Brailey and Me (and You) in all Dimensions

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Director, CARMA, the University of Newcastle

August 22, 2015
Revised: 20-08-2015

After dinner presentation at Workshop in honour of Brailey Sims

### Workshop on Analysis and its Applications

**in Honour of Brailey Sims**

**21 - 23 August 2015**

Room V111 - Mathematics Building

#### Friday 21st August

- 2:00 Aidan Sims (University of Wollongong)
- 3:00 Coffee – V105 – CARMA Room
- 3:30 Ian Searston (University of Newcastle)
- 4:00 Theo Bendit (University of Newcastle)
- 4:30 John Giles (University of Newcastle)
- 5:00 Łukasz Piejko (Lublin Poland)
- 5:30 Reception – Mathematics Tea Room

#### Saturday 22nd August

- 9:30 Chris Lennard (University of Pittsburgh)
- 10:30 Coffee – V111 Foyer
- 11:00 Suthep Suantsai (Chiang Mai University)
- 12:00 Jamnian Nantadilok (Lampang Rajabhat University)
- 12:30 Lunch – V111 Foyer
- 2:30 Warren Moors (University of Auckland)
- 3:30 Ali Exhragh (University of Newcastle)
- 4:00 Coffee – V111 Foyer
- 4:30 Mike Meylan (University of Newcastle)
- 5:00 Chris Kellett (University of Newcastle)
- 6:30 Conference Dinner - Master of Ceremonies: Gerard Joseph, IBM Canberra
  - Merewether Surf House – Henderson Parade, Merewether

#### Sunday 23rd August

- 10:00 Jeff Hogan (University of Newcastle)
- 10:30 Mamtaz Hussain (University of Newcastle)
- 11:00 Coffee – V111 Foyer
- 11:30 Ohad Giladi (University of Newcastle)
- 12:00 Bishnu Lamichhane (University of Newcastle)
- 12:30 Brailey Sims (University of Newcastle)
- 1:00 Lunch – V111 Foyer

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**Menu**

**Entree**

Garlic prawns in white wine cream sauce, herb salad & grilled bread
Crumbed lamb cutlet, zucchini, racicchio & salsa verde

**Main**

Roasted chicken supreme, zucchini fritter, smokey tomato relish & fennel
N.T. barramundi, smoked potato croquette, crushed broad bean salad & finger lime butter

**Dessert**

Frangipani tart, mascarpone & poached pear
Sticky date pudding & salted caramel sauce

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**Program**

- 6:30pm - Welcome – Gerard Joseph
- Entree
- Main course
- “Brailey and Me” – Jon Borwein
- Dessert
- Brief remarks
- Chris Lennard
- Jamnian Nantadilok
- Suthep Suantsai
- George Wilis
- Barrie Stokes
- Concluding remarks
  - Gerard Joseph, Jon Borwein and Brailey Sims
Brailey as a **Youth**

The young scientist

Brailey and Me
Brailey as a Youth

The young scientist

- Brailey knows a lot about a lot of different things
Brailey as a Youth

The young scientist

- Brailey knows a lot about a lot of different things
- Student politician, defrocked scout, and early wine collector
Brailey as a Youth

The young scholar (top right)

NBHS 1962 Class 3C

Brailey has Many Children
Brailey has Many Children

- Five children and three grandchildren
Qualifications:

BSc (Hons I and University Medal) [University of Newcastle, 1969]


Current Appointment:

Associate Professor, School of Mathematical and Physical Sciences, The University of Newcastle, Australia [Three year post-retirement contract at 35% FT]

Previous Academic appointments:

Associate Professor, School of Mathematical and Physical Sciences, The University of Newcastle, Australia [January 1990 - March 2012]

Senior Lecturer, Department of Mathematics, The University of New England [1972-1989]

Visiting Appointments:

- Distinguished Visiting Professor at the University of Saville (2013)
- Visiting Professor CIMAT, Mexico (2004)
- Distinguished Visiting Professor at 6 Korean Universities in 1999
- Distinguished Visiting Professor at the University of Pretoria, South Africa, (1997)
- Distinguished Visiting Scholar at the University of Valencia, Spain (1997)
- Visiting Scholar at Simon Fraser University (1996)
- Visiting Scholar at Kent State University (1986)
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- Visiting Scholar at Simon Fraser University (1996)
- Visiting Scholar at Kent State University (1986)

• A happy traveller
First encounters

Brailey as GH Hardy (197x)
First encounters

- 1971 BS nearly started Great Fire of Edinburgh
- 1977 John Giles sabbatical at Dalhousie (Seattle)

Brailey as GH Hardy (197x)
First encounters

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• 1977 John Giles sabbatical at Dalhousie (Seattle)
• 1982 BS at Dalhousie (Queens)

Brailey as GH Hardy (197x)
First encounters

- 1971 BS nearly started **Great Fire of Edinburgh**
- 1977 John Giles sabbatical at Dalhousie (Seattle)
- 1982 BS at Dalhousie (Queens)
- 1988 JMB in Newcastle, Armidale and Canberra

**Brailey as GH Hardy (197x)**
Brailey and JMB's CV


Brailey and JMB’s CV

- 5 papers, 1 in review, 1 being invented, and one book review
Fixed point encounters

A Banach space $X$ has the fixed point property for nonexpansive mappings [f.p.p.] if every nonexpansive self-mapping of a nonempty weakly compact convex subset of $X$ has a fixed point. Using a lattice-theoretic approach, the authors present criteria for a Banach space to have the f.p.p.

Let $d(X,Y)$ denote the Banach-Mazur distance of two $B$-spaces; let $\alpha(X) := \text{Sup} \{||x|| \vee ||y|| : ||x||,||y|| \leq 1, \langle x, y \rangle \leq 1\}$ denote the Riesz angle of a $B$-lattice $X$. The $B$-lattice $X$ is said to be weakly orthogonal if for every sequence $\{x_n\}$ which converges weakly to $x_0$ we have $\liminf_n \liminf_m ||x_n - x_0|| \wedge ||x_m - x_0|| = 0$.

Theorem 5.1: A $B$-space $X$ has the f.p.p. if there exists a weakly orthogonal $B$-lattice $Y$ such that $d(X,Y) \cdot \alpha(Y) < 2$. Corollaries: (i) A weakly orthogonal $B$-lattice $X$ with $\alpha(X) < 2$ has the f.p.p.; (ii) a $B$-space $X$ has the f.p.p. if for some $\Gamma$ and $1 < p < \infty$, we have $d(X, L_p(\Gamma)) < 2^{1/q}$, where $p^{-1} + q^{-1} = 1$; (iii) a $B$-space $X$ has the f.p.p. if either $d(X, c(\Gamma)) < 2$ or $d(X, c_0(\Gamma)) < 2$.

The authors also prove fixed point theorems in $M$-spaces and abstract $L_p$ spaces, $1 \leq p \leq \infty$, pointing out that their results suggest the conjecture that a $B$-space $X$ has the f.p.p. if and only if $X$ contains no isometric copy of $\ell_1[0, 1]$.
Further encounters

In many places

1985 Passport
Further encounters

In many places

• 1989, 1990 at Luminy (Marseilles)

1985 Passport
Further encounters
In many places

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- 1991 in Halifax

1985 Passport
Further encounters In many places

- 1989, 1990 at Luminy (Marseilles)
- 1991 in Halifax
- 1993, 1995, 1998 in Newcastle, Tasmania, etc

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Further encounters

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- 1991 in Halifax
- 1993, 1995, 1998 in Newcastle, Tasmania, etc
- 1996 BS sabbatical in Vancouver

1985 Passport
Further encounters

Fuschia’s graduation (2007)
Further encounters

- 2001 in Sicily (with Nash)

Fuschia’s graduation (2007)
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- 1999/2000 Aidan at CECM in Vancouver

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Fuschia’s graduation (2007)
Further encounters

- 2001 in Sicily (with Nash)
- 1999/2000 Aidan at CECM in Vancouver
- 2008 JMB moves to Newcastle

Fuschia’s graduation (2007)
In many places

ChiangMai (2013)
In many places

ChiangMai (2013)
Brailey now (and in the Future)
Brailey now (and in the Future)

- Several theses over the years (Tam, Searston, Searston)
Brailey now (and in the Future)

- Several theses over the years (Tam, Searston, Searston)
- Plus really tall sons
Thank you

... and good Hunter wine
Conclusion. We continue to be fascinated by a blend of functional analysis, fixed point theory and optimisation together with experimental mathematics. Also politics, literature, cricket (?) ... and good Hunter wine