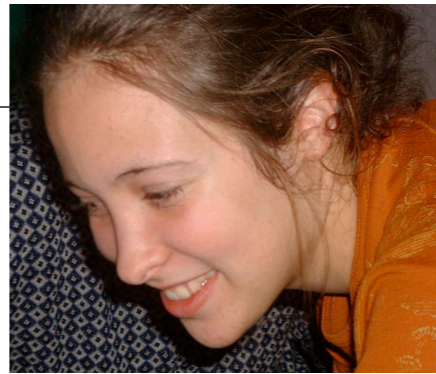
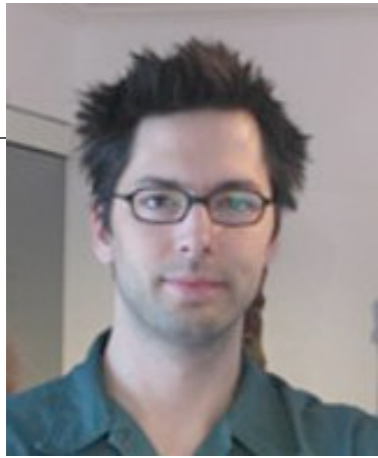


Labo GAMME

Music and Machine Learning
University of Montreal





Alexandre Lacoste
Former Student
Now at RadioLibre.ca / W3

Norman Casagrande
Former Student
Now at Last.FM

Lysiane Bouchard
Current Student

Francois Maillet
Current Student

Jasmin Lapalme
Former Master's Student

People (in no particular order)



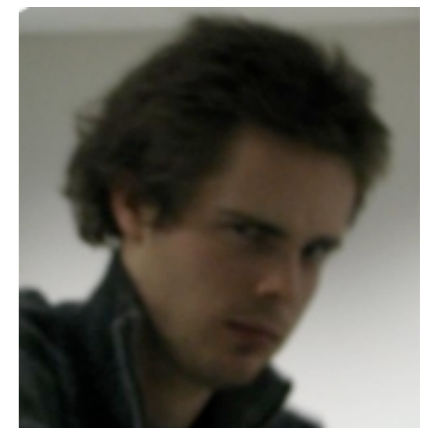
Thierry Bertin-Mahieux
Current Student

Jean-François Paiement
Current student
(at EPFL, Lausanne)

Stanislas Lauly
Current Student

Douglas Eck
Director

Sean Wood
Current Student



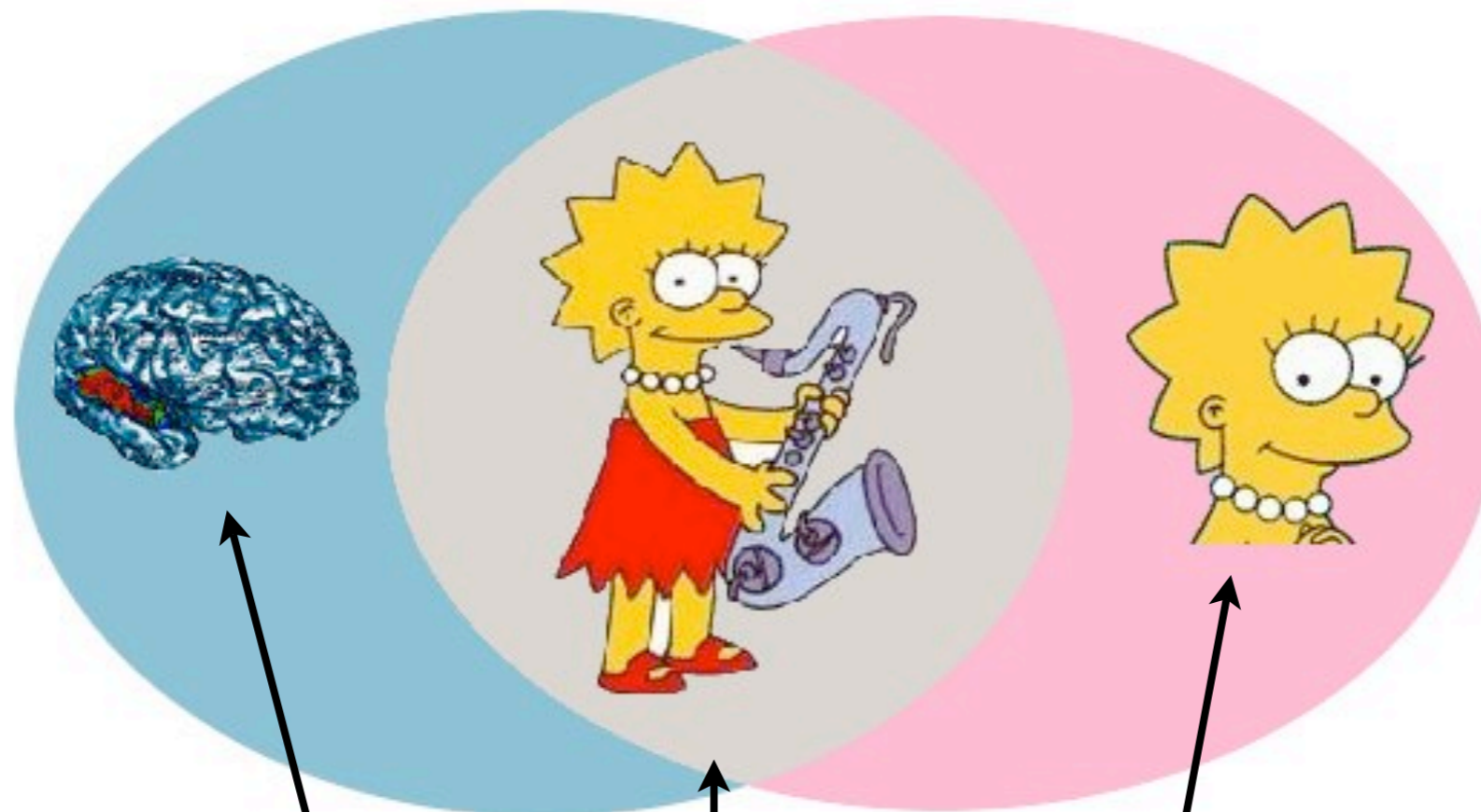
Simon Lemieux
Current Student

James Bergstra
Current Student

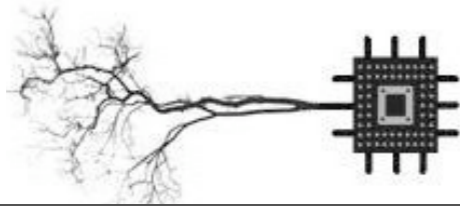
Affiliations

- LISA - Machine Learning, University of Montreal
- BRAMS - Brain Music and Sound, University of Montreal, McGill, Concordia
- CIRMMT - Center for Interdisciplinary Research in Media, Music and Technology - McGill, University of Montreal
- Sun Labs, Boston. Eck was visiting professor Jan-July 2007 at Sun and continues to work with Paul Lamere on Search Inside the Music. However there is currently no official connection between Gamme and Sun.

A Venn Diagram...



$$\{\text{Gamme}\} = \{\text{BRAMS}\} \cap \{\text{LISA}\}$$



Faculty Members

- Laboratoire d'Informatique des Systèmes Adaptatifs (Machine Learning)
- Interests:
 - Time series analysis
 - “Deep” architectures
 - Finance and insurance
 - Dimensionality reduction
 - Ensemble learning



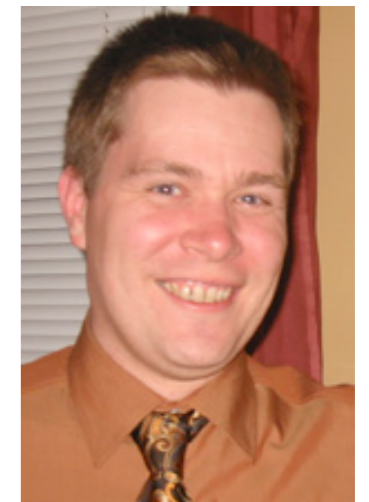
Yoshua Bengio



Douglas Eck



Balázs Kégl
(now CNRS, Paris Sud)



Pascal Vincent

- Brain, Music and Sound
- Neuroscience and music
- 14 faculty members from University of Montreal, McGill and Concordia
- Excellent facilities for music neuroscience
- Many interesting machine learning questions, e.g. classification of MRI imaging results

Co-Directors



Isabelle Peretz
Neuropsych, Univ. of
Montreal



Robert Zatorre
Neuroscience,
Montreal Neurological
Institute

Music Performance Laboratory at BRAMS

- Music performance laboratory (Eck) installed at BRAMS.
- Recording and reproducing Boesendorfer grand piano
- Able to collect and analyze professional (and unprofessional :-) performances
- Studio supports audio recording of jazz quartet



Past, Present and Future Projects

GAMME students will describe project details... it would take too many slides to go through these individually

- Music similarity and recommendation
(e.g. contributions to Search Inside the Music)
- Music sequence learning
(e.g. Echo State Networks, generative models, LSTM)
- Meter and rhythm-related work
(e.g. beat tracking, finding metrical structure in audio)
- Expressive music performance [Boesendorfer piano]
(one focus: when no score is available such as jazz improv.)
- Dimensionality reduction
(e.g. “deep” audio encoding using DBNs)
- Machine learning approaches to signal processing
(e.g. note onset detection)
- Work related to music production
(e.g. automatic music mixing and mastering)

Conclusions

- Sorry I couldn't be there
- Please ask GAMME students lots of questions
- Hope to see any and all in Montreal!

–Doug

