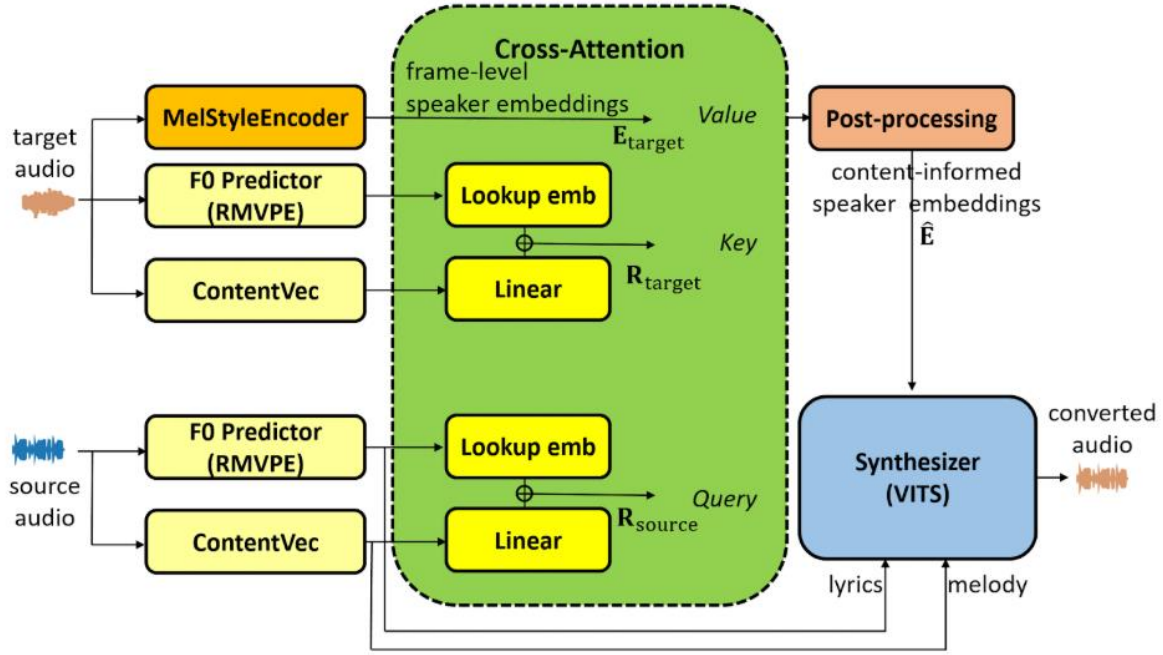
- **Yi-Wen Liu’ s Lab** proposes a **cross-attention-based singing voice conversion (SVC)** system that generates frame-level speaker timbre embeddings informed by content and melody. Unlike traditional SVC methods using static speaker embeddings, this approach captures dynamic vocal variations across pitch and enunciation. Results show improved clarity and voice similarity, with expressiveness remaining a future challenge.



Neural Network Compression –Shen, Chih-Ya

- **Goal:** Reduce computation and memory usage in deep neural networks.
- **FCNN Compression(Left Picture):**
  - ◯Uses block-diagonal masking to prune weights.
  - ◯ Minimizes differences across blocks and applies delta + Huffman encoding for efficiency.
- **CNN Compression(Right Picture):**
  - ◯ Introduces “HAP self-distillation” to improve training.
  - ◯ Uses NGGM pruning (based on gradients + geometric median).
  - ◯ Employs a retraining-aware design.
- **Key Contribution:** Combines structured pruning and improved distillation methods for better compression.