



Mike Winters <mikewinters10@gmail.com>

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## ISMIR 2016 - Paper Accepted for Poster Presentation (Paper #181)

6 messages

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ismir2016-papers@ismir.net <ismir2016-papers@ismir.net>

Fri, May 13, 2016 at 12:21 PM

To: mikewinters@gatech.edu

Cc: ismir2016-papers@ismir.net

Dear Mr. R. Michael Winters,

Congratulations! We would like to inform you that your paper

A Dataset for Automatic Practice Logging (Paper #181)

has been scheduled for POSTER presentation at ISMIR 2016. (Please note that all ORAL and POSTER contributions are considered to have the same status at ISMIR.)

In this email you will find the following information:

- 1) Camera-Ready Submission Instructions
- 2) Author Registration Deadline
- 3) Registration and Accommodation Information
- 4) Financial Support (ThinkTank, Women in Music IR & Students Grants)
- 5) Reviews for your Paper

All the best,

Johanna Devaney  
Douglas Turnbull  
George Tzanetakis  
Program Chairs, ISMIR 2016

Juan Bello  
Dan Ellis  
General Chairs, ISMIR 2016

===== 1) Camera Ready Submission =====

Your next step is to prepare a camera-ready manuscript by:

\*\*\* Camera-Ready Deadline: Friday, May 27 \*\*\*

You should de-anonymize your papers, **add acknowledgements** when appropriate, and make updates based on the feedback from the reviewers (see below). When revising your papers, make sure that all fonts are embedded in the PDF document, and that it is not password-protected. Papers which are not formatted according to the ISMIR 16 templates (including excessive use of \baselinestretch) or papers that exceed the 6+1 page length requirement will not be accepted for publication in the proceedings.

To submit your camera-ready manuscript, you can click on the following URL which will take you directly to a form to submit your final paper:

<https://www.softconf.com/h/ismir2016/cgi-bin/scmd.cgi?scmd=aLogin&passcode=181X-C6J7G7J8P7>

We will notify you about the specific day and time of your presentation at a later date.

===== 2) Author Registration =====

Accepted papers must be presented at the conference by one of the authors and, at least, one of the authors must register by the Author Registration deadline:

\*\*\* Author Registration Deadline: Friday, June 3rd \*\*\*

Failure to register before the deadline will result in automatic withdrawal of your paper from the conference proceedings and program.

### ===== 3) Registration and Accommodation Information =====

We're happy to announce that registration for the 17th Conference of the International Society for Music Information Retrieval (ISMIR-16) is now officially open. The conference will be held in New York City between August 7th and 11th, 2016, primarily at the campus of New York University (NYU).

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#### Registration:

To register for the conference and tutorials and to book discount accommodation at NYU, please visit:  
<https://wp.nyu.edu/ismir2016/participants-2/registration/>

The deadline for early registration and author registration is June 3. Prices will increase after this date and any papers for which there is not appropriate author registration by this date (see details in Section 2 above) will not be included in the conference or the proceedings.

Visit our site for information on tutorials, an outline of the conference program, and information on satellite events (ThinkTank, HAMR, CogMIR and DLfM).

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#### Accommodation and other travel arrangements:

Please note that NYU housing availability is limited and will be awarded on a first-come-first-served basis. Housing is restricted to people 18 years old and above, and is not suitable for families with children, or unregistered partners. Booking must be completed as part of the registration process.

For more information about accommodation including options outside NYU, please visit:  
<https://wp.nyu.edu/ismir2016/participants-2/accommodation/>

To help you in planning your trip, we have also prepared pages with information about visas and travel to/from NYC's airports.

### ===== 4) Financial Support (Grants) =====

ISMIR and the Women in MIR (WiMIR) initiative are proud to announce a number of financial support opportunities for students and other members of the community wishing to attend the conference. Awards are granted based on the quality of the accepted submission, the degree of financial need, the applicant's newness to ISMIR, and the applicant's geographical diversity.

The types of awards are

ThinkTank registration - available for all grad students who are attending ISMIR.

Student Author Grants - available for first or supporting authors of an accepted full paper who were students at the time of paper submission.

Women in MIR (WiMIR) Grants - available to female first or supporting authors of accepted full papers, as well as female first authors of accepted late-breaking demo (LBD) submissions. WiMIR Grants are being offered for the first time thanks to the generous support of industry partners (Smule, Shazam). Applicants do NOT need to be students to apply for the WiMIR Award.

Details on how to apply are available at:

<https://wp.nyu.edu/ismir2016/participants-2/financial-support-grants/>

===== 5) Reviews for your Paper =====

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ISMIR 2016 Reviews for Submission #181

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Title: A Dataset for Automatic Practice Logging

Authors: R. Michael Winters, Siddharth Gururani and Alexander Lerch

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REVIEWER #1

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Reviewer's Scores

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Scholarly/scientific quality: low

Novelty: medium low

Relevance of topic: high

Importance: medium low

Readability and paper organisation: low

Title and abstract: no

Bibliography: no

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Comments

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The paper presents a dataset aimed at facilitating research on automatic practice logging (APL). Also, it presents an algorithmic proof-of-concept that shows how to use the presented dataset.

One of the greatest flaws I found in the paper is that it takes too long to define what APL is. The first time APL is described in terms of its inputs and outputs is in Section 4. Until then, the it could be confused with Automatic Transcription of Music, Score Following or Audio Cover Song Identification. As I understand, APL aims at providing information like: "piece Op. 31 was practiced for 31 minutes using the right hand, then for 15 minutes using the left hand", which is a variation of ATM, SF and ACSI, perhaps with some elements from Automatic Instrument Identification.

APL seems to be an interesting problem, as it involves searching and characterizing audio signal variations throughout a track. It could be used in online (or self-) tutoring tools, enabling to measure the effectiveness of training practices.

However, I fail to see that it can, potentially, improve the musician's skills. Knowing that there were 30 minutes of practice does not change the fact that the piece is being played better, or that the musician still needs more practice. The paper presents no evidence that this could be an useful piece of information. Therefore, it is hard to predict the real benefits of APL.

Also, all references towards a musician's practice habits are purely speculative (there is no proof, or reference, that musicians spend "hundreds or thousands of hours" practicing; it could be more and it could be less). There is probably some statistical study about this, which could greatly improve the strength of the idea behind APL.

Define what an APL system is in the first paragraph, be redundant. Also early differentiate from ATM, SF and ACSI

Also explain the essential differences with ATM, SF, ACSI

Argue how it might be used to improve musicians skills.

Find a book about musicians' practicing at cite it several times. Maybe an "Oxford Handbook"?

I think APL is a great idea, and the paper could focus more on describing its benefits. For example: what could a musician do with a fully-functional APL system? How could it fit common practice methodologies? Perhaps it could help a musician find relevant parts of a recorded practice session?

Last, the dataset is an important contribution to the ISMIR community, but it needs to be described in more detail. What types of practice does it contain? What does "technique" mean in Table 1, and why aren't the others (sight-reading, improvisation...) considered "techniques"? I also wonder if an APL dataset containing only variations of one piece is very useful, because the APL problem also involves identifying the piece that is being played.

Define technique in more detail. Also describe how the movements are different from each other.

Specific comments

- \* Title: it is misleading, because the paper only briefly presents the dataset (1.5 pages out of 6), and focuses on other issues most of the time.
- \* Abstract: when it states: "ultimately can not capture many of the subtle nuances involved", it implies that the APL system will be able to do so. However, the ultimate goal of APL (as stated in Section 5.1) is only to label tracks according to their content. Therefore, the abstract is also misleading.
- \* Bibliography: it is missing references on music education or practice techniques. Without them, APL cannot be sustained as a useful tool for music practice.
- \* Readability and paper organisation: as stated above, the paper takes too long to state what APL is and to differentiate it from current MIR problems. This harms the readability of the paper, because the reader cannot fully understand the goal of the initial discussions. There are also some speculative and/or subjective statements like "this paper presents an \*interesting\* alternative" or "musicians spend hundreds if not thousands of hours (...)". These statements could be more objective, assertive and be associated to some statistics or some references.
- \* Importance: although I personally feel that APL is an interesting computer science problem, I fail to understand what are its impacts on a musician's skills.
- \* Relevance of topic: I believe APL can be a great contribution to the ISMIR research community.
- \* Novelty: APL could be rewritten as a variation of other, well-known MIR problems.
- \* Scholarly/scientific quality: Some aspects are missing, as stated above. The paper could be more assertive. The importance of APL could be better discussed, and APL could be put in perspective to Non-Automatic PL in an experimental setting.

How about: "Introduction to Automatic Practice Logging: A Dataset and Proof-of-Concept."

Qualify broad goals of APL vs current achievements.

Specify the outputs better.

Remove or qualify speculative statements Be more objective or assertive, use published statistics.

More of a discussion about how it impacts a musician's skills.

This is a major issue. APL is different because it has to be robust to: mistakes, pauses, fragmentation, repetitions etc. (See text and powerpoint for more detail.)

User tests?

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REVIEWER #2

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Reviewer's Scores

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- Scholarly/scientific quality: high
- Novelty: high
- Relevance of topic: high
- Importance: high
- Readability and paper organisation: high
- Title and abstract: yes
- Bibliography: yes

Really likes the paper.

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## Comments

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Dear authors,

Congratulations for a very interesting paper. The writing is very neat and clear, stating clearly the three major contributions of this paper and elaborating correspondingly.

It sets out clearly about the potential utility of Automatic Practice Logging, but what is more interesting to me, describing a real scenario for applied MIR that challenges some of the typical MIR tasks. You mention song cover detection, audio-to-score alignment and transcription from audio as major areas of influence, but I easily imagine these could benefit from and incorporate almost any standard MIR technique, from study of pitch and chroma, timing and expressive performance, to audio-source separation and boundary detection (some of which you interestingly combine in the proof of concept algorithm).

A little evidence that this type of task will surely be of relevance in the present and near future is that there is already some academic/industry research pointing in similar directions (see for example the project between Korg and UPF: cortosia (<http://mtg.upf.edu/node/3174>)).

A small critique is that you describe the approach with a wholistic aspiration (to cover many types of music and practices) whereas the particular "practice" you describe seems to correspond to score-centric practice, which would differ from other musical approaches (although you mention it somewhere) and therefore influence structurally the design of an APL system.

Specify large-scale goals and differentiate it from current results

However, I regard the paper as highly interesting, with a clear problem statement which reads somewhat as a call to the community; a contributing dataset and an experimental algorithm.

Although you focus specifically on the parts comprising "repertoire," a natural continuation of an APL system could label automatically excerpts of practice according to various categories such as tempo (something that a musician tends to increment gradually as the study progresses), key (perhaps not relevant in score-centric traditions, but certainly useful for the practice of jazz music, for example), and perhaps less obvious (and sometimes more subjective) categories such as labels about tone and or timbre. Furthermore, the system could incorporate some kind of error measure which could in turn serve as a challenging motor to novice practitioners.

Write more about how practice might be characterized in terms of nuances

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REVIEWER #3

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## Reviewer's Scores

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Scholarly/scientific quality: medium high  
Novelty: medium high  
Relevance of topic: high  
Importance: medium high  
Readability and paper organisation: medium high  
Title and abstract: yes  
Bibliography: yes

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## Comments

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This paper aims to introduce a new discipline to the MIR community, the Automatic Practice Logging. The paper roughly divides into two parts, a first one presenting the background and motivations of this discipline, and a second one that presents the original dataset compiled by the authors to study APL, and a preliminary algorithm applied to recognition of practice types.

Overall, this paper is well written and organized, with an interesting review of MIR literature. To my opinion, novelty and interest of this paper mainly come from the creation of a new publically available dataset of 34 hours of annotated piano practice with a typology on practice types. Such dataset will interest different MIR fields, e.g. cover song recognition, interactive music tuition system. Except that, I personally find that APL can be seen only as a sub-task of application of more fundamentals topics like automatic music transcription and cover song and genre recognition, which would make the contribution of this paper to MIR community more minor.

Differentiate it more from other tasks.  
Perhaps we could say. It is a lot like other fields except for the pauses, mistakes, repetitions, etc. People might be attracted to it if we can argue that it is very difficult.

APL introduces many original difficulties, such as the impacts of recording environment and audio recording material, on MIR tasks, that are most often left aside by current MIR systems. It is a good thing to bring attention to these new difficulties, although it is a shame that they are not accompanied by more detailed methodological suggestions. Especially about how dissociating the “right errors” made by a beginner musician and the “bad errors” made by the MIR system, this is already a question that automatic music transcription needs to tackle for improvisation and free music. It would have been nice that you described some probabilistic methods that could fit this task, in regards to existing current methods in language modeling (e.g., the works of Raczynski, S., Vincent, E. and Sagayama, S. “Dynamic Bayesian networks for symbolic polyphonic pitch modeling”, IEEE Transactions on Audio, Speech and Language Processing, Institute of Electrical and Electronics Engineers, 2013, 21 (9), pp.1830-1840.)

What is this about?

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## REVIEWER #4

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## Reviewer's Scores

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Scholarly/scientific quality: medium high  
Novelty: high  
Relevance of topic: high  
Importance: high  
Readability and paper organisation: high  
Title and abstract: yes  
Bibliography: no

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## Comments

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This paper recognizes an important, timely, and largely unexplored research area in content-based MIR: automatic practice systems. Whereas some

organizations, e.g. Pandora, have been able to manually annotate commercial music content at web scale, such an approach has little chance in music rehearsal settings. Unfortunately for the community, "practice" as a kind of performance is wildly different from the professional recordings on which we've focused as a community to date, complete with errors, spontaneous repetition or pauses, background noise, etc. Therefore, to address this deficiency and kickstart the larger effort, the authors curate and provide a dataset of 35 hours of audio, performed by a single musician, and labeled in turn. They conclude with a simple inquiry, testing the ability to identify which piece is currently being performed -- similar in spirit to cover song identification.

Overall, I strongly recommend the acceptance of this paper in the conference. The combination of timeliness and novelty makes this decision easy, and the authors do a good job of articulating the task itself and its myriad challenges. This is one of the truly innovative works, and has the potential to encourage a lineage of research that motivates the field for years to come. I only have a few constructive points for the authors' consideration:

Wow

#### - Bibliography

I've checked the box in the rubric as "No", the bibliography isn't quite there. There are two (and a half?) areas I think could help fill out the background of this paper a little, which would be helpful since this topic is being somewhat introduced to the community.

1. Amateur musicianship -- Jeff Smith (from Smule) released a two datasets at last year's ISMIR, alongside his thesis [<https://ccrma.stanford.edu/damp/>]. It's not exactly 1:1, but (a) his thesis is well researched, and should provide additional perspective, and (b) demonstrates the increasing interest around non-professional music systems.

Cite Jeff Smith and related references around amateur musicianship, performance and learning.

1.5 Commercial music rehearsal systems -- This is my half point, being an extension of the first. There are a number of music practice systems that have started hitting the market, including Yousician [<https://get.yousician.com/>] or RockSmith [<http://rocksmith.ubi.com/rocksmith/>]. Again, not exactly similar to the framework or data presented here, but it demonstrates the growing interest in the development of self-directed music practice systems.

2. MIR Datasets -- It might be worth mentioning other modern datasets released into the community, acknowledging the value placed on such efforts by the community. One that comes to mind is MedleyDB [<http://medleydb.weebly.com/>] for a few reasons: (a) it is similar in that it motivated a research area that didn't really exist prior (multitrack recordings), (b) it is a well built / maintained resource, and (c) it's proven rather successful in the community.

Mention other modern datasets.

#### - Long-term plan

I'd strongly advise finding some room in the paper to discuss the long-term strategy for the dataset presented. Gone are the days when you collect some data, put it on a server, and forget about it (if it's successful, that is -- otherwise, sure, that's exactly what will happen :o). How might others contribute to the dataset in time? Are there plans to grow the collection? It would be great to include other musicians / instruments in the future, and there is perhaps no one better suited to offer perspective on how that can unfold than the authors themselves.

Lay out plans for future development of the dataset.

#### - Proof of Concept evaluation

This is mostly fine, but I find Figure 2 unclear. Perhaps this could just be replaced by a table with some percentages? I don't think it adds much value as a figure, beyond being colorful at least.



To: alexander lerch <alexander.lerch@gatech.edu>, Siddharth Kumar Gururani <siddfisher@gmail.com>

[Quoted text hidden]

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**alexander lerch** <alexander.lerch@gatech.edu>

Fri, May 13, 2016 at 2:14 PM

To: Mike Winters <mikewinters@gatech.edu>

Congratulations! I have to admit I did not see that coming. Well done! But now we have to invest some work to make it a well-rounded paper ;)

[Quoted text hidden]

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Alexander Lerch

Assistant Professor, GT Center to Music Technology

[www.gtcmt.gatech.edu](http://www.gtcmt.gatech.edu)

[www.AudioContentAnalysis.org](http://www.AudioContentAnalysis.org)

[www.musicinformatics.gatech.edu](http://www.musicinformatics.gatech.edu)

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**Mike Winters** <mikewinters@gatech.edu>

Fri, May 13, 2016 at 4:45 PM

To: alexander lerch <alexander.lerch@gatech.edu>

Yes, it looks like there are two weeks, so I'll have to get started right away.

[Quoted text hidden]

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**alexander lerch** <alexander.lerch@gatech.edu>

Fri, May 13, 2016 at 4:54 PM

To: Mike Winters <mikewinters@gatech.edu>

Let's coordinate on Monday.

[Quoted text hidden]

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**Mike Winters** <mikewinters@gatech.edu>

Fri, May 13, 2016 at 8:27 PM

To: alexander lerch <alexander.lerch@gatech.edu>

Monday is my first day at Microsoft, so my schedule is a little bit unknown at the moment. I will get started this weekend though and summarize the major criticisms from the reviewers.

[Quoted text hidden]