

# الندوة الوطنية الأولى حول الميكانيك والطاقة الشمسية

اشرف السيد مدير الجامعة والسيد عميد كلية العلوم التطبيقية على انطلاقة الندوة الوطنية الأولى حول الميكانيك والطاقة الشمسية المنظم من قبل مخبر البحث الهندسة الميكانيكية وأنظمة الطاقة لقسم الهندسة الميكانيكية بكلية العلوم التطبيقية لجامعة قاصدي مرباح ورقلة. يومي 17 و18 جوان 2023. وحسب اللجنة العلمية فقد تم قبول 154 ما بين مداخلة وبوستار. وبمشاركة عدة باحثين من جامعتنا والجامعات الوطنية. شكرا لكل الأساتذة الباحثين وكذلك طلبة الدكتوراه المشاركين الشكر موصول للجنة التنظيمية من أساتذة وموظفين القسم والكلية. وكذلك للجنة العلمية وعلى رأسهما رؤساء اللجنتين. ورئيس الملتقى، والشكر موصول كذلك للسيد عميد الكلية ومدير الجامعة.



The banner features a background image of a large, modern building with a yellow facade and red accents. On the left, there are two circular logos: one with a gear and a sun, and another with a green leaf and a sun. The text is centered and reads: "First Algerian Conference on Mechanics and Solar Energy (ACMSE'23)/on web Ouargla, June 17<sup>th</sup>-18<sup>th</sup>, 2023".

**MODELING OF CUTTING PARAMETERS IN POLYAMIDE (PA66) MACHINING USING RSM METHODOLOGIES**

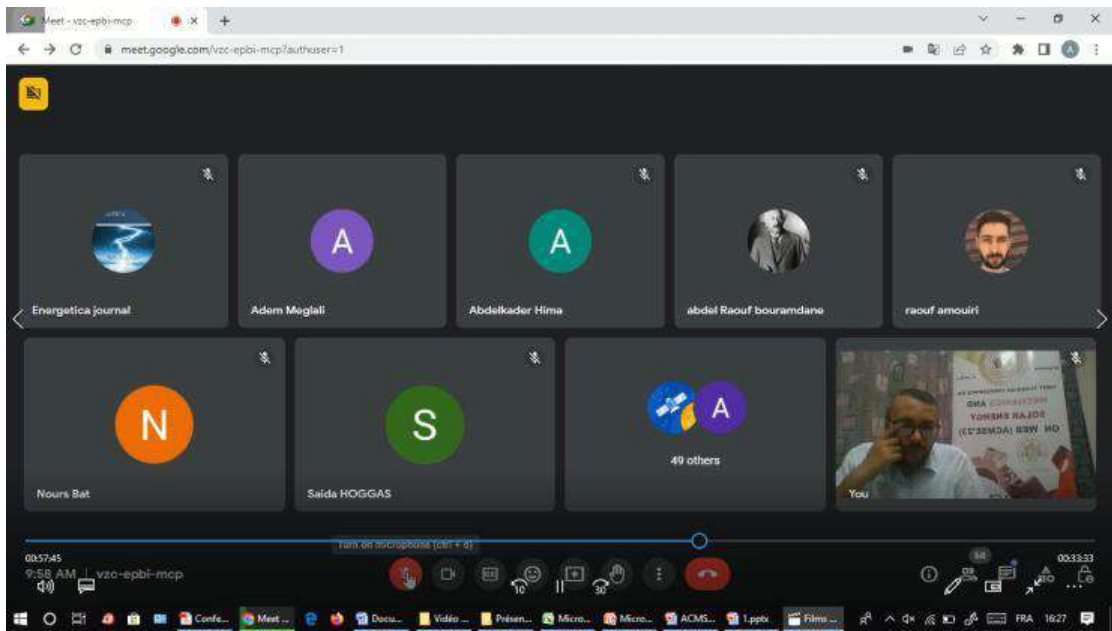
 **Mechanics and Structure Laboratory (LMS)**  
 **University 8 Mai 1945 Guelma, Algeria**

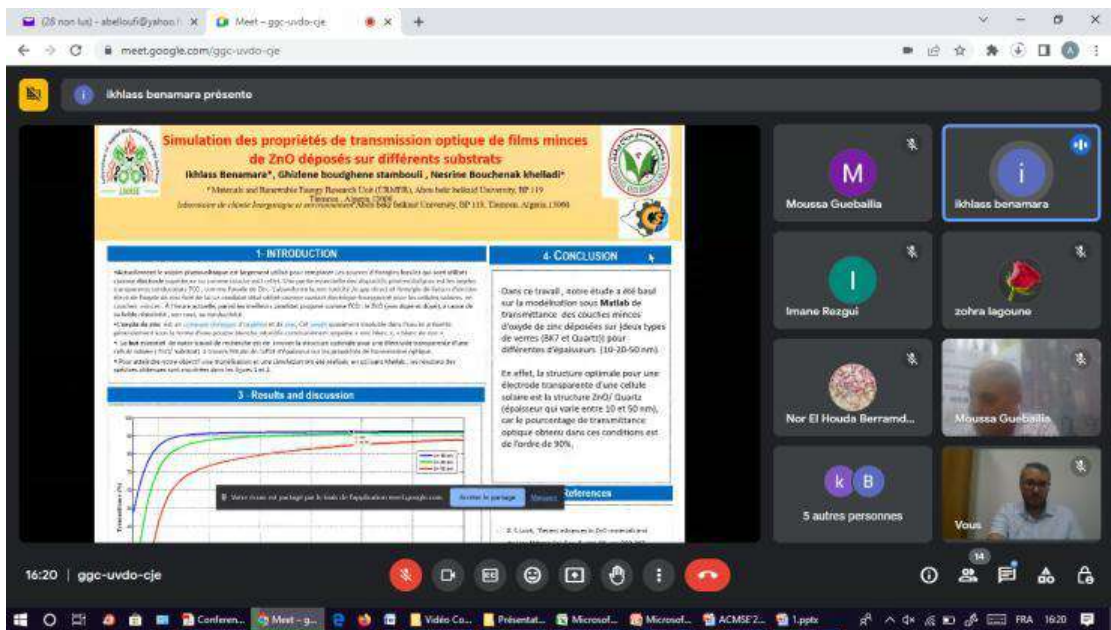
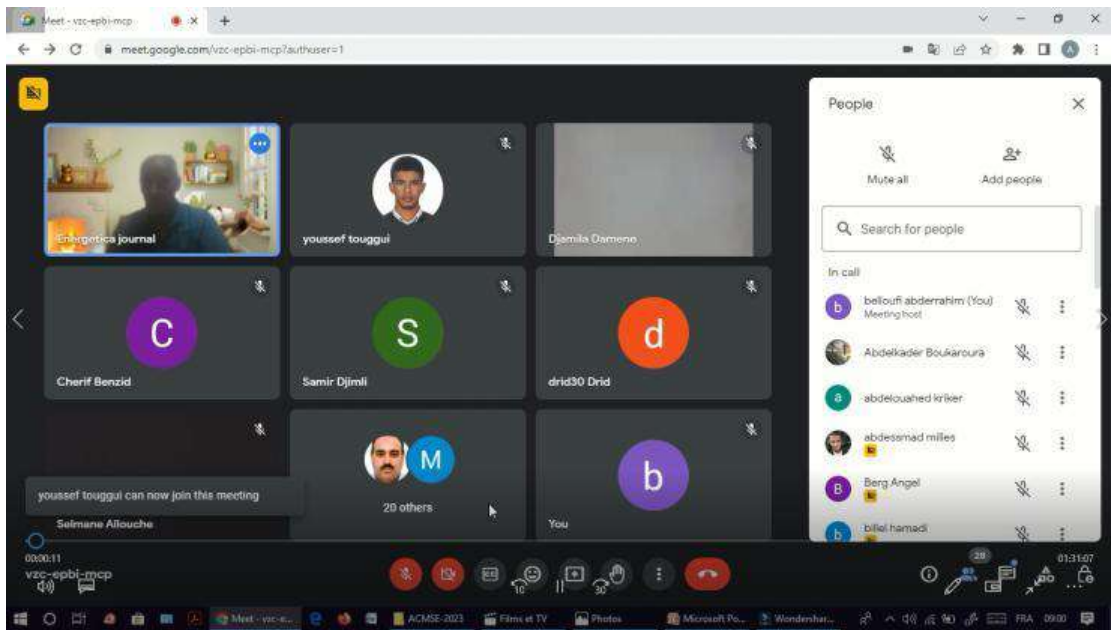
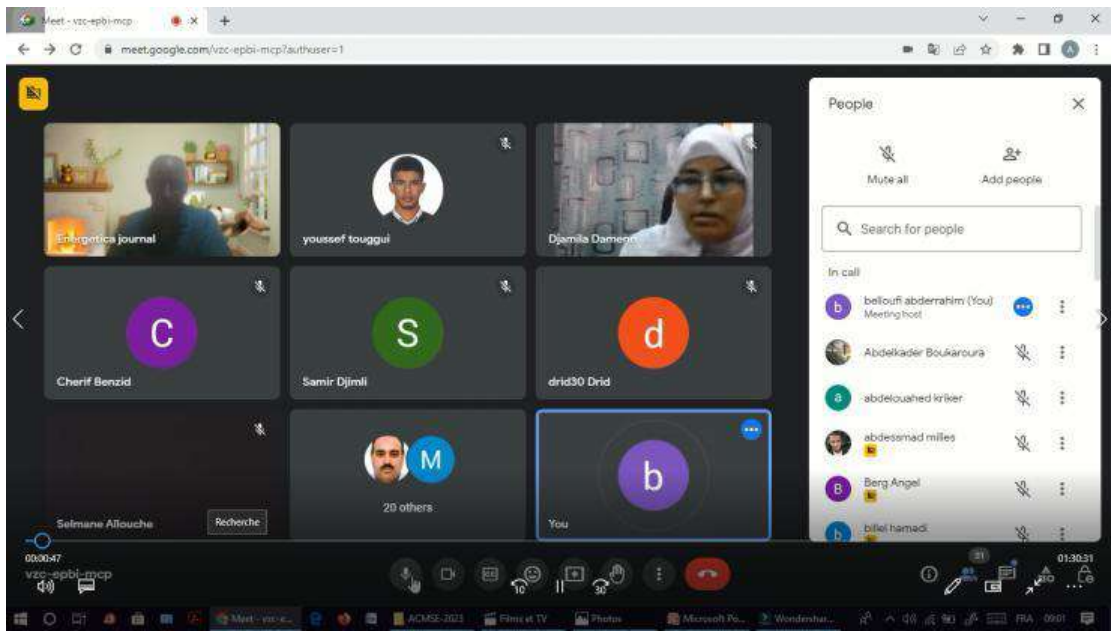
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**Presented by: HAOUES SABRINA**









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Abdelkader Hima is presenting

## 2 - Perovskite solar cell principal

A diagram illustrating the principal structure of a perovskite solar cell. It shows a 3D lattice of atoms. Blue spheres represent 'A' sites, red spheres represent 'X' sites, and green spheres represent 'B' sites. The structure is a cube with a smaller cube inside, where the 'B' site is at the center and 'X' sites are at the corners of the inner cube. 'A' sites are at the corners of the outer cube.

09:22:54  
9:23 AM | vzc-epbi-mcp

Abdelkader Hima, raouf amouri, Djamel Boucherma, Ammar semane, djilali messaoudi, Oussama HACHELFI, 43 others, You

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## 3 - Perovskite solar cell evolution

A line graph titled "Best Research-Cell Efficiencies" showing the evolution of solar cell efficiencies from 1975 to 2020. The Y-axis represents Cell Efficiency (%) and the X-axis represents Year. The graph shows various technologies including Monocrystalline Silicon, Polycrystalline Silicon, Thin-Film (CdTe, Si, a-Si), Heterojunction (Heterostructure), and Perovskite. The Perovskite line shows a rapid increase in efficiency, starting around 2009 and reaching approximately 25% by 2020. The NREL logo is visible in the top right corner of the graph.

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## 4 - Conclusion

Perovskite solar cells technologies is a very promising field of research on a lot of point of views :

- Material processing,
- Layer deposition technics,
- Solar cell design experimental and theoretical,
- Stability enhancement,
- Cost lowering,
- Enhancement of environmental impact,
- Toxicity avoiding,
- .....

Johnson, T.J., Hallquist, A., Garcia-Fernandez, A. et al. An open access database and analysis tool for perovskite solar cells based on the 2016 data points. *Nat Energy* 7, 107–121 (2022). <https://doi.org/10.1038/s41560-022-00941-2>

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Abdelkader Hima, raouf amouri, Nours Bat, Ammar semane, abdel Raouf bouramda..., 50 others, You

