E. Lalonde and **D.G. Rancourt**, Method for Getting Site-Specific EFG Information from Sheet Silicates: Application to Micas, ICAME 1993, Aug. 8-14, 1993, Vancouver, B.C.

17. A.E. Lalonde, **D.G. Rancourt**, and G.Y. Chao, Fe-Bearing Trioctahedral Micas from Mont Saint-Hilaire, Quebec, GAC-MAC-94, May 1994, Waterloo, Ontario. Abstract accepted.

18. **D.G. Rancourt** and G. Klingelhöfer. Possibility of a Mössbauer Resonant-Electron Microscope. Fourth Seeheim Workshop on Mössbauer Spectroscopy, May 1994, Seeheim, Germany.

19. **D.G. Rancourt** and J.Y. Ping. Algorithms and programs for data treatment and spectral analysis in Mössbauer spectroscopy. ICAME'95, Sept. 1995, Rimini, Italy.

20. A.E. Lalonde and **D.G. Rancourt**. Determination of accurate Fe-site populations in Mica-Fe andMica-Mg geochemical standards by Mössbauer spectroscopy. ICAME'95, Sept. 1995, Rimini, Italy.

21. L. Dou, R.J.W. Hodgson and **D.G. Rancourt**. Bayesian inference theory applied to hyperfine field distribution extraction. CAM'95 (CAP/APS/SMF joint meeting) 11-16 June 1995.

22. P.H.J. Mercier, **D.G. Rancourt** and R.G. Berman. An Fe-57 Mössbauer spectroscopy study of synthetic layer silicates of the phlogopite-annite series having various Aℓ-contents. CAP Congress, Ottawa, June 16-19, 1996.

23. M.-Z. Dang and **D.G. Rancourt**. Testing microscopic models of the hyperfine fields in Fe-Ni alloys. CAP Congress, Ottawa, June 16-19, 1996.

24. K. Lagarec, **D.G. Rancourt**, R.B. Scorzelli and I. de Souza Azevedo. Investigation of Fe-Ni alloys in meteorites using Mössbauer spectroscopy. CAP Congress, Ottawa, June 16-19, 1996.

25. L. Dou, R.J.W. Hodgson and **D.G. Rancourt**. A preliminary study of a biotite spectrum using the Bayesian inference theory and the Gibbs sampling. CAP Congress, Ottawa, June 16-19, 1996.

26. M.-Z. Dang and **D.G. Rancourt**. Analysis of complex solid-phase systems: industrial and environmental. OCMR Partnerships 1997, Toronto, June 5, 1997.

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2. Recoil™. Mössbauer spectral analysis and spectral data handling software. MS-Windows operating system. Includes operating manual. Developed with K. Lagarec. Now distributed by ISA Inc. (www.isapps.ca/recoil). Approximately 200 copies sold worldwide.

3. NanoSim™. X-ray diffraction simulation software for nanoparticles of specified structures, sizes, shapes, degrees and type of disorder, etc. MS-Windows operating system. Developed with ISA Inc. Beta version being used in our research since 2003. Expected launch in 2004.

4. dSED. A database tool for modelling sediment early diagenesis. Written in MS-Access. Includes a user manual authored by S. Katsev, D.G. Rancourt, and I. L'Heureux. Available free at www.science.uottawa.ca/LSSE/dSED.

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2. D.G. Rancourt, S.R., Julian, J.M. Daniels. Superpara-magnétisme et Superferromagnétisme. Laboratoire de Cristallographie et de Physique Cristalline Université Bordeaux I, Talence, November 29, 1984.

3. D.G. Rancourt. Nouvelle Théorie du Magnétisme des Composés d'Insertion du Graphite - Superferromagnétisme en deux dimensions, Centre de Recherche Paul Pascal, Talence, March 15, 1985.

4. D.G. Rancourt, S.R. Julian, J.M. Daniels. Méthodes pour Déterminer la Taille de Petites Particules par l'Effet Mössbauer, Informal Seminar organized by Dr. G. Marest, Institut de Physique Nucléaire - Université Claude Bernard, Lyon, April 16, 1985.

5. D.G. Rancourt. Fluctuations de Spins dans les Spin Glass par l'Effet Mössbauer. Seminar organized by Dr. P. Imbert, DPHG-SPSRM, Centre d'Étude Nucléaires de Saclay, Saclay, France, May 29, 1985.

6. D.G. Rancourt. Effect de Relaxation dans les Spin Glass Amorphes et dans les Alliages Aléatoires, Seminar organized by Dr. M. Boge, Laboratoire des Interactions Hyperfine - Centre d'Étude Nucléaire de Grenoble, Grenoble, September 22, 1985.

7. D.G. Rancourt, C. Meschi, B. Hun, and S. Flandrois. Graphite Intercalation Compounds - Recently Observed Novel Magnetic Phenomena, Kamerlingh Onnes Colloquium, November 8, 1985.

8. D.G. Rancourt. Low Temperature Behaviour of Ising Magnetic Chains-Decorated Soliton, Locally Enhanced Exchange and Diffusive Propagation, K.E.L.T. Group Seminar, Kamerlingh Onnes Laboratorium. December 12, 1985.

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10. D.G. Rancourt. Solitons in Solid State Physics, University of Ottawa, Physics Seminar, September 10, 1986.

11. D.G. Rancourt. Examples d'Effets Magnétoélastiques dans l'État Solide, Département de Physique, Université de Sherbrooke, 22 octobre, 1987.

12. D.G. Rancourt. Possibilités d'Application de la Spectroscopie Mössbauer à la Métallurgie, Institut de Génie des Matériaux, Laboratoire du Conseil National de Recherche, Montréal, 23 octobre, 1987.

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14. D.G. Rancourt. Comportement de Magnétisme Reentrant dans L'Invar et le Problème du γ-Fer, Département de Physique, Université de Montréal, 12 avril, 1988.

15. D.G. Rancourt. Mica - A Laboratory for 2D Physics and a Probe of Rock Formation Conditions, Department of Physics Seminar, University of Ottawa, November 1, 1990.

16. D.G. Rancourt. Mica - A Laboratory for 2D Magnetism, 1D Hydrogen Diffusion and some Unique Crystal Chemistry, Statistical Physics Seminar, Clarkson University, Potsdam, U.S.A., March 15, 1991.

17. D.G. Rancourt. Least Squares Fitting of Mössbauer Spectra: Methods and Problems. Materials Physics Department, University of Science and Technology, Beijing, China, September, 1992.

18. D.G. Rancourt. Magnetism, Atom Order, and Hyperfine Fields in fcc Fe-Ni Alloys. Physics Department, Queen's University, Kingston, Ontario, November 25, 1992.

19. D.G. Rancourt. Microscopic Mechanism of Oxidation in Fe-Bearing Phyllosilicates. Department of Geological Sciences, University of Illinois at Chicago, April 22, 1993.

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33. D.G. Rancourt. Tailored 2D magnetism in layer silicates: Theory, experiment and dirt. Department of Physics, Universidad Nacional de La Plata, La Plata, Argentinia. June 8, 1995.

34. D.G. Rancourt. Three research lectures entitled “Mössbauer methodology, I: Thickness effects, II: Hyperfine parameter distributions, III: Microscopic causes of the hyperfine field and its fluctuations”. Department of Physics, Universidad Nacional de La Plata, La Plata, Argentinia. May 31 - June 2, 1995.

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37. D.G. Rancourt. Low-moment fee Fe-Ni alloy phase proposed as a new meteoritic mineral. Department of Physics, University of Alberta, Edmonton, October 11, 1996.

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55. D.G. Rancourt. A physicist's mid life crisis: Invar, mud, graduate students from hell, PDFs from Holland, finite planet, and radical professionalism. O.C.I.P. Xmas talk, Ottawa, December 18, 2001.

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58. D.G. Rancourt. Advances in characterizing complex mixtures and nanophase materials. Institute for Chemical Process and Environmental Technology (ICPET), NRC, Ottawa, February 24, 2005.

59. D.G. Rancourt. "C'est quoi l'activisme? Pourquoi l'activisme?" Keynote talk, Première Édition de la Semaine de l'Activisme au Collège de Maisonneuve, Montréal, Québec. May 2, 2006.

60. D.G. Rancourt (invited panellist). Does Activism Work? Forum organized by the International Socialists – Gatineau/Ottawa District. University of Ottawa, June 7, 2006.

61. D.G. Rancourt (keynote speaker). Afghanistan: Guerre humanitaire ou criminelle? Les conférences du rassemblement Outaouais contre la guerre. Université du Québec en Outaouais, March 6, 2007. This talk has been posted as an audio-visual download by the Réseau Alternatif de l'Information Lucide: http://www.railcitoyen.net/index.php?option=com_content&task=blogcategory&id=38&Itemid=89 .

62. D.G. Rancourt (keynote speaker). On the responsibility of university professors to create anarchism: Liberation through anti-hierarchy activism. Studies in National and International Development (SNID) series, Queens University, Kingston, Ontario, October 18, 2007.

Media and scientific review articles and interviews about our research:

1. Item: *Antitaenite*, and review of our paper (Rancourt and Scorzelli, 1995, JMMM, 150; 30-36). Featured in: New Mineral Names, by J.L. Jambor, N.N. Pertsev, and A.C. Roberts, American Mineralogist, 81, 1996, 766-770.

2. Article: *Meteorites*. Faculty of Science, University of Ottawa, Newsletter, September 1997.

3. Article: *Researcher seeks industry partners (magnetic sorbants)*. Mining Matters section, Canadian Mining Journal, December 6, 1998.

4. Article: *Researchers caught between an invariable object and a hard place*. Gazette, University of Ottawa, XII(13) June 2, 2000, 4. (Feature on PhD student Ken Lagarec, solution to the Invar problem.)

5. Article: *Développement d'un modèle sur les sédiments lacustres. Lire l'avenir au fond du lac*. Gazette, University of Ottawa, XIII(8) February 23, 2001, 3. Geneviève-L. Picard.

6. Article: *L'avenir des lacs inscrit dans leur vase*. Science-Clips section, Découvrir 22(5) Septembre-Octobre 2001, 8. Philippe Gauthier, Agence Science-Presse.

7. Interview: *Groupe de recherche LSSE*. D'un soleil à l'autre, Radio Canada, September 27, 2001.

8. Promotion: *Can you recognize Canada's university of the 21st century? Denis Rancourt, LSSE group*. Full page width adds appeared in Le Droit, The Globe and Mail, The Ottawa Citizen, and Silicon Valley North, on Thursday, March 1, 2001.

9. Newsletter article: *Denis G. Rancourt – MEDC International Advisory Board member*. Mössbauer Effect Reference and Data Journal, January 2005, volume 28(1), p. 23-24. (Overview of scientific contributions and interests, plus cover photo.)

10. Short Article: *A fresh look at lakes*. Canadian Geographic, Discovery section, May-June issue, 2005, p.32 (two pictures).

11. Interview: *Boreal forest lakes and LSSE*. CHUO FM 89.1 (Ottawa) with host Chris Jack of "5 O'clock Train" (20 minutes, live). May 19, 2005.

12. Interview: Guest interview, one-hour special theme show about global warming. The Roseanne Barr KCAA 1050 AM radio show, Loma Linda, California. May 30, 2007. In relation to DGR's article "Global Warming: Truth or Dare?"

13. Interview: Featured guest interview: Zero Point Radio, with Christopher Holmes and James Moffatt, June 2, 2007, 4-6pm.

14. Interview: Featured guest interview, environmental and development issues. Planète Terre, with Dianne D'Almeida, CHUO 89.1 FM, December 14, 2007, 11-12am; and follow up on global warming, December 21, 2007, 11-12am.

15. Interview: Feature guest interview, DGR environmental scientist. Science et Techno (SET) with Andréanne Baribeau and Louis Jacques, CHUO 89.1 FM, December 21, 2007, 10:30-11am.

16. Interview: Feature guest interview. A murder of Crows with Victoria, Aileen, Domm, and Steph, CHUO 89.1 FM, January 3, 2008, 4-5pm.

Media and magazine articles about DGR's teaching and cultural and political activities

Understanding Power. Feature article, with photo. *Ottawa Xpress*, January 5, 2006, by Stuart Trew.

Afghan MP Malalai Joya opens the fall season of Ottawa University's "Science in Society" Course. September 16, 2006. *YaYaCanada* feature article with pictures. http://www.yayacanada.com/course0.html

Afghan MP continues to criticize her government. *Embassy*, September 20, 2006, by Brian Adeba.

Social analysis of activism: Hippies, militants, liberals, and fascists. *YaYaCanada* feature article with pictures of DGR's SCI 1101 class of October 11, 2006.
http://www.yayacanada.com/rancourt_lecture_11-10-06.html

Bio-feature of DGR in the article entitled "Teachers changing the world", November/December 2006 print issue of *Canadian Dimension magazine*.

Ottawa Xpress, November 23, 2006, issue. Best of Ottawa 2006 feature. Best Hero section: "Denis Rancourt (University of ottawa professor who almost got fired for teaching an activist course)".

Global Scamming and Climate Plug Nickels? February 21, 2007. *YaYaCanada* feature article about DGR's web-posted article "Global Warming: Truth or Dare?"
http://yayacanada.blogspot.com/2007/02/global-scamming-and-climate-plug.html

Questioning Climate Politics: Denis Rancourt says the "global warming myth" is part of the problem. Interview with editor-in-chief Dru Oja Jay. *The Dominion*, April 2007 issue, pages 14-15.
http://www.dominionpaper.ca/articles/1110

Global Warming Suspicions and Confusions. Article by Z-Net editor Justin Podur; May 2007 feature article for Z-Net subscribers.
http://www.zmag.org/content/showarticle.cfm?ItemID=12796

Activism down to a science. Feature article, with photo. *Ottawa Sun*, July 10, 2007, by Laura Czekaj.

Anarchy in the U of O: Denis Rancourt wants to return academia to its freethinking roots; the establishment has other plans. This City feature article by Ron Corbett (photo by Colin Rowe), *Ottawa Magazine*, September 2007 issue, p.13-14.

Harmony Six – The 5 O'Clock Train with Denis Rancourt. Documentary film (Canada / 2008 / 57 minutes / English), www.documentaryservices.ca, film maker Peter Biesterfeld. The film documents the Harmony Six community self-help project for homeless people with mental disabilities, through the eyes of Denis Rancourt's CHUO 89.1 FM radio show of February 28, 2008.

Theses supervised (not including unofficial co-supervisions):

1. M. Royer, **M.Sc.**, 1991; Site-specific Fe-57 Mössbauer recoilless fractions in true trioctahedral micas.

2. P.R.L. Heron, **M.Sc.**, 1992; A mean field method for disordered magnetic alloys with application to fcc fe-Ni.

3. M.-Z. Dang, **M.Sc.**, 1992; Mössbauer study of synthetic hematite aggregates.

4. P. Tume, **M.Sc.**, 1992; An Fe-57 Mössbauer study on the thermal oxidation of iron in biotite mica.

5. M. Dubé, **M.Sc.**, 1993; Application of a mean field theory of magnetic alloys to fcc Fe-Ni.

6. I.A.D. Christie, **Ph.D.**, 1994; The magnetic properties of annite: a SQUID magnetometry and Fe-57 Mössbauer spectroscopy study.

7. P.H.J. Mercier, **M.Sc.**, 1996; An Fe-57 Mössbauer spectroscopy study of the effects of different equilibration temperatures and oxygen fugacity buffers on the Fe^{2+} and Fe^{3+} site populations in synthetic annite mica.

8. M.-Z. Dang, **Ph.D.**, 1996; Interplay of spin structures, hyperfine magnetic field distributions and chemical order-disorder phenomena in face centered cubic Fe-Ni alloys studied by Mössbauer spectroscopy measurements and Monte Carlo simulations.

9. R.J. Evans, **M.Sc.**, 2001; The electric field gradient of octahedral Fe^{2+} in layer silicates. (co-supervised with John Tse, NRC)

10. K. Lagarec, **Ph.D.**, 2001; Resolving the magnetic and structural anomalies in face centered cubic Fe-Ni alloys. A solution to the Invar and anti-Invar problems.

11. P.-J. Thibault, **M.Sc.**, 2002; Caractérisation de la ferrihydrite authigénique synthétisée sous différentes conditions et en présence ou absence de bactéries.

12. P.H.J. Mercier, **Ph.D.**, 2003; Crystal chemistry of natural and synthetic trioctahedral micas: Exploring the limits of geometric crystal chemical models.

13. F. González-Lucena, **M.Sc.**, 2004; Mineral magnetism of synthetic microcrystalline and nanophase iron oxyhydroxides and iron oxides.

14. Iana Tsandev, **M.Sc.**, 2005; Numerical study of the factors affecting the cycling of iron, sulphur and phosphorous in lake sediments. (Officially co-supervised with Prof. Ivan L'Heureux.)

15. R.J. Evans, **Ph.D.**, 2005; Mössbauer hyperfine parameters in oxygen-coordinated octahedral Fe^{2+} from electronic structure calculations.

Partly supervised or unofficially co-supervised theses:

1. Ricardo Brun Del Re, Ph.D., 1991, A Comparative Study of Some Mn- and Fe-based Chalcopyrite Semiconductor Alloys: Basic Properties and the Effects of Ordering. (Main supervisor: John C. Woolley).

2. Laïla Raki, Ph.D., 1995, Synthèse et Caractérisation de Dérivés Organo-Hydrotalcite Microporeux. (Main supervisor: Christian Detellier).

3. Lixin Dou, Ph.D, 1998, Applications of Bayesian Inference Methods to Time Series Data Analysis and Hyperfine Parameter Extraction in Mössbauer Spectroscopy. (Main supervisor: Richard Hodgson).

4. Amir A.T. Shabani, Ph.D., 1999, Mineral Chemistry and Mössbauer Spectroscopy of Micas from Granitic Rocks of the Canadian Appalachians. (Main supervisor: André E. Lalonde).

5. Paula C. Piilonen, Ph.D., 2001, Crystal chemistry, Mössbauer spectroscopy and paragenesis of astrophyllite group minerals from over- and undersaturated alkaline rocks. (Main supervisor: André E. Lalonde).

Supervision of fourth-year projects and BSc theses:

1. Pamela Tume, 1989. Magnetism of biotite. (co-supervised with Gilles Lamarche)

2. Paula Heron, 1989. Mean field theory of local moment magnetism (?).

3. Andy McDonald, 1992-93. Ideal absorber thicknesses of minerals in Mössbauer spectroscopy. (co-supervised with Andre Lalonde, published paper)

4. Alexandre Trottier, 1995-96. Etude de l'effet des déformations mécaniques à froid sur l'Invar, par voie de la spectroscopie à effet Mössbauer.

5. Adam Densmore, 1995-96. Equilibrium Fe-Ni phases synthesized by mechanical alloying. (published paper, one more coming)

6. Karine Hinzer, 1995-96. Characterization of oscillatory zoning in sphalerite. (co-supervised with Ivan L'Heureux and Tony Fowler)

7. Pierre-Jean Thibault, 1998 (full calender year). Effet de *Bacillus subtilus* et *Bacillus licheniformis* sur la formation de cristaux d'oxydes de fer. (co-supervised with Danielle Fortin)

8. Gabriella Giustiniano, 1998 (full calender year). Characterizing iron oxides formed on the surfaces of *Bacillus subtilus* and *Bacillus licheniformis* using Mössbauer spectroscopy. (co-supervised with Danielle Fortin)

9. Milena Kusnir, 1998 (full calender year). Characterizing iron oxides formed in the presence of two gram positive bacteria (*Bacillus subtilus* and *Bacillus licheniformis*) by X-ray powder diffraction. (co-supervised with Danielle Fortin)

10. Jonathan Lavoie-Copeland, 2000-01. Powder X-ray diffraction of nano-crystals: Methods of simulation.

11. Nicolas Sabourin, 2000-01. Caractérisation des minéraux magnétiques d'un couplet loess/paléosol de Sibérie.

12. Majorie Théodore, 2002. Théorie et simulations de diffraction de rayons-X associées à l'analyse de données pour des échantillons naturels complexes.

13. Sean Kelly, 2005. Simulation of Mössbauer spectra of distributions of superparamagnetic particles.

Post-doctoral fellows and research associates supervised

Dr. Samir Chehab, 1987-88.
Dr. Peter Hargraves, 1988-89.
Dr. Claude Plante, 1995-96.
Dr. Mei-Zhen Dang, 1997-1999, 2001-
Dr. Denis Mavrocordatos, 1998-99. (main supervisor: Danielle Fortin)
Dr. Brindusa Kevorkian, 1998-99.
Dr. Claar van der Zee, 2001-02.
Dr. Darryl Roberts, 2001-02.
Dr. Hanbai Lin, 2002-03.
Dr. Frederic Ghogomu, 2003. (co-supervised with Ivan L'Heureux)
Dr. Beena George, 2001-
Dr. Sergei Katsev, 2002-2004 (co-supervised with Ivan L'Heureux)
Dr. Patrick Mercier, 2003-2004

Supervision of summer research and COOP students:

Michel Royer, 1988; Christine Villeneuve, 1989; Steve Odoisk, 1994; Sébastien Triquenaux, 1996; Cédric Raynal, 1995; Adam Densmore, 1996; Renée-Xavière Larouche, 1997, 1998, 2000; Jim Evans (with Dr. John Tse, NRC), 1998; Louise Vaillancourt (Department work), 1998; Alexandre Boutry, 2000; Sidney Tsai, 2000; Nicolas Sabourin, 2001 (8 month COOP); Laura Sévigny, 2001; Inge Folmer, 2001 (Dutch COOP); Elise Leenarts, 2001 (Dutch COOP); Chris McDonald, 2002; Claire Foottit, 2002; Amandine Chen, 2002; Majorie Theodore, 2002; Jean-François Meunier, 2003 (8 month COOP); Claire Foottit, 2003; Chris McDonald, 2003; Mélanie Carrière, 2003, 2004; Sean Kelly, 2003, 2004, 2005; Yang Liu, 2004 (4 month COOP); Dali Wu, 2004 (4 month COOP); Jean-François Meunier, 2004 (8 month COOP); Philippe Marchand, 2004, 2005; Andrew Li, 2004; Xiaobing Lui, 2005 (4 month COOP); Andréanne Baribeau, 2005; Michael Lui (F2005 COOP); Jean-François Meunier, 2006; Sean Kelly, 2007.

[42 4-month work terms to date].

12. CONTRIBUTIONS TO THE COMMUNITY AND TO SOCIETY AT LARGE

It is unfortunate that the standard format of the Faculty of Science CV does not have a section-12 as the one I have added here. To serve the community at large and to contribute to public debate in all areas of intellectual research is part of the mission of any university. Professional scientists should not be excluded from this and should be encouraged to take on their responsibilities as citizens, not just as servants to society's technical needs.

In this regard, see also the above sections entitled:
"Media and scientific review articles and interviews about our research"
and
"Media and magazine articles about DGR's teaching and cultural and political activities".

CHUO 89.1 FM radio show The Train

On July 7, 2005, I became a co-host of the CHUO 89.1 FM radio show "The Train" (aka "5-O'Clock Train") that plays every Thursday 5-6pm. This show features live interviews related to alternative culture, activism, social justice issues, and science and campus issues.

Starting on August 10, 2006, I became the producer and sole host of The Train. This show has featured hundreds of expert guests and has developed a dedicated audience. It

is also available as a live stream on the web and as backed-up audio files on its own web site (since 2007): http://5oclocktrain.tripod.com/ .

Editor and manager of U of O Watch: http://uofowatch.blogspot.com/ .

This blog was created on May 21, 2007, and is "devoted to transparency at the University of Ottawa, Ottawa, Canada." The aim of this web forum is to expose, comment and analyze social interactions with the university "that appear to illustrate institutional behaviour that is not consistent with the public good."

This provides a vital service to both the university and its community, as there are presently no such other forums for these analyses. The new blog is an actuation of several of the ideals described in the institution's Vision 2010 mission statement.

Editor and manager of Activist Teacher: http://activistteacher.blogspot.com/ .

This blog was created on February 24, 2007, and is specialized in radical pedagogy and the role of activism in teaching.

It provides a useful service to teachers and university educators interested in exploring novel methods and in following radical developments.

Editor and manager of Activist Climate Guy: http://climateguy.blogspot.com/ .

Since May 6, 2007, I have edited and managed the blog "Activist Climate Guy", which offers a radical political and scientific analysis of the global warming issue.

An underlying theme is how environmental problems are often cast into scientific terms in order to avoid discussing or even seeing their root causes.

This is a good example of a critical analysis of the interactions between science and society, one of my research areas.

Public readings (self-authored works): poems, vignettes, essays, etc.
(First readings of new works only)

More than 80 such readings to date (2006). Two published poems, Zigote magazine, October 2005 issue, with picture spread and short biographies (French and English).

Media and non-scientific articles by DGR

1. D.G. Rancourt. **Keeping environmental research alive and well**. Editorial, University of Ottawa *Gazette,* March 14, 2003 publication date, Volume XV, 7, back page (page 12).

2. D.G. Rancourt. **Why take physics?** *The Fulcrum*, student newspaper, University of Ottawa, September 4-10, 2003, page 3. (Opinion-Letter)

3. D.G. Rancourt. **Let's make this a Vision 20-20 exercise**. Letter. *The Bulletin*, Graduate Student Union (GSAED) paper, University of Ottawa, Summer 2004, vol.8(13), 6-7.

4. D.G. Rancourt. **AVS brings BMD basher to campus**. Feature. *The Bulletin*, Graduate Student Union (GSAED) paper, University of Ottawa, September 2004, vol.10(1), 3.

5. D.G. Rancourt. **I'd like to see more unhappy graduate students**. Opinion. *The Bulletin*, Graduate Student Union (GSAED) paper, University of Ottawa, April 2005, vol.10(6), 4.

6. D.G. Rancourt. **Global warming is causing extinction of the political species**. *Caucus*, The Political Magazine of the Students, University of Ottawa, Vol.6, Issue 3, February-March 2006, 10.

7. D.G. Rancourt. **Gradual change is not progress**. *GlobalResearch.ca*, Feature Articles section, posted May 3, 2006.
   http://globalresearch.ca/index.php?context=viewArticle&code=RAN20060503&articleId=2377

   This article was also printed in *DESIGNER/builder – A journal of the human environment* magazine: Social Justice back page, March/April 2008, p.46-47.

8. D.G. Rancourt. **Confronting power: The role of community**. *Peace and Environment News. PEN Insider.* May-June 2006, page 8.
   http://www.perc.ca/PEN/2006-05-06/s-rancourt.html

9. D.G. Rancourt. **An Inconvenient Truth is too convenient**. *Peace and Environment News. PEN Insider.* July-August 2006 (v21-n6), page 2.
   http://www.perc.ca/PEN/2006-07-08/s-rancourt.html

10. D.G. Rancourt. **Are Physicists Smart? Disciplined Professionals Serve Power.** GlobalResearch.ca, Feature Articles section and Cover Article in the Science and Medicine section, posted September 4, 2006.
http://www.globalresearch.ca/index.php?context=viewArticle&code=20060904&articleId=3140

(This article has been republished on several blog sites.)

11. D.G. Rancourt. **Malalai Joya breaks the fear barrier in Ottawa**. September 2006. First published at *Canadian Dimension* e-mag and at *rabble.ca*.
http://canadiandimension.com/articles/2006/09/15/660/
http://rabble.ca/in_his_own_words.shtml?sh_itm=02511e34aff13e67d99edecdea1b8af2&rXn=1&
http://www.malalaijoya.com/index1024.htm

12. D.G. Rancourt. **Balance Kills: Media, Good Will, and Israeli Oppression in Palestine**. *GlobalResearch.ca*, Feature Articles section, posted October 24, 2006.
http://www.globalresearch.ca/index.php?context=viewArticle&code=RAN20061024&articleId=3592

13. D.G. Rancourt. **Abolishing Security Certificates Is Not Enough**. Talk given at the November 11, 2006, rally at the Human Rights Monument, Ottawa:
http://www.zerra.net/freemohamed/comment.php?comment.news.1854 .

14. D.G. Rancourt. **We can benefit from the wisdom of children**. Op-Ed. Saturday Observer section, *The Ottawa Citizen*. February 10, 2007, page B7, 767 words.

15. D.G. Rancourt. **Activism and Risk – Life Beyond Altruism**. *Peace and Environment News. PEN Insider.* May-June 2007 (v22-n4-5), page 2, full page.

16. D.G. Rancourt. **Global Warming: Truth or Dare?** February 2007.
http://www.globalresearch.ca/index.php?context=listByAuthor&authorFirst=Denis&authorName=Rancourt
http://climateguy.blogspot.com/2007/05/global-warming-truth-or-dare.html

    An excerpt of this article was printed in *DESIGNER/builder – A journal of the human environment* magazine, Environmental Intelligence section, January/February 2008 issue, p.37-41.

    This article was also extensively quoted from by a Congressman in a speech from the floor in the US Congress and was written about or cited in newspapers in several counties. Alexander Cockburn in *The Nation* (June 25, 2007, issue: Dissidents Against Dogma) called it: "One of the best essays on greenhouse myth-making from a left perspective […]."

17. D.G. Rancourt. **Academic squatting: A democratic method of curriculum development.** *Our Schools / Our Selves*, v.16, n.3 (#87) Spring 2007, pages 105-109, and editorial comments on page 21.

18. D.G. Rancourt. **Academic squatting: A democratic method of curriculum development.** *DESIGNER/builder – A journal of the human environment*, September/October 2007, pages 41-42.

This is Exhibit "B"

to the Affidavit of Denis Rancourt,

sworn before me this

16 day of February, 2012.

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Canadian Association of University Teachers

Committee to investigate case of Denis Rancourt

(Friday, February 06, 2009) - CAUT has appointed an independent committee of inquiry to investigate a series of disputes between the University of Ottawa and physicist Denis Rancourt that initially resulted in grievances, human rights complaints and legal actions and subsequently led to Rancourt being relieved of teaching duties, locked out of his laboratory, barred from campus and most recently suspended pending the university's governing board approval of his dismissal. In the meantime, Rancourt's graduate students have been assigned to other faculty members.

Rancourt has taught at the university for more than 20 years and is a full professor in the department of physics. He has published nearly 200 articles and essays on subjects ranging from marine geochemistry, condensed matter physics, planetary science, and spectroscopic measurement theory to the physics profession, climate change, critical pedagogy and activism.

The independent committee is chaired by Joyce Lorimer, professor and department chair of history at Wilfrid Laurier University, and includes Walter Whiteley, professor of mathematics and statistics at York University, and Jeffrey Halpern, associate professor of anthropology at Rider University in Lawrenceville, New Jersey, and a member of the American Association of University Professors' Committee A on Academic Freedom and Tenure.

Information about the committee's terms of reference can be found here.

Return to main news page

Canadian Association of University Teachers

Independent Committee of Inquiry to examine the situation of Dr. Denis Rancourt at the University of Ottawa

Terms of Reference

1. To investigate the ongoing series of disputes between Dr. Rancourt and the University of Ottawa;

2. To determine whether there were breaches of or threats to academic freedom and other faculty rights;

3. To make any appropriate recommendations.

Committee Members

Chair

Dr. Joyce Lorimer, Professor, Department of History, Wilfrid Laurier University Members

Members

Dr. Walter Whiteley, Professor, Department of Mathematics and Statistics, York University, Toronto, ON
Dr. Jeffrey Halpern, Associate Professor, Department of Sociology, Rider University, Lawrenceville, NJ

Canadian Association of University Teachers

Issues & Campaigns

Academic Freedom

Academic freedom is the life blood of the modern university. It is the right to teach, learn, study and publish free of orthodoxy or threat of reprisal and discrimination. It includes the right to criticize the university and the right to participate in its governance. Tenure provides a foundation for academic freedom by ensuring that academic staff cannot be dismissed without just cause and rigorous due process.

Where we stand

CAUT actively promotes and defends academic freedom and tenure. CAUT undertakes investigations of alleged violations and monitors cases across the country. Where violations are established, CAUT intervenes to bring about appropriate changes.

Resources

CAUT Policy Statements and Resolutions

- Policy Statement on Academic Freedom
- Policy Statement on Academic Appointments
- Policy Statement on Academic Appointments Held Jointly in a University and a Related Institution
- CAUT Procedures in Academic Freedom Cases
- CAUT Procedures in Academic Freedom Cases Involving Allegations of Requirement of an Ideological or Faith Test as a Condition of Employment

International Policy Statements

- UNESCO Recommendation concerning the Status of Higher-Education Teaching Personnel

Reports: General Inquiries

- No Debate: The Israel lobby and free speech at Canadian universities

Reports: Independent Committees of Inquiry

- Interim Statement CAUT Committee of Inquiry Regarding Allegations of Lack of Informed Consent in Research Conducted by Dr. Anne Duffy and Dr. Paul Grof (2011)
- Popadiuk/Memorial Independent Committee Report (Mar 2008)
- The Chun Independent Committee Report (Dec 2006)
- Supplement to the Olivieri Report (Jan 2002)
- The Olivieri Report (2001)

Reports: CAUT Ad Hoc Investigatory Committees

- Report on the Termination of Dr. Ramesh Thakur as Director of the Balsillie School of International Affairs Affiliated with the University of Waterloo, Wilfrid Laurier University and the Waterloo-based Centre for International Governance Innovation (2010)
- Report into the Situation of Dr. Larry Reynolds at The University of Manitoba and The Winnipeg Regional Health Authority (2010)
- Report on the Firing of Professor Colin Wightman by Acadia University (2008)
- Report on Trent University and the Denial of Professor George Nader's Reappointment (2007)
- Report into the tenure review of Dr. Eileen Hogan at Acadia University (2006)
- Report on the discontinuance of Dr. Laurent Leduc at the University of St. Michael's College, University of Toronto (2006)
- Report: McMaster University Senate Guidelines for Members of the McMaster University Community regarding Interactions with the Media (2005)
- Report into the complaints of Professor David Noble against Simon Fraser University (2003)
- Report of the Committee of Inquiry into a Complaint by Professor Michael Thorpe at Mount Allison University (2001)
- Report on the Matter of the Tenure Applications of Dr. James Kepron at Brandon University (2001)
- Report of the Academic Freedom and Tenure Committee into the Complaint of Professor Ken Westhues at the University of Waterloo (1996)
- Report on the Decision of the University of Calgary Not to Appoint Dr. Aleksandra Vinogradov to the Department of Civil Engineering (1991)
- Report on the Denial of a Fair Hearing to Prof. Vivian Walsh at the University of Waterloo (1979)
- Report on the Non-Renewal of the Probationary Contract of Dr. Marlene Webber in the School of Social Work at Memorial University (1978)
- Report on the Non-Renewal of the Contract of Dr. George Abouna in the Faculty of Medicine at the University of Calgary (1978)
- Report on the Non-Renewal of the Probationary Contract of Professor Samuel McClelland in Communications Studies at the University of Windsor (1977)
- Report on the Removal of Censure of Simon Fraser University (1968)
- Report on the Failure of Communications at Simon Fraser University (1968)
- Report of the investigation into the dismissal of Professor H.S. Crowe by United College, Winnipeg, Manitoba (1958)

Statements and Letters

- CAUT letter to the Hon. Chris Bentley regarding the arrest of Mr. Alex Hundert on Friday, September 17th, 2010, following his invited participation in a panel discussion at Ryerson University (Sept 2010)
- CAUT announces inquiry into firing of Director of Balsillie School of International Affairs at Waterloo and Wilfrid Laurier (Jun 2010)
- CAUT criticizes the University of Ottawa for admonishing Ann Coulter about speech rights in Canada (Mar 2010)

Task Force Reports

- Defending Medicine: Clinical Faculty and Academic Freedom (2004)

Universities that Impose a Faith or Ideological Test

- Canadian Mennonite University

- Crandall University (formerly Atlantic Baptist University)
- Redeemer University College
- Trinity Western University

Major Canadian Academic Freedom Cases

- Nancy Olivieri
- David Healy
- Gabrielle Horne
- David Noble
- Mary Bryson
- Stéphane McLachlan and Ian Mauro

Current Independent Committees of Inquiry

- Independent Committee of Inquiry to examine the situation of Dr. Denis Rancourt at the University of Ottawa
- Clinical Faculty at the Faculty of Medicine, Dalhousie University and the Department of Medicine at Capital District Health Authority
- Seizure of the research records of Drs. Anne Duffy, Paul Grof and Martin Alda at the University of Ottawa Institute of Mental Health Research and the Royal Ottawa Hospital

Current Ad Hoc Investigatory Committees

- Ad Hoc Investigatory Committee into the situation of Clinical Faculty in the Faculty of Medicine and Dentistry at the University of Alberta
- Ad Hoc Investigatory Committee into Academic Librarians at McGill University

Links

- Harry Crowe Foundation
- CAUT Academic Freedom Fund

This is Exhibit "C"

to the Affidavit of Denis Rancourt,

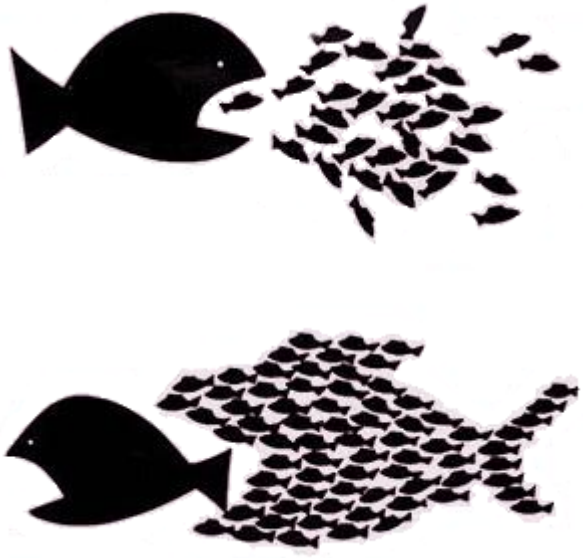
sworn before me this

16 day of February, 2012.

A Commissioner, etc.

STUDENT APPEAL CENTRE

2008 Annual Report



Mistreatment of Students, Unfair Practices and Systemic Racism at the University of Ottawa

The Student Appeal Centre 2008 Annual Report

Mistreatment of Students, Unfair Pracrices and Systemic Racism at the University of Ottawa

INTRODUCTION

The Student Appeal Centre (SAC) is a service offered by the Student Federation of the University of Ottawa (SFUO). We provide help and support to students who wish to appeal decisions that were taken by the administration of the University of Ottawa. We also assist students who wish to file a complaint against or to receive assistance in dealing with the University of Ottawa (the “University”).

Witnessing abuse of power, unfair treatment and bad management by the University against its students is a part of our daily reality. The students who consult the Appeal Centre are discouraged, angry, scared and completely disillusioned. The problems students face are systemic, and something must be done.

The power asymmetry that divides students from administrators is dangerous. In the context of appeals, the University acts as a legislator, a party and a judge. The administration writes the regulations concerning appeals, imposes the decision you are appealing and decides whether or not you win your appeal. There is nowhere else to go: if you have a problem, you must turn to the administration – it holds all the decisional power.

We hope this report will encourage students, professors and staff to unite in demanding more legitimate and democratic control of our campus.

CASE STUDIES
THIS HAPPENED TO U OF O STUDENTS

The best way to understand the Student Appeal Center's position and why we denounce unfair practices at the University of Ottawa is by hearing about individual cases.

These cases are real. This happened to students at the University of Ottawa.

It is by chance that these cases concern Asian females only. Their names have been changed and the Student Appeal Centre has received permission to tell their stories.

THE INFAMOUS 'MY ACADEMIC ADVISOR MADE A MISTAKE' CASE

TingTing is an international student from China. During the winter semester of 2008 she only had two courses remaining for the completion of her degree in the Faculty of Social Sciences. She consulted her academic advisor, who noticed she was good in math and who registered her in a MAT course. TingTing worked hard in the course, which she found very hard - she went to the prof's office hours every week. She passed the first midterm but did poorly on the final exam and failed the course.

Upon learning of her failure, she went to meet with her prof. **This is when TingTing learned that she did not have the prerequisite for the course**. Her registration was a mistake on the part of her academic advisor. Had she tried to register herself using the online system, the course would not have been available for registration.

TingTing had three jobs lined up – all employers were asking for a diploma, but she could not provide one. Since she was still missing three credits to graduate, she had to take a summer course. She didn't have the $1782.58 (the price of one course for international students) and had to borrow money from a friend.

She filed two separate appeals.

TingTing asked Financial Services for a refund for the MAT course.

- They said no.

TingTing appealed to the Administrator of Undergraduate Studies of her faculty, asking for the F to be removed from her transcript. She provided a letter from her professor who wrote that he feels this is "very unfair" and that "she should be given some help."

- The Administrator refused to remove the failed course from TingTing's transcript.
- TingTing didn't take no for an answer. She asked the Administrator to reconsider and the Administrator offered that the course count as HP (out-of-program) – which means that the F would not affect her GPA but would continue to appear on her transcript.

TingTing appealed her case to the Vice-Dean, indicating that she did not find the proposed solution acceptable.

- 15 days later, the Vice-Dean had not responded.
- The Student Appeal Centre called and emailed the Vice-Dean to follow up on the case.
- The Vice-Dean never responded, but TingTing received an email from the Administrator asking her if she was going to accept the proposed solution to have the course count as HP.

TingTing appealed to the Dean of the Faculty of Social Sciences.

- 18 days later, there was no response.
- The Student Appeal Centre contacted the Dean to follow up on the case.
- The Dean did not respond but TingTing received yet another email from the Administrator asking her if she was going to accept the proposed solution to have the course count as HP!

TingTing appealed her case to the Vice-President, Academic, Robert Major and the Vice-President, Resources, Victor Simon.

- The Vice-President, Resources responded that TingTing's request for a reimbursement did not fall within his jurisdiction.
- The Vice-President, Academic refused to intervene by telling TingTing to appeal to the Senate Appeals Committee. He also took the opportunity to give his opinion on the case and to tarnish TingTing's reputation. He indicated that he found TingTing's appeal was very unusual in light of the fact that she had been accused of academic fraud in 2004!

The president of the SFUO, Dean Haldenby, appealed TingTing's case to Allan Rock, President of the University of Ottawa.

- As of October 31, 2008, the president acknowledged having received the appeal but TingTing's appeal remains unsolved.

TingTing and the SFUO are incredibly frustrated and disillusioned. TingTing has now completed all the requirements for her degree but she is still fighting the University of Ottawa. Her only mistake was to trust the professional judgment of her advisor.

The Student Appeal Centre understands that these types of mistakes are bound to happen. Our goal is not to criticize the work of academic advisors but to insist that the University take responsibility for the harm it can cause to its students.

INNOCENT MISTAKES MUST BE PUNISHED !

Jiao is a young professional Chinese woman. She recently moved to Canada and works full time for a reputable accounting firm while studying law on a part-time basis. Her previous studies include little to no creative written work, such as essays.

During the winter of 2007, she was asked to write her first legal memo. To complete the assignment she was instructed to use the assigned course readings. The directives provided by her professor specifically state, "for the purposes of this exercise, you are not expected to go beyond the assigned materials." In completing the assignment, she copied sentences directly from these assigned readings and did not include citations.

She continues to use this technique for her second assignment. In February 2008, she is notified that she is being accused of academic fraud related to her first assignment. She meets with the Committee of Inquiry and they discuss the requirements related to referencing. After this discussion, she understands that what she did was contrary to the policy on academic fraud. In her defense, she explains that she thought she was doing what was required of her, that her intention was never to cheat the professor and that she has no motives for trying to cheat on a small assignment. As proof of her honesty, she tells the Committee that she had made the same mistake on her

second assignment. She asks not to be punished but to be given the opportunity to hand in a new assignment as proof of her understanding of citing requirements.

However, none of this matters; at the University of Ottawa, to hand in an assignment in which there are copied passages without quotation marks, is a valid case of fraud. The best-case scenario is to receive an F for the work – and that is what Jiao gets.

It may be the best possible sanction, but Jiao does not think it is fair that she is being punished for making an honest mistake in university – an institution based on learning and educating.

She appeals to the Executive Committee of her Faculty, without success.

In the meantime, the professor who first brought the accusation against Jiao learns that she had 'committed' the same 'plagiarism' in her second assignment. We are now months after this second assignment has been handed in and marked but the professor emails Jiao nonetheless, telling her that she is going to bring forward a second accusation! Jiao's anxiety increases. She now regrets having been honest with the Committee of Inquiry…

Jiao decides to appeal to the Senate Appeals Committee. At this level of appeal, she asks her mentor – a professor at another Canadian university who has extensive experience as a member of appeal committees – to write a letter of support. He does this without hesitation, convinced that if this case were to be heard at his university, Jiao would have been treated differently.

Jiao researches case law to support her appeal and presents her findings in writing to the Senate Appeals Committee. She summarizes an arbitration ruling, which occurred in a university setting. The case clearly states that **the intentions of the accused must be considered when determining whether or not plagiarism has occurred.** Furthermore, the case explains the importance of determining whether the reader was deceived by the plagiarism: was Jiao's professor misled? Didn't the professor recognize the text of the assigned readings right away?

Finally, Jiao meets the Senate Appeals Committee to defend her case. This meeting does not go well. It is evident in the first few minutes of the meeting that she will not win. One Committee member even asks her "why are we here?" When she attempts to discuss her intentions, the Committee interrupts her saying: "we can never truly know anyone's intentions." There is little discussion concerning whether or not the professor was deceived.

When Jiao leaves the room, she says: "they were so mean to me!" She reflects on what just happened and concludes, "Well, I guess this was good practice for me – I don't think anybody is going to be nice to me when I go to court as a lawyer."

After all, Jiao is only at university to learn.

Epilogue:

The Senate Appeal Committee refused to grant her appeal and she was sanctioned with the grade of zero for the work.

The accusation concerning her second assignment never materialized.

WE DECIDED YOU WERE GUILTY AT 'HELLO'

Wendi is an international student of Chinese origin who studies in the School of Management. In December 2007 she arrived at one of her exams five minutes late. Luckily for her, the exam hadn't started yet. Everybody was chatting with their neighbor

or doing a quick revision of their notes. Wendi found a seat and pulled out her notes to review them. When the professor arrived with the exams a few minutes later, she placed her stack of notes on the floor underneath her seat, with the blank side facing up.

Two hours into the exam a TA came to Wendi's desk to verify her ID and saw her notes under her seat. The TA warned the professor who asked Wendi to leave the exam room immediately. Wendi tried to explain that she had not looked at her notes during the exam, but to no avail – she left without finishing her exam.

Wendi says she did not cheat. She says she did not once look at her notes. But without any cameras in the classroom, she was unable to provide uncontestable proof of her innocence.

The first two levels of appeal at the Telfer School of Management found Wendi guilty and sanctioned her with an F for the course plus the added requirement of three extra credits to obtain her degree.

Wendi could not accept that her word was being dismissed so easily. She appealed to the Senate Appeals Committee, urging it to complete a more thorough investigation. When Wendi finally met the Committee, more than 210 days after the incident, it became apparent within the first two minutes of the meeting that a decision had already been reached: Wendi was guilty and a liar.

Wendi provided a witness statement with her appeal. The witness said that they never saw Wendi look at her notes during the exam. It appears that this statement had absolutely no effect on the Committee's decision. The Committee did not even mention or contact the witness. The Senate Appeals Committee also did not contact the TA who reported the incident. Most importantly, Wendi requested on two occasions that the Committee compare her notes to her exam – this would prove that nothing was copied from the notes. It appears that the Committee did not compare Wendi's notes with her exam. This was not necessary – a conclusion had been reached. She was found guilty, but the Committee reduced the sanction. Wendi only received an F for the course.

ACADEMIC FRAUD: A STUDENT'S WORST NIGHTMARE

HOW THE UNIVERSITY TREATS ALLEGED CHEATERS, LIARS AND STUDENTS WHO FORGET TO USE QUOTATION MARKS

The Student Appeal Centre witnesses many different types of cases - injustice takes many different forms. This year, we have chosen to devote the greater part of our yearly report exposing issues related to academic fraud. It is necessary to stand up and speak out for the students who carry the burden of being labeled "cheaters" at University. Most of them are visible minorities, and many of the students who come to the Student Appeal Centre have simply made honest and inadvertent mistakes. This is how they are treated.

The system that governs academic fraud instills fear in students. It also teaches us to hate cheaters: cheaters take away from the validity of our diplomas and steal intellectual property.

But what is cheating? Is making a mistake or forgetting to use quotation marks plagiarism? Should you fail a course for that? And what about students who say they are innocent? How much proof is needed to punish them?

In practice, at U of O, students who are accused of fraud face the automatic stigma of being worthless and untrustworthy individuals – after all, "why would the University trust the word of alleged cheaters?" It is this logic that leads to all kinds of injustices and unacceptable treatment of students by the University. The University may want to tackle problems of fraud, but this is no reason to deny fair and impartial hearings.

LONG AND STRESSFUL PROCEDURES

According to the regulation on academic fraud, a professor who suspects an act of fraud is to send a report to the Dean of the student's faculty. This is often followed by long and stressful waiting periods for students. There is no deadline placed on professors to bring forward an accusation against a student. There is also no deadline placed on administrators to initiate the investigation process. In some cases, professors inform students that they will receive an accusation but students wait two, three even four months before receiving the accusation from the Dean's office.

Once a student has been formally accused, they are invited to defend themselves. **It is the responsibility of the student to prove to the University that they are innocent.**

Under the University of Ottawa's academic fraud system, students are guilty until proof of the contrary.

Students are also allowed to meet the Committee of Inquiry who investigate the case and make a decision. Many students report that the tone of the meeting is very accusatory and that their statements are treated with disregard. Students have the impression that a decision has already been reached prior to their hearing. In one case, a meeting concerning an accusation of fraud had to come to an end because the student was in tears and unable to continue the interrogation.

In cases involving in-class cheating such as looking over a colleague's shoulder, students are practically left without a defense because the most they can do is *say* that they are innocent – this is definitely never enough to prove your innocence.

THE SANCTIONS

The least severe sanction is to receive an F for the work under investigation. Depending on the weight of the work, this can sometimes mean a failure in the course.

Concerning sanctions, each University of Ottawa faculty treats students very differently. The Faculty of Arts, Social Sciences and particularly Health Sciences have shown greater leniency. At the other extreme, the Telfer School of Management is extremely strict, often punishing students with sanction 2c of the Policy on Academic Fraud: "the mark F or zero for the course concerned and an additional requirement of 3 credits added to the student's program of studies." This sanction has even been imposed in a case where the work under investigation was worth 1% of the student's final grade.

IN YOUR DEFENSE

We have unsuccessfully tried to argue that the intention of the student must be considered when determining whether or not academic fraud has occurred.

At the U of O, whether or not a student has fraudulent intentions is irrelevant in determining if there is academic fraud. Proof that a student had no intention to deceive can only be used to plead for a more lenient sanction.

Students have tried to prove their honest intentions by showing that they already had an excellent grade in the course and had no reason to cheat. They also tried to prove that their intention was not to pass off somebody else's ideas as their own because they included the source in the bibliography.

At the U of O, your arguments do not matter. At the U of O, your intentions are irrelevant.

The bottom line of plagiarism cases is very simple: is there any unreferenced text that appears in your work? If yes, you are guilty of plagiarism. It may be a mistake but it doesn't matter. The best case scenario is to receive an F for the work.

WHO ARE THE ACCUSED ?

Out of the 48 students who consulted the Student Appeal Centre between November 1, 2007 and October 31, 2008 with cases of academic fraud, 71% were visible minorities.

Arab, Black and Asian men and women – these are the students that most often get accused of academic fraud.

This systemic racism at the University of Ottawa must stop.

The central administration has been alerted to these numbers. The student media has reported these numbers. Nothing is being done to address the problem.

We observe that many international students are unfamiliar with our overly strict system of academic fraud.

We are also a witness to cases in which professors have used accusations of academic fraud as a tool to cause harm to students' careers. In three cases at the Faculty of Graduate Studies, black students were accused of fraud following a conflict they had with their professors. In a system where it only takes a minor referencing

mistake to be found guilty of academic fraud, search and you will find.

THE GOAL OF REGULATIONS ON ACADEMIC FRAUD:

THE PUNITIVE VS. THE EDUCATIONAL

Comparison with other universities' regulations proves that there are two trends in Ontario when treating academic fraud. Some institutions choose to adopt an educational approach and plan for alternative ways to address issues of fraud. For example, universities such as Brock, Carleton, Guelph and Laurier plan for more lenient sanctions including a written warning or "resubmission of the piece of academic work in which the violation was committed, for evaluation with or without a grade penalty" (Carleton University).

Other schools treat academic fraud similarly to the University of Ottawa; as a means of punishing students with serious sanctions that necessarily affect their academic careers and professional advancement. A discussion is needed at U of O. What is the goal in adopting regulations concerning academic fraud? The Student Appeal Centre suggests that we revisit our preconceived notions on academic fraud. The statistics speak for themselves: how long will the U of O continue to follow its racist and punitive system of academic fraud?

In closing, we note that the unfair practices denounced here concern the formal procedure on academic fraud. Many professors are more understanding and choose to adopt informal mechanisms to address issues of academic fraud. Those cases are untraceable and, as such, the Appeal Centre and the University are unaware of statistics regarding these informal cases.

AN UPDATE ON THE SENATE APPEALS COMMITTEE

Last year the Student Appeal Centre denounced the long delays encountered when appealing to the Senate Appeals Committee, the final level of appeal for individual cases at the University of Ottawa. We had calculated that it took on average 78 days before students received a final decision. We denounced the fact that faculties had no deadline for making submissions to the Committee. We proposed policy changes to the University and the University accepted some of our suggestions, resulting in the following improvements:

- After refusing to reveal their identity during several years, the Senate Appeal Committee members no longer work under secrecy. Each member is now introduced at the beginning of the meeting.
- One student seat was added to the Committee.
- A twenty one business day deadline is now imposed on faculties when making submissions concerning a student's appeal.

However, our 2007-2008 Senate appeals cases show that the average time of appeal has gone up to 82 days. That's right, the adopted changes had absolutely no effect on the length of the procedure to the Senate Appeals Committee.

One important problem that continues to be belittling for students is the disregard with which they are treated by the Senate Appeals Committee. In reality, each student is treated very differently by Committee members. In the best cases Committee members show understanding and respect – in the worst cases, committee members show disregard and contempt for students. In one case, the appellant wrote to the Senate of the University following her hearing. She said, "I understand now that I am not your equal - that is the only possible explanation for the contempt with which you treated me this morning. I am a student, a nothing – message received."

Senate Appeal Committee hearings are not recorded. The SFUO demands that they be recorded – this will be to the benefit of both students and the University.

NEW AND OLD TRENDS IN SYSTEMIC INJUSTICE

IF YOU IGNORE STUDENTS, THEY MIGHT JUST GO AWAY

A technique that continues to be very efficient for the administration in dealing with student's appeals or complaints is to simply ignore them. Many students have to follow up at least once before receiving a response. Sometimes, a response never comes. The Student Appeal Centre also follows up on these cases but we are sometimes ignored by the administration. Many cases end, not because a final decision has been reached, but simply because the student has given up.

PSYCHOLOGICAL PROBLEMS AND STIGMATIZING STUDENTS

A dangerous recent trend is the *ad hoc* labeling of students who fight against the University as having "psychological problems." On more than one occasion students who have gone to great lengths to defend themselves have been labeled as "crazy" or as "needing psychological help." **This behavior of the University labeling students "crazy" is strictly unacceptable.**

Some students do have medically recognized disabilities based on mental health. Cases prove that the University of Ottawa does not follow its obligation to accommodate these students. By blindly making illegitimate diagnoses, the University is reinforcing the terrible stigma that students with a disability are forced to face on a daily basis.

THE POLICIES AND PRACTICES THAT DON'T EXIST

The University of Ottawa does not have an ombudsperson to act as an impartial mediator. It also lacks a policy against discrimination and intimidation of undergraduate students, and provides no clear guidelines on the duty to accommodate students with disabilities. With a community of over 40 000 people, we cannot think of a logical reason not to adopt and enforce policies to protect everybody's basic rights.

RECOMMENDATIONS AND DEMANDS

The administration cannot fix the problems exposed in this report by itself. If our goal is efficiency and concrete progress, all unions, professors, support staff and students must be consulted. Our university setting is supposed to be founded upon open dialogue and critical thought – the students demand open forums and public consultations. **We demand to be involved in the changes that affect us.**

RECOMMENDATIONS AND DEMANDS CONCERNING ACADEMIC FRAUD

A complete revision of the regulation and practices concerning academic fraud is urgently needed.

- Written practices ensuring fair and equitable investigations are necessary.
- Our policy needs to clearly state that students are innocent until proof of the contrary.
- Our policy needs to clearly state that the burden of proof rests on the University.
- Professors must have deadlines to follow if they wish to bring forward an accusation.
- The administration must follow deadlines to ensure that cases are dealt with in a timely fashion.
- Sanctions need to be revisited so that innocent mistakes can be fixed rather than punished.

- Students should not be sanctioned with a stricter sanction as a result of an appeal.
- Committee members should undergo sensibility training on diversity issues and racism.
- Students should be allowed to be accompanied by any person of their choice at all levels of investigation and appeal.
- All students need to have accessible and comprehensive tools to understand in detail what is required when it comes to referencing: to constantly reinforce fear of academic fraud is no way to educate.
- Accusatory attitudes and general disbelief of students who face accusations must stop immediately.

OTHER RECOMMENDATIONS AND DEMANDS

- Administrators must respond in a timely fashion to all correspondence. Ignoring students is unacceptable.
- An ombudsperson is necessary to ensure the fair and equitable treatment of students by the University.
- A policy concerning discrimination and intimidation of undergraduate students is urgently needed.
- Cases should be dealt with more quickly: long delays are encountered at all levels of appeal.
- The Senate Appeal Committee's procedure must be reviewed to ensure that appeals are heard in a timely manner.
- We demand that Senate Appeal Committee hearings be recorded.

CONCLUSION

SOLIDARITY ON CAMPUS

Our report is not meant to exasperate the supposed division between students, professors and support staff. This division only serves to strengthen the administration's power by creating an inexistent opposition between our groups. Slowly but surely, students tell us about professors who are also victims of abuse of power, and unions share their frustration in dealing with the central administration. The SFUO is in solidarity with all other unions and groups at the University of Ottawa and we support you in your requests for an equitable and healthy campus environment. Let's unite – let's take back our campus.

STATISTICS

STUDENT APPEAL CENTRE STATISTICS FROM NOVEMBER 1, 2007 TO OCTOBER 31, 2008

Out of the 388 students who consulted the Student Appeal Centre, 47**%** were women and 45% were visible minorities.

Nombre de dossiers par faculté / Number of Cases per Faculty

Faculté / Faculty	Nombre de dossiers / Number of Cases
Arts / Arts	44
Common law / Common Law	3
Droit civil / Civil Law	4
Éducation / Education	13
Étu. sup. et post. / Grad. and Post. Studies	25
Génie / Engineering	98
Gestion / Management	24
Médecine / Medicine	3
Sciences / Science	37
Sciences de la santé / Health Science	47
Sciences sociales / Social Science	58
Dossiers ne relevant pas d'une faculté / Cases Unrelated to a Faculty	32

This table is not a reflection of the most problematic faculties. It is more a reflection of the Student Appeal Centre's good relationship with the Faculty of Engineering. Last year, we requested that all faculties inform their students of our services but all faculties refused except the Faculty of Engineering. We take this opportunity to thank the Faculty of Engineering for its continued collaboration with the Student Appeal Centre. Other faculties continue refusing to include the Student Appeal Centre's contact information in communications concerning accusations of academic fraud.

Motifs pour faire appel / Grounds for Appeal

Motifs pour faire appel et/ou nature du problème / Grounds for Appeal and/or nature of the problem	Nombre de cas / Number of Cases
Accomodation / Accommodation	40
Admission / Admission	17
Autres services (Protection, Logement, etc.) / Other Services (Protection, Housing, etc.)	11
Cours et évaluation des cours / Courses and Course Evaluations	8
Exigences du diplôme / Degree Requirements	13
Éthique, discrimination, intimidation / Unethical Behaviour, Discrimination, Intimidation	35
Examens (différés, supplémentaires, conflits et abscences) / Exams (deffered, supplemental, conflicts and abscences)	42
Finances / Finances	30
Fraude scolaire / Academic Fraud	48
Gestion du cours / Course Management	27
Inscription ou désinscription aux cours / Registration or Deregistration to Courses	17
Notation et révision de notes / Grading and Grade Reviews	86
Problèmes avec un professeur / Problems with Professor	44
Relevés de notes / Transcripts	17
Retrait / Withdrawal	64
Autre / Other	4

This table is not a reflection of the Student Appeal Centre's total number of cases. Many cases involve more than one ground for appealing. For example, imagine a student who encounters problems deferring an exam following a conflict with a professor who refuses to accept the student's medical note. Such a case would count in the following categories: exams, accommodation and problems with a professor.

Dossiers de fraude scolaire / Academic Fraud Cases

Faculté / Faculty	Nombre de dossiers / Number of Cases	Nombre de minorités visibles / Number of Visible Minorities
Arts / Arts	6	3
Common law / Common Law	1	1
Droit civil / Civil Law	0	0
Éducation / Education	0	0
Étu. sup. et post. / Grad. and Post. Studies	6	5
Génie / Engineering	3	3
Gestion / Management	12	10
Médecine / Medicine	0	0
Sciences / Science	8	3
Sciences de la santé / Health Science	3	2
Sciences sociales / Social Science	9	7

Comité d'appel au sénat / Senate Appeals Committee

Faculté / Faculty	Nombre de dossiers / Number of Cases	Succès / Success	Nombre de minorités visibles / Number of Visible Minorities
Common law / Common Law	1	0	1
Étu. sup. et post. / Grad. and Post. Studies	2	0	2
Génie / Engineering	6	1	4
Gestion / Management	5	4	4
Sciences / Science	2	2	1